

Thursday
June 7, 1979

Part IV

Department of Transportation

Materials Transportation Bureau

Display of Hazardous Materials
Identification Numbers; Improved
Emergency Response Capability;
Proposed Rule

DEPARTMENT OF TRANSPORTATION**Materials Transportation Bureau****[49 CFR Part 172]****[Docket No. HM-126A: Notice No. 79-9]****Display of Hazardous Materials Identification Numbers; Improved Emergency Response Capability**

AGENCY: Materials Transportation Bureau, Research and Special Programs Administration, Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking.

SUMMARY: The Materials Transportation Bureau (MTB) proposes to adopt a numerical identification system for hazardous materials transported in commerce. These identification numbers would be required to be displayed on shipping papers and packages in association with the required hazardous material descriptions. They would be required to be displayed on orange panels affixed to portable tanks, cargo tanks, and tank cars containing hazardous materials. The purpose of the proposed regulations is to improve the capability of emergency response personnel (fire, police, et al) to quickly identify hazardous materials and to assure the accurate transmission of information to and from the scenes of accidents involving hazardous materials.

DATES: Comments must be received on or before August 7, 1979.

ADDRESS COMMENTS TO: Dockets Branch, Materials Transportation Bureau, Washington, D.C. 20590 (telephone: 202-472-2726). It is requested that five copies be submitted.

FOR FURTHER INFORMATION CONTACT: L. Metcalfe, Standards Division, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590, 202-426-0656.

SUPPLEMENTARY INFORMATION: This Notice proposes the adoption of an identification numbering system for hazardous materials based primarily on the system adopted for worldwide use by the United Nations Committee of Experts on the Transport of Dangerous Goods. Use of the identification numbering system will provide for improved identification of hazardous materials and the communication of information concerning the handling of such materials when they are involved in transportation accidents. Display of identification numbers would be

required in connection with descriptions on shipping papers, on packages of 110 gallons capacity or less, and would be required on orange panels affixed to portable tanks, cargo tanks and tank cars. The MTB believes the use of identification numbers will provide an improved capability to quickly obtain and transmit accurate information about hazardous materials involved in accidents in order to obtain information necessary to deal with such accidents. Another element the MTB believes to be important in providing an improved emergency response capability is a manual it has under development. It will associate identification numbers with brief, concise instructions that will assist emergency personnel during the first minutes of a hazardous materials accident.

Many expressions of interest concerning the need to improve hazardous materials emergency response capabilities have been received from members of Congress, the National Transportation Safety Board, the Secretary of Transportation's Hazardous Materials Task Force, state officials, and most important, fire, police and other emergency service organizations. The MTB believes that the improvements proposed in this Notice will, if adopted, provide the basis for an improved emergency response capability that is not presently available through direct use of technical names; e.g., hexadecyltrichlorosilane (UN 1781), to identify hazardous materials and accurately and quickly communicate information about them.

The primary drafters of this Notice are Alan I. Roberts and Lee E. Metcalfe of the Materials Transportation Bureau.

Background

On June 25, 1975, the Hazardous Materials Regulations Board (HMRB) published in the Federal Register (40 FR 26688, Docket HM-126) a request for public comment on hazard information systems. The request listed nine factors to be considered in the evaluation of a hazard information system:

1. Capability of the general public to recognize the existence of the immediate dangers presented by a material;
2. Presentation of information in a manner so that the general public will be able to accurately transmit basic information to emergency response personnel;
3. Compatibility, intermodally and internationally;
4. Capability of application to both bulk and non-bulk shipments;

5. Capability of functioning without use of a manual or other subsidiary documents;

6. Capability to meet the needs of emergency response personnel, carriers, shippers, and the general public;

7. Capability of integration with documentation, packaging, and vehicle identification requirements to help insure accuracy;

8. Capability of implementation without undue economic burden on shippers and carriers; and

9. Capability of indicating degree of hazard.

The request for public comments went on to describe nine different systems that either had been proposed to the Department or were known to be supported by one or more segments of the affected industry or emergency response community. An exception was the DOT hazardous materials information system which was previously subject of a rulemaking proposal under Docket HM-103. The MTB has considered all of these systems and the comments that were received in response to the request, and is now of the view that none are acceptable for adoption. The following is a summary of some of the reasons for this conclusion:

1. At least two of the systems would employ a preassigned before shipment numbering technique to provide specific action information or an indication of the level of hazard (Hazchem, NFPA 704). Although preassignment of numbers presumably would be made by MTB, commenters have not recommended any criteria except for flammability. Use of preassigned numbers would impose substantial delays on the introduction of new materials into commerce and the extensive effort and resources necessary for implementation would make such a system unworkable.

2. Several of the systems would employ numbers or words based primarily on the hazards or properties of a material (HI, RID/ADR, USCG, IATA, Union Carbide, Air Products, Pennwalt). The MTB believes that reliance on the identification of hazards alone is no longer a feasible approach, that specific identification of many materials is essential to the accomplishment of an improved emergency response program. Communication of hazards is important in the initial phases of an accident, and appropriate first contact handling information can be based on hazards; however, many accident situations dictate the need for more detailed information on how to deal with specifically identified materials. This is particularly so in accidents involving

combinations of hazardous materials as is frequently the case in major train derailments.

3. One system would call for shippers to furnish the carrier an emergency response form that would move with each rail car (Canadian Transport Commission). While the basic idea has merit, the MTB considers that (1) such a system would result in the production of emergency response information widely varying in content based on subjective judgments of different shippers, except where industry associations might prepare response information for common materials; (2) the enforceability of such a requirement without detailed Government guidelines would be questionable; and (3) while such a program may be workable for bulk shipments and full loads, the huge amount of paperwork involved would make its implementation impracticable for less-than-carload shipments.

4. One system would call for display of the order of severity in three risk categories—health, flammability, and reactivity (NFPA 704). The MTB and its predecessor have examined the utility of such a system on several occasions. However, no criteria have been suggested for the health and reactivity presentation; therefore, qualitative evaluations must be made in assigning levels of hazard (hence, the preassignment factor discussed in 1 above). In addition, this proposed system places too many hazard factors into three fields, thereby precluding appropriate assessment. Examples are the assignment of health hazard level three to chlorine, liquid oxygen, sodium hydroxide (lye), hydrogen sulfide, and tetraethyl-lead, and the assignment of reactivity level one to calcium oxide (quicklime), antimony pentachloride and chromic acid. The kind of hazard and the extent of the hazard posed by each of these materials is very different from that posed by the others that share the same assigned number. The appropriate action required to handle accidents involving these materials also is quite different in each case. Consequently such a system is not appropriate for use in a transportation emergency response situation.

The MTB believes that determination of the degree of hazard beyond an examination of the properties of a material requires an assessment of the environment and circumstances at the scene of an accident. In most instances, a preliminary determination of risk can be made based on the information obtained at the scene of an accident. If the initial assessment reveals that a potentially serious situation exists; e.g.,

a large spill from a tank vehicle placarded POISON and bearing an identification number, then, beyond that basic initial response information provided in the proposed manual, a call should be made to the central response information center to obtain expert advice in fully assessing the level of risk based on the accident environment; i.e., topography, wind direction, proximity to habitations, configuration of the accident, etc., and the properties and quantity of the spilled material in relation thereto. It is not conceivable that all the factors that must be considered in determining risk can be transmitted directly from placards on transport vehicles. Therefore, the identification numbering system has been selected as the best means to assist in quicker and more accurate determinations of risk.

The MTB extends its appreciation to the many individuals, companies, and organizations for their considerable efforts in preparing and submitting comments in reply to the Request for Public Comment. A number of comments were accepted and previously adopted under Docket HM-112, and others not directly related to the proposals in this Notice will be considered in a future rulemaking action.

Of all the comments received in response to the Request, the MTB finds those presented by the Association of American Railroads (AAR) particularly supportive of the concepts on which the proposals in this Notice are based. For this reason, we restate a large portion of the AAR comments:

The Basic Requirements of a Hazard Information System

The communication of hazard information is a very difficult task. It must be capable of use by many different groups, each with a different need for information, and it must be usable in an emergency environment without requiring the use of potentially unavailable supplementary materials. The information which it transmits must be easily recognized, quickly understood and accurately communicated.

Who Needs a Hazard Information System?

The most general answer to this question is that anyone who may potentially come in contact with a transportation accident involving hazardous materials needs an information system in order to be able to make intelligent decisions about the safety of his own life and property and about the lives and property of others.

The general public is the broadest and most inclusive subcategory of people with a need. This group includes both those who are at the scene of an incident and know it and those who are in proximity and are not aware of it. As a rule of thumb, it is probable that no system of hazard information will protect those who are not able to immediately view the sight of the incident except as it alerts those who are in proximity and then pass along the message.

Carrier and shipper personnel are the next group of people with a need for a hazard information system. They may be considered to have certain minimal training in either necessary response countermeasures or in the ability to communicate the fact that an incident involving hazardous materials has taken place.

Emergency response personnel, generally, are taken to be the police and fire departments serving the area in which the hazardous incident takes place. Despite the wide variation in training and competence of such personnel, they are assumed, at a minimum, to be familiar with routine fire fighting and evacuation procedures and, at a more sophisticated level, may be able to apply advanced levels of countermeasure technology.

Expert emergency response teams consist of those with special training in dealing with hazardous commodities. They may be in the employ of shippers and manufacturers, carriers, and governmental agencies. They consist of that group with the highest possible degree of knowledge about the specific commodities involved in particular incidents.

What Is Required of a Hazard Information System?

Each of the four groups outlined above has different needs for a system of hazard information.

The general public should be made aware immediately that a hazard exists and should be able to communicate the very basic facts of that hazard to experts with a higher level of knowledge. These basic facts include the location of the incident, the type of vehicle involved, the occurrence of leakage, fire or explosion and, if vehicle markings are seen, transmission of the fact of such markings or of the wording on them.

Carrier and shipper personnel should be able to communicate all of the information possessed by the general public and, in addition, they should be able to identify the nature of the hazard involved. By having access to the

shipping papers, the carrier and shipper personnel will be able to pass along detailed information concerning the commodities involved to their superiors and to the first emergency units to arrive at the scene. In some instances, carrier and shipper personnel information such as that provided by CHEMTREC.

[Emergency] response personnel require immediate information on the nature of the hazards of the materials involved and any special handling requirements. They should be able to use the information obtained from lower levels of response sophistication to access more detailed data to assist them in handling the specific product involved under the circumstances prevailing at the time of the accident.

Expert emergency response teams need to be able to use the information obtained at the scene and from lower level response groups to provide the most detailed and sophisticated direction for the handling of the incident. They should also be able to assist in proper cleanup and disposal activities following the immediate minimization of threats to life and property.

Summary

Having analyzed the abilities and needs of those who will have contact with any hazard information system, its essentials are easily stated:

- It must be immediately recognizable as a system describing the existence of a hazard.
- It must be readily understandable by anyone who comes in contact with it.
- The information gained by anyone who comes in contact with it must be readily communicable to all others with a need to know.
- For those with a greater degree of ability, it must be indicative of a response pattern applicable to the particular incident.
- It must be uniform among all transportation modes.
- It must be capable of accommodating new hazardous commodities and, for higher levels of sophistication, it would be desirable that it be capable to easy computer implementation.

The Components of the Hazard Information System Developed by the AAR

In this section of the AAR's comments, the primary component parts of our hazard information system will be discussed and, wherever possible, related to the needs of various parties as recognized above.

Shipping Papers

The railroad industry believes that primary reliance must be placed on the shipping papers for information on the name of the product involved and its hazards. Historically, the shipping paper has been seen as the only single source of complete identifying information which travels with a shipment of hazardous materials. Because of all the important exemptions which appear in the regulations for the labeling and placarding of hazardous materials, the complete identification of particular shipments can be accomplished only through the shipping papers which accompany it. The recognition of deficiencies in the current use and content of shipping papers has led to the development of recommendations by the AAR for their correction.

Currently, shipping papers identify only the required classification, that is, the "primary hazard" of the material. This is no longer sufficient; the regulations must be amended to require the inclusion of all major hazards ("major hazards" are those recognized to the tertiary level) for dangerous commodities. This will mean that a shipment of, for instance, sulphuric acid must now be listed on [the] shipping paper as "SULPHURIC ACID, corrosive material, poisonous liquid, Class B."

To make the presence of hazardous materials obvious on the shipping paper, the proper shipping name and all hazards must be listed first and consecutively in each commodity's freight description. The order of materials (regulated or non-regulated) as listed on the shipping paper can be random if this previously described format is employed. The uniform presentation of information on shipping papers will enable transportation and emergency response personnel to readily identify hazardous materials from their descriptions and classifications.

In order to hasten the ability of on-scene personnel to contact those with expert technical information about the commodities involved, an emergency telephone number must be added to the shipping document. This telephone number must provide, on a 24-hour basis, immediate access to emergency assistance from the shipper, a designated industry response group, CHEMTREC, The Bureau of Explosives, or whatever source is deemed by the shipper to be best. It is of the utmost importance that both the immediate and long-term response to a hazardous materials incident be initiated as quickly as possible. In view of the

potential for reducing injury, danger to property and adverse environmental consequences, the requirement for an emergency telephone number on shipping documents, to be placed there by the shipper, is a minimal burden.

The railroads of the United States have established a numerical Standard Transportation Commodity Code (STCC) for identifying hazardous materials. The use of STCC numbers is required by mutual railroad agreement and the number is exhibited on waybills covering all shipments. Recent efforts by the STCC Technical Committee of the AAR have resulted in the development of a new series of STCC numbers whose purpose is to specifically identify discrete hazardous materials. This "49-series" was made effective January 1, 1978 and is the vehicle for hazardous materials management which the transportation industry has long needed.

STCC numbers are 7-digit combinations assigned to specific commodities based on hazard characteristics. Within the 7-digit STCC number a means is provided to allow the quick identification of primary, secondary and, in some cases, tertiary hazards, whether or not hazards subordinate to the primary hazard are now recognized by DOT. The 49-series begins with the first two digits, 49, as an identifier for hazardous materials. The next three digits identify the potential hazards of the materials and the final two digits identify the specific commodity * * *.

It is important to note that many materials properly shipped under a general classification, i.e., "flammable liquids, n.o.s.", have now been given specific 49-series STCC numbers based on the specific tariff description currently used. Their movement in transportation is well documented, and therefore, these commodities, as listed in STCC Tariff 1-D (or subsequent revisions), should henceforth be listed in § 172.5 as proper shipping names. The railroads request that the Hazardous Materials Regulations require the shipper to insert the STCC numbers on all shipping papers tendered with goods for transportation. Only [the] shipper knows enough about the materials he produces and ships to ensure the accurate assignment of STCC numbers.

The STCC Code is designed to be flexible and to allow for future expansion to include both new commodities and new combinations of [hazard] classification; a section is already reserved in the STCC Code to designate substances which are environmentally hazardous as defined

by the Environmental Protection Agency.

The precise logic which has been employed to create the 49-series has resulted in numbers whose utility far surpasses those proposed by other organizations including MCA and the United Nations. The middle three digits provide a complete set of numbers to reveal all major potential hazards of each product and this unique feature does not exist in any other system of which the AAR is aware * * *.

The AAR insists that no secondary, untried system of "hazard numbers" be implemented. The 49-series STCC Code is now in existence and in use and the next revision of the Bureau of [Explosives] publication "Emergency Handling of Hazardous Materials in Surface Transportation" will contain a complete listing of all commodities in the 49-series code and the appropriate hazard information for handling emergency situations involving these commodities. A cross reference index will be supplied to locate commodity information if only the 49-series STCC number is known; in addition, a growing number of rail carriers will be able to provide hard copy information about the commodities involved by entering the STCC numbers of commodities involved in incidents into their computers.

Out of an abundance of caution, it must be emphasized that the STCC Code does *not* make the railroads' system just another "numbers game" Hazard Information System. STCC numbers allow precise commodity identification and verification, allow computer accessing for commodity information, provide a means for the retention of hazardous materials movement statistics and assist in the computer generation of shipping documents. They are not intended for use by the general public and, thus, require no first-level-of-response decoding. Their primary purpose is fulfilled at the shipper/carrier interface and in the ability of the shipper or carrier to make precise commodity information known to emergency personnel * * *.

Emergency Action Guide

A unique feature of the AAR Hazard Information System is the Emergency Action Guide for Hazardous Materials Incidents * * *.

The purpose of the Emergency Action Guide is to indicate, primarily for carrier personnel, an initial response pattern to be taken to save lives and prevent injuries. Such an initial response will usually not extend beyond the first fifteen minutes or so following an

accident and, with this in mind, the Guide identifies the basic nature of the hazard for each classification of material and describes the "ground rules" for initial emergency action. The Guide, while not suggested as a mandatory requirement, is proposed to be included as part of a trainman's timetable for relevant operations and could be displayed by poster in cabooses and locomotives. When reproduced on durable material, and perhaps folded, such a guide could also be carried in truck cabs, fire engines, and police vehicles. Recommended procedures for using the Guide would include instructions to those to whom it is issued to read it in advance of an emergency in order that, when an applicable section of the Guide could be easily found.

A basic purpose of the Emergency Action Guide is to fill the gap between the accident and the receipt of information from the party responding to the emergency telephone number and, even if the Guide was not part of the information carried on local community emergency vehicles, it could be available from the train crew, or from the truck driver, to assist the first emergency units on the scene.

The above is not a complete reproduction of the AAR's comments, nor is the copyrighted AAR Emergency Action Guide reproducible in this notice. Sample pages submitted by the AAR may be reviewed in the docket file. However, the quoted comments are representative of AAR's viewpoints concerning matters covered by this Notice. The MTB agrees that primary reliance must still be placed on shipping papers for information relative to "non-bulk" shipments, and that while the display of information on shipping papers has considerably improved following the adoption of regulations under Docket HM-112, further improvements are necessary. The MTB agrees that an identification number should be assigned to hazardous materials for rapid communication of information and employment in the emergency response system. The MTB agrees with the AAR that an emergency action guide or emergency response manual should be employed in the improved system. However, the MTB does not fully agree with the AAR's recommendations on how to accomplish improvements in these three areas.

The Identification Numbers

The MTB is proposing that the UN numbering system be used as the basis for implementation of an improved

emergency response system. For a number of years, the United Nations Committee of Experts on the Transport of Dangerous Goods has been assigning identification numbers to specific chemicals and generic descriptions for "dangerous goods." This system is becoming more and more recognized on a worldwide basis. It is referenced in the Dangerous Goods Code of the International Maritime Consultative Organization and is under consideration for adoption in the forthcoming standards to be implemented by the International Civil Aviation Organization. This system also is referenced in various procedural documents under development pertaining to international trade documentation. The MTB recently was advised by its Canadian Government counterpart, Transport Canada, that UN identification numbers will be used within Canada in connection with shipments of hazardous materials and that the numbers will be the basis for the Canadian emergency response system.

Several important factors were considered by the MTB in deciding to propose the use of the basic UN numbering system for improved emergency response information:

1. The numbers are assigned by Governmental authorities under the aegis of the Economic and Social Council of the United Nations and have the same meaning throughout worldwide commerce.

2. They have been assigned specifically to identify hazardous materials (dangerous goods) and are intended to have no other meaning or use. Thus, their formulation and application is not dictated by any other competing or overriding considerations.

3. They are assigned, for the most part, to materials requiring separate recognition that are shipped in commercial quantities. Therefore, only four digits are necessary. Other chemical identifier systems have as many as nine digits. The fewer the digits in an identification number, the greater its reliability in an emergency response system employing radio and telephone communications.

4. Numbers are assigned on the basis of the next open number without regard to the particular chemical properties of a material, thereby, avoiding any problems in the availability of numbers for future assignments. Availability of numbers almost inevitably would be a problem if the internal arrangement of digits was meant to have some special meaning; e.g., a chemical grouping or properties assignment. The use of

identification numbers will (1) serve to verify descriptions of chemicals; (2) provide for rapid identification of materials when it may be inappropriate or, even worse, confusing to require display of lengthy chemical names on vehicles; (3) assist in preparation of correct documentation when language translation is necessary; and (4) be an aid in speeding communication of information on materials from accident scenes and the return of more accurate emergency response information. For example, the UN number for acetone is 1090, while the number for acetone cyanohydrin is 1541—a distinction of great importance in conveying appropriate emergency response information.

It is proposed to list UN or U.S. identification numbers in a new column 3a of § 172.101. The number will be preceded by "UN" if the description preceding it is exactly the same or sufficiently similar to the international description (as displayed in the IMCO Code). If the description in § 172.101 is significantly different but addresses the same material as a UN entry, it will be given the same number but will be preceded by "NA" in the United States and Canada. A four-digit number beginning with "9" indicates there is no corresponding UN description (specific or generic) for the material assigned that number. This is the mechanism the MTB and Transport Canada propose to use to assign identification numbers to materials, such as hazardous substances, that have not as yet been assigned numbers by the United Nations Committee of Experts.

The AAR is to be complimented on its attempts to implement a hazardous materials identification numbering system. Its efforts in this regard have, in MTB's opinion, led the way towards providing an improved emergency response capability for hazardous materials. This Standard Transportation Commodity Code (STCC) system, in the absence of any established alternative, is being used in U.S. rail transport with increased frequency. Nevertheless, the MTB believes that what it is proposing in this Notice is preferable to the STCC system as a national, multimodal system for the following reasons:

1. While the 49 STCC series is not to be used for economic purposes, by necessity its formulation was constrained by the need for it to "bridge" into other STCC series numbers established for freight rating/statistical purposes. The following STCC listings illustrate this point:

Specified name in STCC tariff 1-G	STCC number
Combustible liquid n.o.s. (asphalt tile plasticizer)	49 154 08
Combustible liquid n.o.s. (plasticizers, paint, lacquer or varnish)	49 154 10
Combustible liquid n.o.s. (bell dressing)	49 154 16
Combustible liquid n.o.s. (electric wire saturating or finish compound, paraffin base)	49 154 18
Combustible liquid n.o.s. (bay rum)	49 154 20
Combustible liquid n.o.s. (perfumery)	49 154 22
Combustible liquid n.o.s. (after shave lotions)	49 154 24
Combustible liquid n.o.s. (polishing wheel cement thinner)	49 154 26

It is obvious that many STCC entries would serve no useful purpose for improved emergency response. There are a number of entries in Section 172.101 that are end-use terms, a practice which should not be expanded unless proven necessary.

2. If the descriptions in § 172.101 are greatly expanded, as suggested by the AAR, the undesirable result would be reduced accuracy and rapidity of access to information that is essential.

3. The STCC identification numbering system is published in a tariff which is on file with the Interstate Commerce Commission. Additions or deletions are made by, or under the supervision of, representatives of the railroad industry. Neither the transfer of all the listings for hazardous materials in the STCC Tariff nor incorporation of the tariff by reference is appropriate for publication in the Department's Hazardous Materials Regulations. If the AAR believes there are materials inappropriately described by generic descriptions in § 172.101, it should petition the MTB to describe each of them by technical name, thereby affording public participation in a rulemaking proceeding.

4. Recognition of the STCC system is limited to the United States and even within the United States its acceptance and use is further limited—primarily to the shipment of materials by railroad. It is not recognized on a worldwide basis, nor is it likely to be in light of the now-established UN numbering system and the growing application of that system.

Display of the Identification Number

The MTB proposes to require the display of the identification number, as listed in proposed column 3a of § 172.101, on all shipping papers as the third element of a basic description (immediately following the hazard class entry) and on the outside of packagings of 110-gallons capacity or less (immediately following the prescribed shipping name of contents). It also proposes to require that the number be displayed on orange panels affixed to portable tanks, cargo tanks, and tank

cars. While not a part of this proposal, the MTB will consider in the future the need to expand the required display of the orange panel to other than bulk shipments of materials.

The MTB believes that the display of the identification numbers must be as uniform as possible to enable ready recognition by emergency response personnel. Further, the MTB recognizes that, with display of the identification numbers on vehicles, it may not be necessary to expand the name marking requirements for tank cars and cargo tanks—an alternative of questionable benefit when complex chemical names are involved. The display of the numbers on the orange panel will lead to rapid identification of contents. If an identification number addresses a generic description, and such a description is considered inadequate for a particular material, the MTB believes the material should be described in § 172.101 by technical name with an identification number assigned to it following an appropriate rulemaking proceeding. The MTB recognizes that it may have to consider a number of additions and changes to the list of hazardous materials in the future.

Concerning the marking of identification numbers on packages, two major factors were considered. First, freight personnel often became the first contact "emergency" personnel when spills and leaks occur. The MTB visualizes that they will be able to make use of the manual in the same manner as emergency response personnel. Sole dependence on complex chemical names without reference to an identification number may lead to an erroneous response. This same view applies to emergency response personnel coming into contact with packages directly in vehicles, on freight docks, or elsewhere. The second factor is the value of the identification number in verifying the shipping information displayed on documents with the information displayed on packages to preclude error.

The Manual

One of the principal comments the HMRB received in response to its proposals under Docket HM-103 was the view that the proposed system (HI) placed heavy reliance on a manual that the HMRB suggested would be placed in each of the 392,000 emergency vehicles (fire, police, etc.) in the Nation. At approximately the same time as the initial proposal under HM-103, the Office of Hazardous Materials initiated distribution of its "Emergency Services Guide for Selected Hazardous Materials" which provides guidance

during the initial phases of an emergency for 45 selected materials that are transported in bulk quantities. To date, more than 680,000 copies of the Guide have been distributed to fire, police, and other emergency services organizations without charge. This fact, plus information that good use has been made of the manual, reinforces the MTB's view that a manual should be a viable part of this improved emergency response effort. It will serve to provide immediate emergency response information, especially important during the first minutes when many judgements and decisions must be made.

The MTB has undertaken the development of a manual of approximately 100 pages that will address virtually all hazardous materials transported in commerce. The manual is being developed on the principle that its statements of information and recommended actions must be concise and clearly understood. In examining other manuals, it is evident that there are only a limited number of recommendations (instructions) that can be given in a manual even though the recommendation may address hundreds of materials. Rather than write a manual with separate instructions for each material—a method that would be unduly burdensome, expensive, and unnecessary—the MTB is planning the manual according to the following format. At the beginning of the manual there will be two lists of virtually all domestic and international shipping names for hazardous materials. The first list will be arranged in numerical order of identification numbers, and the second list in alphabetical order. In both lists, there will be a page reference number associated with each entry. The numbered pages, approximately 60 to 70, will contain initial emergency response information and instructions. Many materials calling for the same initial emergency response action will be covered by the same page of information and instructions. The information pages are being developed in a style similar to those contained in the "H" manual proposed under Docket HM-103.

The MTB believes that, in many instances, the manual will be all that is needed at the scene of an incident to terminate a minor event or to keep a minor event from becoming a major event of great consequence. However, when a situation requires further assistance, the manual refers the user to CHEMTREC (Chemical Transportation Emergency Center) and other organizations to obtain more detailed information and the help of technical experts.

Other features of the manual under development include (1) display of certain chemical descriptions in red to indicate when evacuation may be necessary; (2) evacuation tables related to small and large spills of the materials listed in red; (3) a page devoted to the display of placards with an indication that the recommendation on a particular page should be followed relative to each placard if, for some reason, shipping papers are not available or the identification number is not displayed; and (4) a typical shipping paper highlighting the description of a hazardous material and its identification number.

Exclusions

The proposals in this Notice do not apply to any material for which its proper shipping description does not have an associated identification number displayed in column 3a of § 172.101. Included in this category would be Consumer commodities, ORM-D and classes A and B explosives.

Consumer commodities properly classed ORM-D due to their quantity and form are not considered to pose a risk sufficient to warrant the application of these requirements. Classes A and B explosives, while under consideration for inclusion in the future, will have to be reviewed in greater detail to determine if a large number of identification numbers are necessary to make more finite distinctions in their risks or if a complete restructuring of the explosives descriptions would be appropriate. The MTB believes that, at the present time, it is desirable to use the "A" and "B" references for explosives presently displayed on shipping papers and placards for direct application in the manual and for communications.

Other Actions

This rulemaking proposal is considered to be a matter of high priority to the MTB. Therefore, other proposals pertaining to the hazardous materials communications regulations will be dealt with in two separate rulemaking actions. Included in these actions will be proposals to (1) permit the use of certain international descriptions (IMCO and forthcoming ICAO descriptions emanating primarily from the UN recommendations); (2) require further description for certain n.o.s. entries; (3) prescribe additional labeling requirements and permit use of certain newly adopted international labels; (4) require a special marking on portable tanks, cargo tanks and tank cars containing unodorized LP gas; and

(5) address a number of petitions pertaining to shipping papers, certifications and placarding.

Implementation: Priorities and Costs

The MTB views the timing of the implementation of requirements proposed in this Notice as the major feature of its cost. This view is based on factors such as the present inventories of preprinted shipping documents, premarked (name of contents) inventories of packagings, and the necessary training and education associated with the implementation of the procedures necessary to comply with the regulations proposed herein if they are adopted. Therefore, the MTB believes it should make a statement concerning its contemplated implementation of the regulations proposed in this Notice.

The highest priority will be placed on implementation of documentation and identification (the orange panel) requirements applicable to transportation of hazardous materials in portable tanks, cargo tanks and tank cars. The MTB believes the mandatory compliance date should be no more than one year after the date of publication of the final rule.

The second highest priority will be placed on implementation of the documentation requirements for hazardous materials in packaging (other than bulk) excluding those, such as Consumer commodities, ORM-D, that will not be assigned identification numbers. The MTB believes the mandatory compliance date should be no longer than one year after the date of publication of the final rule.

The lowest priority will be assigned to packaging (less than 110-gallon capacity) markings. The MTB believes that two years should be provided for implementation or, as an alternative, a "grandfather clause" should be provided for packagings in stock prior to the effective date of the new regulations.

Concerning the display of identification numbers on orange panels, the MTB has obtained preliminary cost figures from a major supplier of labels and placards and has determined that, depending on the quantities ordered, the costs of prenumbered panels would be approximately as follows: Panels made of tag board for one time use—10 to 25 cents per panel; panels made of extruded vinyl for short term use—20 to 45 cents per panel; panels made of cast vinyl with plastic coating having an estimated life of five years—38 to 55 cents per panel. The vinyl panels would be adhesive backed to facilitate attachment.

The MTB expects the greatest costs will be incurred in the display of the orange panels on cargo tanks operated by common/contract carriers because of the high frequency in the change of usage of cargo tanks in this particular segment of the transportation industry. This fact is recognized in the existing regulations relative to the marking of the name of contents of cargo tanks. However, the MTB believes the added cost associated with implementation of these proposed requirements is warranted in the interest of providing an improved emergency response capability and is preferable to the alternative of extending the present tanks, as is presently required for portable tanks.

Specific views are invited concerning the proposed implementation of the regulations proposed in this Notice. Commenters should provide factual information concerning inventories of preprinted documents, adjustments in ADP programs, packaging turnover, and training. Broad generalized statements will not be beneficial to the MTB in its efforts to make a serious determination of how the rules are to be implemented, if they are adopted.

In further regard to implementation, the MTB was asked recently if any of the present regulations would preclude application of orange panels such as are proposed in this rulemaking. The MTB's response indicated there is no existing regulation that would prohibit the display of the United Nations

identification number after the class entry on a shipping document, nor the display of an orange panel bearing an identification number.

The MTB originally considered that a rulemaking action of this type should be the subject of an advance notice of proposed rulemaking in order to solicit public comments relative to its development. On further consideration, the MTB has decided that a notice of proposed rulemaking is appropriate in order to expedite implementation since the proposals contained herein are confined to one basic issue; i.e., the display of an identification number, with other matters pertaining to improved communications being made the subject of separate rulemaking actions.

Conclusion

The MTB believes (1) adoption of the hazardous materials identification system proposed in this Notice will be a vital initial step in improving emergency response capabilities; (2) that, while the system can function without reliance on a manual, a manual of the type it has under development will significantly enhance emergency response capabilities, particularly during the first minutes of an emergency; (3) the proposed system is compatible intermodally and internationally and will be applicable to bulk and non-bulk shipment to an extent considered necessary; and (4) the proposed system is capable of integration with existing documentation, packaging and vehicle

identification requirements that will insure the accuracy of information transmitted to and from emergency response personnel.

In consideration of the foregoing, it is proposed to amend Part 172 of Title 49, Code of Federal Regulations as follows:

1. In § 172.100 paragraph (d) would be amended by adding the following to the end of the paragraph.

§ 172.100 Purpose and use of the table.

(d) * * * Column 3(a) lists the identification numbers assigned to hazardous materials. Those preceded by a "UN" are associated with descriptions considered appropriate for international shipments as well as domestic shipments. Those preceded by an "NA" are associated with descriptions that are not recognized for international shipments, except to and from Canada. If an identification number is the "9000" series, it is either associated with the description of a material that is not appropriately covered by international hazardous materials (dangerous goods) shipping standards or not appropriately addressed by such standards for emergency response information purposes.

2. Section 172.101, the Hazardous Materials Table, would be revised by the addition of column 3(a) to read as follows:

BILLING CODE 4910-60-M

S172.101 Hazardous Materials Table

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§172.101 Hazardous Materials Table (cont'd)

S172.101 Hazardous Materials Table (cont'd)

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(1)	(2)	(3)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments				
				ID Number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number									
	<i>Ammonium nitrate-Fuel mixtures. See High explosive</i>											
	Ammonium nitrate mixed fertilizer	Oxidizer	UN2069	Oxidizer	173.158	173.182	25 pounds	100 pounds	1,2	1,2		
	Ammonium nitrate (no organic coating)	Oxidizer	NA1842	Oxidizer	173.158	173.182	25 pounds	100 pounds	1,2	1,2		
	Ammonium nitrate (organic coating)	Oxidizer	NA1942	Oxidizer	173.158	173.182	25 pounds	100 pounds	1,2	1,2		
	Ammonium nitrate-phosphate	Oxidizer	UN2070	Oxidizer	173.158	173.182	25 pounds	100 pounds	1,2	1,2		
E	Ammonium oxalate (RQ-5000/2270)	ORM-A	NA2449	None	173.510	25 pounds	100 pounds	2	2			
	Ammonium perchlorate	Oxidizer	UN1442	Oxidizer	173.159	173.510	25 pounds	100 pounds	1,2	4		
						173.250a						
	<i>Ammonium perchlorate. See High explosives</i>											
	Ammonium permanganate	Oxidizer	NA1482	Oxidizer	None	173.154	Forbidden	Forbidden	1,2	1,2		
	<i>Ammonium picrate. See High explosive</i>											
	Ammonium picrate, wet (with 10% or more water)	Flammable solid	UN1810	Flammable solid	173.182		1 pound	1 pound	1	4		
A	Ammonium polysulfide solution	ORM-A	UN2818	None	173.505	173.510	10 gallons	55 gallons				
						173.605						
E/A	Ammonium silicofluoride (RQ-1000/454)	ORM-B	UN2854	None	173.510	173.510	25 pounds	100 pounds	2	2		
E/W	Ammonium sulfate (RQ-5000/2270)	ORM-E	NA2090	None	173.510	173.510	No limit	No limit	2	2		
	Ammonium sulfate nitrate	ORM-C	NA1477	None	173.505	172.510			1,2	1,2		
E	Ammonium sulfide solution (RQ-5000/2270)	Flammable liquid	UN2683	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2		
E	Ammonium sulfate (RQ-1000/2270)	ORM-E	NA0990	None	173.510	173.510	No limit	No limit	2	2		
E	Ammonium tartrate (RQ-5000/2270)	ORM-E	NA0901	None	173.510	173.510	No limit	No limit	2	2		
E	Ammonium thiocyanate (RQ-5000/2270)	ORM-E	NA0902	None	173.510	173.510	No limit	No limit	2	2		
E	Ammonium thiocyanate (RQ-5000/2270)	ORM-E	NA2083	None	173.510	173.510	No limit	No limit	2	2		
	<i>Ammunition, chemical (containing a Poison A liquid or gas). See Chemical ammunition (containing a Poison A material)</i>											
	<i>Ammunition, chemical (containing a Poison B material). See Chemical ammunition (containing a Poison B material)</i>											
	<i>Ammunition, chemical (containing an Irritating liquid or solid). See Chemical ammunition (containing an irritating material)</i>											
	Ammunition, chemical, explosive, with Poisons A material	Class A explosive		Explosive A and Poison gas	None	173.50	Forbidden	Forbidden	6	5		No other cargo may be stowed in the same hold with these items
	Ammunition, chemical, explosive, with Poisons B material	Class A explosive		Explosive A and Poison	None	173.50	Forbidden	Forbidden	6	5		No other cargo may be stowed in the same hold with these items
	Ammunition, chemical, explosive, with irritant	Class A explosive		Explosive A and Irritant	None	173.50	Forbidden	Forbidden	6	5		No other cargo may be stowed in the same hold with these items
	Ammunition for cannon with empty projectile	Class B explosive		Explosive B	None	173.50	Forbidden	Forbidden	1,2	5		
	Ammunition for cannon with explosive projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5		
	Ammunition for cannon with gas projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5		
	Ammunition for cannon with illuminating projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5		
	Ammunition for cannon with incendiary projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5		
	Ammunition for cannon with inert loaded projectile	Class B explosive		Explosive B	None	173.50	Forbidden	Forbidden	1,2	5		
	Ammunition for cannon with smoke projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5		
	Ammunition for cannon with solid projectile	Class B explosive		Explosive B	None	173.50	Forbidden	Forbidden	1,2	5		
	Ammunition for cannon with tear gas projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5		
	Ammunition for cannon with tear gas projectile	Class B explosive		Explosive B	None	173.50	Forbidden	Forbidden	1,2	5		
	Ammunition for cannon without projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5		
				Explosive B	None	173.50	Forbidden	Forbidden	1,2	5		
	Ammunition for small-arms with explosive projectile	Class A explosive		Explosive A	None	173.50	Forbidden	Forbidden	6	5		
	Ammunition for small-arms with incendiary projectile	Class A explosive		Explosive A	None	173.50	Forbidden	Forbidden	6	5		
	<i>Ammunition, non-explosive</i>											
	<i>Ammunition, rocket. See Rocket ammunition</i>											
	<i>Ammunition, small-arms. See Small-arms ammunition</i>											
B	Amyl acetate (RQ-1000/454)	Flammable liquid	UN1104	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2		
	Amyl acid phosphate	Cornstarch material	UN2819	Corrosive	173.244	178.245	1 quart	10 gallons	1,2	1,2		
	Amyl chloride	Flammable liquid	UN1107	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Amyl formate	Flammable liquid	UN1108	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Amyl mercaptan	Flammable liquid	UN1111	Flammable liquid	None	173.141	Forbidden	10 gallons	1,2	1		
	Amyl nitrite	Flammable liquid	UN1119	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4		

§172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) ID Number	(5) Label(s) required (if not excepted)	(6) Packaging		(7) Maximum net quantity in one package		(8) Water shipments					
					(a) Exceptions	(b) Specific require- ment	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(c) Cargo vessel	(d) Passenger vessel	(e) Other requirements			
	Amyl trichlorosilane	Corrosive material	UN1728	Corrosive	None	173.280	Forbidden	10 gallons	1	5	Keep dry			
	Amylamine	Flammable liquid	UN1106	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1				
	Amylene, normal	Flammable liquid	UN1106	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,3	1,3				
	Anhydrous ammonia. See Ammonia, anhydrous		UN1005											
	Anhydrous hydrazine. See Hydrazine, anhydrous		UN2029											
	Anhydrous hydrofluoric acid. See Hydrogen fluoride													
	Aniline oil drum, empty See 173.347(d)		UN1052											
B	Aniline oil, liquid (RQ-1000/454)	Poison B	UN1047	Poison	None	173.347	Forbidden	55 gallons	1,2	1				
	Anisoyl chloride	Corrosive material	UN1729	Corrosive	173.244	173.270	1 quart	1 quart	1	1	Do not accept unless returnable package notice is on drum and the instructions thereon have been carried out			
	Antifreeze compound, liquid	Flammable liquid	NA1142	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1	Slow away from oxidizing materials and acids			
	Antifreeze compound, liquid	Combustible liquid	NA1142	None	173.118a	None	No limit	No limit	1,2	1,2				
	Antifreeze preparation, liquid	Flammable liquid	NA1142	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1				
	Antifreeze preparation, liquid	Combustible liquid	NA1142	None	173.118a	None	No limit	No limit	1,2	1,2				
	Antimonous chloride. See Antimony trichloride		UN1551											
A	Antimony lactate, solid	ORM-A	UN1650	None	173.606	173.510	No limit	1 quart	1	1	Keep dry. Glass carboys not permitted on pas- senger vessels			
E	Antimony pentachloride (RQ-1000/454)	Corrosive material	UN1780	Corrosive	173.247									
E	Antimony pentachloride solution (RQ- 1000/454)	Corrosive material	UN1781	Corrosive	173.244	173.245	1 quart	5 pints	1	1	Keep dry. Glass carboys not permitted on pas- senger vessels			
	Antimony pentafluoride	Corrosive material	UN1782	Corrosive	None	173.246	Forbidden	25 pounds	1	5	Keep dry			
EA	Antimony potassium tartrate solid (RQ- 1000/454)	ORM-A	UN1551	None	173.606	173.510	No limit	No limit						
A	Antimony sulfide, solid	ORM-A	NA1925	None	173.506	173.510	No limit	No limit						
E	Antimony tribromide, solid (RQ-1000/454)	Corrosive material	NA1648	Corrosive	173.244	173.246b	20 pounds	100 pounds	1,2	1,2	Keep dry.			
E	Antimony tribromide, solution (RQ-1000/ 454)	Corrosive material	NA1749	Corrosive	173.244	173.245	1 quart	5 pints	2	2	Keep dry.			
E	Antimony trichloride solid (RQ-1000/454)	Corrosive material	NA1750	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry.			
E	Antimony trichloride solution (RQ-1000/ 454)	Corrosive material	NA1753	Corrosive	173.244	173.245	1 quart	5 pints	1	1	Keep dry.			
E	Antimony trifluoride, solid (RQ-1000/454)	Corrosive material	NA1549	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry.			
E	Antimony trifluoride, solution (RQ-1000/ 454)	Corrosive material	NA1549	Corrosive	173.244	173.245	1 quart	5 pints	2	2	Keep dry.			
R	Antimony trioxide (RQ-5000/2270)	ORM-K	NA2072	None	173.510	No limit	No limit	2	2					
	Aqua ammonia solution (containing 44% or less ammonia). See Ammonium hydroxide													
	Argon	Nonflammable gas	UN1006	Nonflammable gas	173.306	173.302	150 pounds	300 pounds	1,2	1,2				
	Argon, liquid pressurized	Nonflammable gas	UN1901	Nonflammable gas	None	173.314	Forbidden	900 pounds	1,2	1,2				
	Arsenic acid, solid	Poison B	UN1653	Poison	173.364	173.365	50 pounds	300 pounds	1,2	1,2				
	Arsenic acid solution	Poison B	UN1654	Poison	173.364	173.365	1 quart	55 gallons	1,2	1,2				
	Arsenic bisulfide, solid	Poison B	UN1555	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenic bisulfide (fuming) liquid. See arsenic trichloride		NA1653											
	Arsenic disulfide. See Arsenic sulfide, solid	Poison B	NA1657	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenic iodide, solid	Poison B	UN1658	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenic pentoxide, solid (RQ-5000/2270)	Poison B	UN1654	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenic, solid	Poison B	NA1657	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenic sulfide, solid	Poison B	UN1650	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
E	Arsenic trichloride, liquid (RQ-5000/454)	Poison B and ORM-K	UN1661	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	Keep dry			
E	Arsenic trioxide, solid (RQ-5000/454)	Poison B	NA1655	Poison	173.364	173.365	50 pounds	200 pounds	2	2				
E	Arsenic trioxide (RQ-5000/2270)	Poison B	UN1653	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenic, white, solid. See Arsenic trioxide, solid													
	Arsenical compound n.o.s., liquid, or arsenical mixture, n.o.s., liquid	Poison B	UN1650	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2				
	Arsenical compound n.o.s., solid, or arsenical mixture, n.o.s., solid	Poison B	UN1657	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	Keep dry			
	Arsenical dip, liquid (sheep dip)	Poison B	UN1652	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenical dust	Poison B	UN1653	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenical fume dust	Poison B	UN1652	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2				
	Arsenious acid, solid. See Arsenic trioxide, solid													
	Arsenious and mercuric iodide solution	Poison B	NA2810	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2				
	Asbestite	Poison A	UN2185	Poison gas and Flammable gas	None	173.326	Forbidden	1	5					
W	Asbestos, or or above its flashpoint	ORM-C	NA2500	None	173.1090(a)	173.1090(b)	No limit	Forbidden	1,2	1,2	Store and handle to avoid airborne particles. When applicable, no fire or residue thereof may be present in the furnace, heating the sub- stance while the vehicle is on board a cargo vehicle			
	Asphalt, cut back	Flammable liquid	NA1008	Flammable liquid	173.110	173.131	1 quart	10 gallons	1,2	1				

S172.101 Hazardous Materials Table (cont'd)

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(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required (if not excepted)	Packaging		Maximum net quantity in one package	(7) Water shipments			
					(e) Exceptions	(f) Specific require- ments		(g) Passenger carrying aircraft or railcar	(h) Cargo only aircraft	(i) Cargo vessel	(j) Passenger vessel
									(k) Other requirements		
*	Asphalt, cut back <i>Automobile, motorcycle, tractor, or other self-propelled vehicle. See Motor Vehicle.</i> <i>Automobile, motorcycle, tractor, or other self-propelled vehicle engine, or other mechanical apparatus, with charged electric storage battery, wet. See Motor Vehicle.</i> 1-Aziridinyl phosphine oxide (tris). See Tri-(1-aziridinyl) phosphine oxide.	Combustible liquid	NA1093	None	173.118a	None	No limit	No limit	1,2	1,2	
	<i>Bags, burlap, used must be classed for the hazardous material previously contained in bag. See 173.28, 173.29.</i> Bags, sodium nitrate, empty and unwashed	UN2361									
*	Barium azide, wet, 50% or more water	Flammable solid	UN19359	Flammable solid	None	173.155	Forbidden	25 pounds	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
		UN1571	Flammable solid	None	173.230	Forbidden	1 pound	1,2	1,2	Stow away from heavy metals	
	Barium chloride	Oxidizer	UN1446	Oxidizer	173.153	173.168	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds. Stow away from powdered metals
*	Barium chloride, wet	Oxidizer	NA1440	Oxidizer	173.153	173.168	25 pounds	200 pounds	1,2	1,2	Separate from ammonium compounds. Stow away from powdered metals
E	Barium cyanide, solid (RQ-10/4.54)	Poison B	UN1649	Poison	173.370	173.370	25 pounds	200 pounds	1,2	1,2	Separate from ammonium compounds. Stow away from powdered metals
A	Barium nitrate	Oxidizer	UN1448	Oxidizer	173.158	173.189	25 pounds	100 pounds	1,2	1,2	Stow away from acids
	Barium oxide	ORM-B	UN1634	None	173.603	173.510	25 pounds	100 pounds	1,2	1,2	
	Barium perchlorate	Oxidizer	UN1447	Oxidizer	173.153	173.164	25 pounds	100 pounds	1,2	1,2	Stow away from powdered metals
	Barium permanganate	Oxidizer	UN1448	Oxidizer	173.153	173.164	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds and hydrogen peroxide
	Barium peroxide (barium dioxide)	Oxidizer	UN2680	Oxidizer	173.163	173.168	25 pounds	100 pounds	1,2	1,2	Keep dry
	Barrel, empty. See Drum, empty	Corrosive material	NA2794	Corrosive	None	173.280	Forbidden	5 pints	1,2	1,2	
	Battery charged with electrolyte (acid or alkaline battery fluid)	Corrosive material	NA2794	Corrosive	173.260		Forbidden	No limit	1,2	1,2	
	<i>Battery dry. Not subject to Parts 170-189 of this subchapter.</i>	Corrosive material	NA2794	Corrosive	173.250	173.280	No limit	No limit	1/2	1,2	Keep dry
	Battery, electric storage, wet	Corrosive material	NA2794	Corrosive	None	173.258	Forbidden	2 gallons	1,2	1,2	
	Battery, electric storage, wet, with automobile, auto parts, engine (or other specifically named mechanical apparatus)	Corrosive material	NA2794	Corrosive	173.258		Forbidden	5 pints	1,2	1,2	
	Battery, electric storage, wet with containers of corrosive battery fluid	Corrosive material	NA2794	Corrosive	None	173.258	Forbidden	1 quart	1,2	1,2	
	Battery fluid. See Electrolyte (acid) or Alkaline battery fluid	ORM-C	None	None	173.505	173.915			1,2	4	
	Battery parts (plates, grids, etc. unwashed, exhausted)	Combustible liquid	UN1980	None	173.118a	None	No limit	No limit	1,2	1,2	
	Benzaldehyde	Flammable liquid	UN1114	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1	
B	Benzene (benzol) (RQ-1000/454)	Corrosive material	UN9798	Corrosive	None	173.250a	Forbidden	5 pints	1	5	
	Benzene phosphorus dichloride	Corrosive material	UN2799	Corrosive	None	173.250a	Forbidden	6 pints	1	5	
	Benzene phosphorus thiodichloride	Flammable liquid	UN1115	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
E	Benzene acid (RQ-5000/2270)	ORM-E	NA1094	None	173.510	No limit	No limit	2	2	2	
E	Benzonitrile (RQ-1000/454)	Combustible liquid	UN2224	None	173.118b	None	No limit	2	2	2	
E	Benzoyl chloride (RQ-1000/454)	Corrosive material	UN1736	Corrosive	173.244	173.247	1 quart	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Benzoyl peroxide	Organic peroxide	NA2087	Organic peroxide	None	173.157	Forbidden	25 pounds	1,2	1	
	Benzyl bromide (bromotoluene, alpha)	Corrosive material	UN1737	Corrosive	None	173.381	Forbidden	5 pints	1	5	Keep dry
E	Benzyl chloride (RQ-100/45.4)	Corrosive material	UN1738	Corrosive	173.214	173.205	Forbidden	1 quart	1	4	Keep dry
	Benzyl chloroformate (or Benzyl chloroformate)	Corrosive material	UN1739	Corrosive	None	173.238	Forbidden	5 pints	1	5	Keep dry
E	Beryllium chloride (RQ-100/2270)	Poison B	NA1566	Poison	173.364	173.365	50 pounds	200 pounds	2	2	
E	Beryllium compound, n.o.s.	Poison B	UN1560	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
E	Beryllium fluoride (RQ-3000/2270)	Poison B	NA1565	Poison	173.364	173.365	50 pounds	200 pounds	2	2	
E	Beryllium nitrate (RQ-3000/2270)	Oxidizer	UN2464	Oxidizer	173.158	173.182	25 pounds	100 pounds	2	2	
	Black powder	Class A explosive	None	None	173.60	Forbidden	Forbidden	6	5		
	Black powder igniter with empty cartridge bag	Class C explosive	NA0825	Explosive C	None	173.108	50 pounds	150 pounds	1,3	1,3	
	Blasting agent, n.o.s.	Blasting agent	NA0267	Explosive C	None	173.114a	Forbidden	100 pounds	1,2	1,2	
	Blasting caps-(1,000 or fewer) (Show actual number)	Class C explosive	NA0267	Explosive C	None	173.108	Forbidden	Forbidden	1,2	5	
	Blasting caps-electric (1,000 or fewer) (Show actual number)	Class C explosive		Explosive C	None	173.108	Forbidden	Forbidden	1,2	5	Portable magazine or metal locker. Do not store blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded.
	Blasting caps-electric (more than 1,000) (Show actual number)	Class A explosive		Explosive A	None	173.60	Forbidden	Forbidden	6	5	Portable magazine or metal locker. Do not store blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded.
	Blasting caps-(more than 1,000) (Show actual number)	Class A explosive		Explosive A	None	173.60	Forbidden	Forbidden	6	5	Magazine. Do not store blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded.
											Do not store blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded.

§172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) ID Number	(5) Label(s) required (if not excepted)	(6) Packaging		Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments	(a) Passenger carrying aircraft or raillar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Pass- enger vessel	(c) Other requirements	
	Blasting caps with metal clad mild detonating fuse-(1,000 or fewer) (Show actual number)	Class C explosive	NA0981	Explosive C	None	173.103	Forbidden	Forbidden	1,2	5	Portable magazine or metal locker. Do not store blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded.	
	Blasting caps with safety fuse-(1,000 or fewer) (Show actual number)	Class C explosive	NA0361	Explosive C	None	173.103	Forbidden	Forbidden	1,2	5	Portable magazine or metal locker. Do not store blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded.	
	Blasting caps with safety fuse-(more than 1,000) (Show actual number)	Class A explosive		Explosive A	None	173.66 173.67	Forbidden	Forbidden	6	5	Do not store blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded.	
	Blasting gelatin. See High explosive Blasting powder. See Black powder											
W	Bleaching powder, containing 39% or less available chlorine	ORM-C	UN2208	None	173.505	173.920			1,2	1,2	Keep dry. Store separate from flammable liq- uids and acids. (Store away from oils, grease, and similar organic materials.)	
*	Boiler compound, liquid	Corrosive material	UN1760	Corrosive	173.244	173.249	1 quart	10 gallons	1,2	1,2		
	Bomb, explosive. See Explosive bomb Bomb, explosive with gas, smoke, or incendiary material. See Explosive bomb Bomb, fireworks. See Fireworks, special Bomb, gas, smoke, or incendiary.				173.55							
	Bomb, incendiary, or smoke without bursting charge. See Fireworks, special Bomb, practice, with electric primer or electric squib (non-explosive)											
	Bomb, sand-loaded or empty (non-explosive)											
A	Bone oil Booster, explosive	ORM-A Class A explosive		None Explosive A	173.55 None	173.510 173.69	No limit Forbidden	No limit Forbidden	6	5		
*	Bordeaux arsenite, solid	Poison B	NA2759	Poison	173.854	173.925	50 pounds	200 pounds	1,2	1,2		
*	Bordeaux arsenite, liquid	Poison B	NA2769	Poison	178.845	178.846	1 quart	55 gallons	1,2	1,2		
	Boron tribromide	Corrosive material	UN2082	Corrosive	None	173.251	Forbidden	1 quart	1	5		
	Boron trichloride		UN1741	Corrosive	None	173.251	Forbidden	1 quart	1,2	5	Store in well ventilated space. Shade from radiant heat. Segregation same as for non- flammable gases.	
	Boron trifluoride	Nonflammable gas	UN1008	Nonflammable gas and Poison	None	173.802	Forbidden	Forbidden	1	5	Store away from living quarters and foodstuffs	
	Boron trifluoride-acetic acid complex		UN1742	Corrosive material	173.244	173.247	1 quart	1 gallon	1,2	1,2		
	Bottles, having previously contained a hazardous material and not cleaned. See 173.29											
*W	Box toe board (nitrocellulose base)	ORM-Q		None	173.606	173.925			1,2	1,2	Provide cool storage in a compartment having a temperature not exceeding 130 deg F., well away from any sources of heat, and in position to protect or move, even to jettison in event of fire. Separate from explosives, flammable liquids or gases, oxidizing materi- als, organic peroxides, or corrosive liquids.	
*	Box toe gum	Combustible liquid	UN2088	None	173.118a	None	No limit	No limit	1,2	1,2		
*	Box toe gum	Flammable liquid	UN2080	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
	Bromine	Corrosive material	UN1744	Corrosive	None	173.252	Forbidden	1 quart	1	5	Keep cool	
	Bromine pentafluoride	Oxidizer	UN1745	Oxidizer	None	173.246	Forbidden	100 pounds	1	5	Shade from radiant heat. Segregation same as for corrosives	
	Bromine trifluoride	Oxidizer	UN1746	Oxidizer and Poison	None	173.246	Forbidden	100 pounds	1	5	Shade from radiant heat. Segregation same as for corrosives	
	Bromoacetic acid, solid	Corrosive material	UN1938	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry	
*	Bromoacetic acid solution	Corrosive material	UN1938	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	Glass carboys in hoppers not permitted under deck	
	Bromoacetone, liquid	Poison A	UN1569	Poison gas	None	173.244	173.249	Forbidden	1	5	Segregation same as for flammable liquids	
	Bromobenzene	Combustible liquid	UN2514	Nose	173.118a	None	No limit	No limit	1,2	1,2		
	Bromotoluene, alpha. See Benzyl bromide		UN1787									
W	Bucaine, solid (dimethoxy strychnine)	Poison B	UN1670	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Burlap bags, cleaned (vacuum cleaned, wheel cleaned, or otherwise mechanically brushed). See Burlap cloth											
W	Burlap bags, new. See Burlap cloth											
AW	Burlap bags, used and unwashed, or not cleaned	ORM-C		None	173.920		No limit	No limit	1	1	Keep cool	
W	Burnt cloth (hessian)	ORM-C	NA1925	None Flammable solid	173.921	173.150	Forbidden	Forbidden	1,2	1,2	Keep dry. Store away from organic liquids	
	Burnt cotton, not repicked	Flammable solid	NA1925	Flammable solid	None	173.160	Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, ox- idizing materials, or organic peroxides	
	Burnt fiber	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5	Separate from flammable gases or liquids, ox- idizing materials or organic peroxides	
	Burster, explosive											
	Butadiene, inhibited	Flammable gas	UN1010	Flammable gas	173.308	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1	Store away from living quarters	
E	Butane or Liquefied petroleum gas. See Liquefied petroleum gas	Flammable liquid	UN1011	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Butyl acetate (HQ-3000/2270)	Flammable liquid	UN1128	Flammable liquid								

S172.101 Hazardous Materials Table (cont'd)

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(1)	(2)	(3)	(4)	(5)		(6)	(7)			
				Packaging			Maximum net quantity in one package			
				(a) Exceptions	(b) Specific require- ments		(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	
* E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Labels required (if not excepted)						
n-Butyl acid phosphate. See Acid butyl phosphate			UN1718							
Butyl alcohol. See Alcohol, n.o.s.			UN1120							
Butyl bromide, normal		Flammable liquid	UN1126	Flammable liquid	173.118 173.119	1 quart	10 gallons	1,2	1	
Butyl chloride		Flammable liquid	UN1127	Flammable liquid	173.118 173.119	1 quart	10 gallons	1,2	1	
Butyl ether		Flammable liquid	UN1149	Flammable liquid	173.118 173.119	1 quart	10 gallons	1,2	1,2	
Butyl formate		Flammable liquid	UN1128	Flammable liquid	173.118 173.119	1 quart	10 gallons	1,2	1	
n-Butyl isocyanate		Flammable liquid	UN2485	Flammable liquid and poison	173.118 173.119	1 quart	10 gallons	1,2	1	
Butyl mercaptan		Flammable liquid	UN2347	Flammable liquid	None	173.141	Forbidden	10 gallons	1,3	
Butyl phosphoric acid. See Acid butyl phosphate			UN1718							
E n-Butyl phthalate (RQ-100/45.4)		ORM-B Corrosive material	NA8085	None	173.510	No limit	No limit	2	2	
Butyl trichlorosilane			UN1747	Corrosive	None	173.280	Forbidden	10 gallons	2	
B Butylamine (RQ-100/45.4)			UN1125	Flammable liquid	173.118 173.119	1 quart	10 gallons	1,2	1	
Butyraldehyde			UN1129	Flammable liquid	173.118 173.119	1 quart	10 gallons	1,2	1	
E Butyric acid (RQ-5000/2270)		Corrosive material	UN2820	Corrosive	173.244 178.245	1 quart	10 gallons	1,2	1,2	
E Cadmium acetate (RQ-100/45.4)		ORM-E	NA2570	None	173.510	No limit	No limit	2	2	
E Cadmium bromide (RQ-100/45.4)		ORM-E	NA2570	None	173.510	No limit	No limit	2	2	
E Cadmium chloride (RQ-100/45.4)		ORM-E	NA2570	None	173.510	No limit	No limit	1,2	1,2	
E Calcium arsenate, solid (RQ-1000/45.4)		Poison B	UN1573	Poison	173.364 173.367 173.388	50 pounds	200 pounds	1,2	1,2	
E Calcium arsenite, solid (RQ-1000/45.4)		Poison B	NA1574	Poison	173.364 173.365	50 pounds	200 pounds	1,2	1,2	
E Calcium bisulfite solution. See Calcium hydrogen sulfite solution			NA2693							
E Calcium carbide (RQ-5000/2270)		Flammable solid	UN1402	Flammable solid and dangerous when wet	None	173.178	Forbidden	25 pounds	1,2	
Calcium chlorate		Oxidizer	UN1452	Oxidizer	173.158 173.163	25 pounds	100 pounds	1,2	1,2	
Calcium chloride		Oxidizer	UN1455	Oxidizer	None	173.160	Forbidden	100 pounds	1,2	
E Calcium chromate (RQ-1000/45.4)		ORM-E	NA8096	None	173.510	No limit	No limit	2	2	
AW Calcium cyanamide, not hydrated, containing more than 0.1% calcium carbide		ORM-C	UN1408	None	173.945	25 pounds	200 pounds	1,2	1,2	
E Calcium cyanide, solid or Calcium cyanide mixture, solid (RQ-10/4.4)		Poison B	UN1575	Poison	173.370	25 pounds	200 pounds	1,2	1,2	
E Calcium decylbenzenesulfonate (RQ-1000/45.4)		ORM-E	NA3097	None	173.510	No limit	No limit	2	2	
E Calcium hydrogen sulfite solution		Corrosive material	UN1828	Corrosive	173.244 173.245	1 quart	5 gallons	1,2	1,2	
E Calcium hydroxide (RQ-5000/2270)		ORM-B	NA9098	None	173.510	50 pounds	100 pounds	2	2	
E Calcium hypochlorite mixture, dry (Containing more than 39% available chlorine) (RQ-10/4.4)		Oxidizer	UN1748	Oxidizer	173.155 173.217	50 pounds	100 pounds	1,2	1,2	
Calcium, metal		NA1401	Flammable solid	Flammable solid and Dangerous when wet	173.158 173.154	25 pounds	100 pounds	1,2	4	
Calcium, metal, crystalline		NA1401	Flammable solid	Flammable solid and Dangerous when wet	None	173.231	Forbidden	25 pounds	1,2	
EAW Calcium nitrate (See Sec. 173.162 Note)		Oxidizer	UN1454	Oxidizer	173.158 173.182	25 pounds	100 pounds	1,2	1,2	
Calcium oxide (RQ-3000/2270)		ORM-B	UN1910	None	173.505 173.250	25 pounds	100 pounds	1,2	1,2	
Calcium permanganate		Oxidizer	UN1456	Oxidizer	173.158 173.154	25 pounds	100 pounds	1,2	1,2	
Calcium peroxide		Oxidizer	UN1457	Oxidizer	173.158 173.156	25 pounds	100 pounds	1,2	1,2	
Calcium phosphide		Flammable solid	UN1360	Flammable solid and Dangerous when wet	None	173.161	Forbidden	25 pounds	1	
Calcium resinate		UN1318	Flammable solid	Flammable solid and Dangerous when wet	None	173.168	Forbidden	125 pounds	1	
Calcium resinate, fused		UN1314	Flammable solid	Flammable solid	None	173.166	Forbidden	125 pounds	1	
AW Camphene		ORM-A	NA9011	None	173.505 173.810	No limit	No limit	1,8	1,8	
Camphor oil		UN1130	None	173.118a	No limit	No limit	1,2	1,2		
Cannon primers		Class C explosive	NA0378	Explosive C	None	173.107	50 pounds	150 pounds	1,3	
Caprylyl peroxide solution		Organic peroxide	NA2129	Organic peroxide	173.153 173.221	1 quart	1 quart	1,2	4	
Caps, blasting. See Blasting caps										
Caps, toy. See Toy caps		ORM-A	NA2771	None	173.510	100 pounds	No limit	2	2	
Captan (RQ-10/4.4)		ORM-A	NA2757	None	173.505 173.510	No limit	No limit	2	2	
EA Carbaryl (RQ-100/45.4)		Poison B	NA2757	Poison	173.384 173.385	50 pounds	200 pounds	2	2	
E Carbofuran (RQ-10/4.4)										

If stowed under deck, must be stowed in a recoverable location.

Keep dry. Stow away from copper, its alloys, and salts.

Separate from ammonium compounds. Stow away from powdered metals and cyanides. Separate from ammonium compounds, powdered materials, and cyanides.

Segregation same as for flammable solids labeled Dangerous When Wet.

Stow away from corrosive liquids. Keep dry.

Keep cool and dry.

Keep cool and dry. Segregation same as for flammable solids labeled Dangerous When Wet.

Keep cool and dry. Segregation same as for flammable solids labeled Dangerous When Wet.

Keep dry. Stow away from explosives, acids, combustible materials, and ammonium salts.

Separate from ammonium compounds and hydrogen peroxide.

Keep dry.

Keep cool and dry. Segregation same as for flammable solids labeled Dangerous When Wet.

Keep cool. Stow separate from combustible materials, explosives, or acids.

S172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) ID Number	Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
E	Carboxylic acid, liquid or Phenol, liquid (Liquid tar acid containing over 50% benzophenone) (RQ-1000/454)	Poison B	NA2512	Poison	178.845	178.349	1 quart	55 gallons	1,2	1,2		
E	Carboxylic acid, or Phenol (RQ-1000/454)	Poison B	NA1671	Poison	178.964	178.360	50 pounds	250 pounds	1,2	1,2		
E	Carbon bisulfide, or Carbon disulfide (RQ-3000/2270)	Flammable liquid	UN1181	Flammable liquid	178.121	Forbidden	1	5				
	Carbon dioxide, liquefied	Nonflammable gas	UN2187	Nonflammable gas	178.306	178.304	150 pounds	300 pounds	1,2	1,2	Keep cool. Not permitted on any vessel transporting explosives	
	Carbon dioxide-nitrous oxide mixture	Nonflammable gas	UN1015	Nonflammable gas	178.906	178.304	150 pounds	300 pounds	1,2	1,2		
	Carbon dioxide-oxygen mixture	Nonflammable gas	UN1014	Nonflammable gas	178.306	178.304	150 pounds	300 pounds	1,2	1,2		
AW	Carbon dioxide, solid, or Dry ice, or Carbonic	ORM-A	UN1845	None	178.815	440 pounds	440 pounds	1	1		Stow away from open ventilators. Stow away from cyanides or cyanide mixtures, liquid or dry	
	Carbon monoxide	Flammable gas	UN1016	Flammable gas	178.906	178.302	Forbidden	150 pounds	1	4		
	Carbon remover, liquid	Flammable liquid	UN1182	Flammable liquid	178.318	178.119	1 quart	10 gallons	1,2	1		
BAW	Carbon tetrachloride (RQ-3000/2270) Carbonyl chloride. See Phosgene Carboys empty, must be classed for the hazardous material previously contained in carboy. See 173.29	ORM-A	UN1846	None	178.605	178.620	1 quart	55 gallons	1,2	1,2	Stow away from living quarters	
	Cartridge bags, empty, with black powder igniter	Class C explosive	NA0325	Explosive C	None	178.100	50 pounds	150 pounds	1,2	1,2		
	Cartridge cases, empty, primed	Class C explosive	UN0370	Explosive C	None	178.107	50 pounds	150 pounds	1,2	1,2		
	Cartridge, practice ammunition	Class C explosive	NA0362	Explosive C	None	178.101a	50 pounds	150 pounds	1,2	1,2		
	Cave oil. See Gasoline or Naptha Casinghead gasoline. See Gasoline		UN1257	None	178.605	178.652			1,2	1,2		
W	Castor pomace; See Castor beans Caustic, potash, dry, solid, flake, bead, or granular. See Potassium hydroxide, dry, etc.		UN1813									
	Caustic potash, liquid or solution. See Potassium hydroxide solution		UN1814									
	Caustic soda, dry, solid, flake, bead, or granular. See Sodium hydroxide, dry, etc.		UN1823									
	Caustic soda, liquid or solution. See Sodium hydroxide solution		UN1824									
	Cellulose acetate. See Ethylene glycol, monoethyl ether acetate											
	Cellulose. See Ethylene glycol monoethyl ether											
	Cement, adhesive, n.o.s. See Cement, liquid, n.o.s.		NA1135									
	Cement, container, linoleum, tile, or wallboard, liquid	Flammable liquid	NA1133	Flammable liquid	178.118	178.132	1 quart	15 gallons	1,2	1		
	Cement, leather	Flammable liquid	NA1133	Flammable liquid	178.118	178.139	1 quart	10 gallons	1,2	1		
	Cement, liquid, n.o.s.	Combustible liquid	NA1183	None	178.118a	None	No limit	No limit	1,2	1,2		
	Cement, liquid, n.o.s.	Flammable liquid	NA1185	Flammable liquid	178.118	178.132	1 quart	10 gallons	1,2	1		
	Cement, pyroxylon	Flammable liquid	NA1133	Flammable liquid	178.118	178.132	1 quart	15 gallons	1,2	1,2		
	Cement, roofing, liquid	Flammable liquid	NA1183	Flammable liquid	178.118	178.139	1 quart	10 gallons	1,2	1		
	Cement, rubber	Flammable liquid	NA1183	Flammable liquid	178.118	178.132	1 quart	15 gallons	1,2	1		
	Cesium metal	Flammable solid	UN1407	Flammable solid	None	178.208	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet	
	Charcoal, activated	Flammable solid	UN1862	Flammable solid	178.162	178.162	25 pounds	200 pounds	1,2	1,2		
	Charcoal briquettes or briquets	Flammable solid	NA1861	Flammable solid	178.162	178.162	50 pounds	60 pounds	1,2	1,2		
	Charcoal screenings, made from 'pinon' wood	Flammable solid	NA1861	Flammable solid	178.162	178.162	25 pounds	200 pounds	1,2	1		
	Charcoal screenings, wet	Forbidden	NA1361	Flammable solid	178.162	178.162	25 pounds	200 pounds	1,2	1,2		
	Charcoal, shell	Flammable solid	NA1361	Flammable solid	178.162	178.162	25 pounds	200 pounds	1,2	1,2		
	Charcoal, wet	Flammable solid	NA1361	Flammable solid	178.162	178.162	25 pounds	200 pounds	1,2	1,2		
	Charcoal, wood, ground, crushed, granulated, or pulverized	Flammable solid	NA1361	Flammable solid	178.162	178.162	50 pounds	60 pounds	1,2	1,2		
	Charcoal, wood, lump	Flammable solid	NA1361	Flammable solid	178.162	178.162	None	Forbidden	1	1		
	Charcoal wood screenings, other than 'pinon' wood screenings	Flammable solid	NA1361	Flammable solid	178.162	178.162	50 pounds	60 pounds	1,2	1,2		
	Charged oil well jet perforating gun (total explosive contents in guns 20 pounds or more per gun vehicle)	Class A explosive	NA1361	Explosive A	None	178.53	Forbidden	Forbidden			Forbidden	
	Charged oil well jet perforating gun (total explosive contents in guns not exceeding 20 pounds per motor vehicle or special offshore down hole tool pallet)	Class C explosive	NA0124	Explosive C	None	178.53	Forbidden	Forbidden	1,2	5	Forbidden	

§172.101 Hazardous Materials Table (cont'd)

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S172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	(3A) ID Number	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one packaging		(7) Water shipments			
					(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railear	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
	Chromium oxychloride or Chromyl chloride Chromous chloride (RQ-1000/454) Cigar and cigarette lighter fluid. See Lighter fluid Cigarette lighter (or other similar ignition device) Cigarette lighter (or other similar ignition device) Cigarette load Cloud gas cylinder. See Chemical ammonium Coal briquettes, hot Coal facings. See Coal ground bituminous, etc. Coal gas. See Hydrocarbon gas, nonliquefied Coal, ground bituminous, sea coal, coal facings, etc. Coal oil (export shipment only). See Kerosene	Corrosive material UN1758 ORM-E NA9102 UN1226	Corrosive None	None None	173.247 173.510	Forbidden No limit	1 gallon No limit	1 2	1 2	1 2	Keep dry. Glass carboys not permitted on passenger vessels	
E	Coal tar dye, liquid (not otherwise specifically named in Sec. 172.101)	Flammable gas UN1057	Flammable gas 173.21 175.10	178.21 178.118	21 ounces 25 pounds	Forbidden Forbidden	1 1	1 1	1 1	1 1		
E	Coal tar distillate	Combustible liquid NA1157	None	173.118a None	No limit No limit	No limit No limit	1.2 1.2	1.2 1.2	1.2 1.2	1.2 1.2		
E	Coal tar distillate	Flammable liquid NA1186	Flammable liquid 173.118	173.119	1 quart	10 gallons	1.2	1	1	1		
E	Coal tar dye, liquid (not otherwise specifically named in Sec. 172.101)	Corrosive material NA1780	Corrosive 173.244	173.245 173.249a	1 quart	10 gallons	1.2	1.2	1.2	1.2		
E	Coal tar light oil	Combustible liquid NA1137	None 173.118a	173.118a None	No limit No limit	No limit No limit	1.2 1.2	1.2 1.2	1.2 1.2	1.2 1.2		
E	Coal tar light oil	Flammable liquid NA1106	Flammable liquid 173.118	173.119	1 quart	10 gallons	1.2	1	1	1		
E	Coal tar naphtha	Combustible liquid NA2568	None 173.118a	173.118a None	No limit No limit	No limit No limit	1.2 1.2	1.2 1.2	1.2 1.2	1.2 1.2		
E	Coal tar naphtha	Flammable liquid NA2553	Flammable liquid 173.118	173.119	1 quart	10 gallons	1.2	1	1	1		
E	Coal tar oil	Combustible liquid NA1137	None 173.118a	173.118a None	No limit No limit	No limit No limit	1.2 1.2	1.2 1.2	1.2 1.2	1.2 1.2		
E	Coal tar oil	Flammable liquid NA1186	Flammable liquid 173.118	173.119	1 quart	10 gallons	1.2	1.2	1.2	1.2		
E	Coating solution	Flammable liquid UN1180	Flammable liquid 173.118	173.132	1 quart	15 gallons	1.2	1	1	1		
E	Cobalt resinate, precipitated	Flammable solid NA9103	Flammable solid None	173.118	Forbidden	125 pounds	1.2	1.2	1.2	1.2		
E	Cobaltous bromide (RQ-1000/454)	ORM-E NA9104	None None	173.610 173.610	No limit No limit	No limit No limit	2 2	2 2	2 2	2 2		
E	Cobaltous formate (RQ-1000/454)	ORM-E NA9105	None Poison B	173.610 173.964	No limit 50 pounds	No limit 200 pounds	2 1.2	2 1.2	2 1.2	2 1.2		
E	Cobaltous sulphate (RQ-1000/454)	UN1584	None	173.955	173.955	1.2	1.2	1.2	1.2	1.2	Keep dry	
W	Cocculus, solid (fishberry)	NA1372										
	Coconut meal pellets containing at least 6% and not more than 13% moisture and not more than 10% residual fat content	Forbidden										
	Coir. See Fibers	Flammable liquid NA2060	Flammable liquid 173.118	173.119	1 quart	10 gallons	1.2	1	1	1		
	Coke, hot	UN2565										
	Collodion	Collodion cotton, wet. See Nitrocellulose, wet										
	Cologne spirits (ethanol)	Flammable liquid UN1967	Flammable liquid 173.118	173.125	1 quart	10 gallons	1.2	1	1	1		
	Columbian spirits (wood alcohol)	Flammable liquid UN1280	Flammable liquid 173.118	173.125	1 quart	10 gallons	1.2	1	1	1		
	Combination fuse	Class C explosive NA0367	Explosive C None	173.105	50 pounds	150 pounds	1.2	1.2	1.2	1.2		
	Combination primer	Class C explosive NA0378	Explosive C None	173.107	60 pounds	150 pounds	1.2	1.2	1.2	1.2		
	Combustible liquid, n.o.s.	Combustible liquid UN1903	None 173.118a	None	No limit	No limit	1.2	1.2	1.2	1.2		
	Commercial shaped charge. See High explosive											
	Common fireworks. See Fireworks, common											
	Compound, cleaning, liquid	Flammable liquid NA1993	Flammable liquid 173.118	173.119	1 quart	10 gallons	1.2	1	1	1		
	Compound, cleaning, liquid	Corrosive material NA1760	Corrosive 173.244	173.245	1 quart	1 quart	1.2	1.2	1.2	1.2		
	Compound, cleaning, liquid	Combustible liquid NA1098	None 173.118a	None	No limit	No limit	1.2	1.2	1.2	1.2		
	Compound, cleaning, liquid (containing hydrochloric (muriatic) acid)	Corrosive material NA1780	Corrosive 173.244	173.248	1 quart	1 gallon	1	1	1	1		
	Compound, cleaning, liquid (containing hydrofluoric acid)	Corrosive material NA1790	Corrosive 172.244	172.256	1 quart	1 gallon	1	1	1	1		
	Compound, cleaning liquid (containing phosphoric acid, acetic acid, sodium potassium hydroxide)	Corrosive material NA1760	Corrosive 173.244	173.245 173.249a	1 quart	1 quart	1.2	1.2	1.2	1.2		
	Compound, enamel	Flammable liquid NA1268	Flammable liquid 173.118	173.128	1 quart	55 gallons	1.2	1	1	1		
	Compound, lacquer, paint, or varnish, removing, reducing, or thinning, liquid	Combustible liquid NA1142	None 173.118a	173.345	1 quart	1 gallon	1.2	1.2	1.2	1.2		
	Compound, lacquer, paint, or varnish, removing, liquid	Corrosive material NA1760	Corrosive 173.244	173.345	1 quart	1 gallon	1.2	1.2	1.2	1.2		
	Compound, lacquer, paint, or varnish, removing, reducing, or thinning, liquid	Flammable liquid NA1142	Flammable liquid 173.118	173.128	1 quart	55 gallons	1.2	1	1	1		
	Compound, polishing, liquid	Flammable liquid NA1142	Flammable liquid 173.118	173.129	1	55 gallons	1.2	1	1	1		

S172.101 Hazardous Materials Table (cont'd)

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(1) Hazard class W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	(3) ID Number	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package	(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments		(c) Passenger carrying aircraft or rafcar	(d) Cargo only aircraft	(e) Cargo vessel	(f) Passenger vessel
*	Compound, rust preventing or Compound, rust removing	Corrosive material	NA1760	Corrosive	173.144	173.245	1 quart	1 gallon	1,2	1,2	
*	Compound, tree or weed killing, liquid	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
*	Compound, tree or weed killing, liquid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
*	Compound, tree or weed killing, liquid	Flammable liquid	NA1993	Flammable	173.118	173.119	1 quart	10 gallons	1,2	1	
*	Compound, tree or weed killing, liquid	Poison B	NA2810	Poison	173.845	173.846	1 quart	65 gallons	1,2	1,2	
*	Compound, tree or weed killing, solid	Oxidizer	NA1478	Oxidizer	173.153	173.154	25 pounds	100 pounds			
*	Compound, vulcanizing, liquid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
*	Compound, vulcanizing, liquid	Flammable liquid	NA1142	Flammable	173.118	173.119	1 quart	10 gallons	1,2	1	
*	Compound, water treatment, liquid. See Water treatment, liquid	NA1780									
	Compressed gas, n.o.s.	Flammable gas	UN1854	Flammable	173.805	173.802	ForbIDDEN	800 pounds	1	4	
	Compressed gas, n.o.s.	Nonflammable gas	UN1855	Nonflammable	173.806	173.802	150 pounds	800 pounds	1,2	1,2	
	Consumer commodity	ORM-D		None	173.610	173.1200	65 pounds gross	65 pounds gross			Not subject to requirements of Part 176
	Container, reused or empty, must be classed for the hazardous material previously contained. See 173.28, 173.29										
E	Copper acetarsenite, solid (RQ-100/45.4)	Poison B	UN1585	Poison	173.884	173.307	50 pounds	200 pounds	1,2	1,2	
EA	Copper arsenite, solid	Poison B	UN1586	Poison	173.864	173.365	50 pounds	200 pounds	1,2	1,2	
EA	Copper chloride (RQ-10/4.54)	ORM-B	UN2802	None	173.505	173.510	25 pounds	100 pounds			
W	Copper cyanide	Poison B	UN1587	Poison	173.870	173.960	25 pounds	200 pounds	1,2	1,2	Slow away from acids Segregation same as for flammable solids. Sep- arates from flammable gases or liquids, oxidiz- ing materials, or organic peroxides
	Copra pellets. See Coconut meal pellets	Class C explosive	NA0288	Explosive C	None	173.104	50 pounds	300 pounds	1,2	1,2	
	Cordage detonant fuse										
	Corrosive battery fluid. See Electrolyte (acid), or Alkaline Corrosive battery fluid	Corrosive material	UN1780	Corrosive	173.244	173.245 173.246a	1 quart	1 quart	1	4	For material that meets only the corrosion to skin criteria of 49 CFR 173.240(a)(1), "under deck" stowage is also authorized if the de- scription includes the additional entry speci- fied by Sec. 172.1720(b).
	Corrosive liquid, n.o.s.	Corrosive material	UN1758	Corrosive	173.244	173.245b	25 pounds	100 pounds	1	4	For material that meets only the corrosion to skin criteria of 49 CFR 173.240(a)(1), "under deck" stowage is also authorized if the de- scription includes the additional entry speci- fied by Sec. 172.2030(b).
	Corrosive solid, n.o.s.	Corrosive material									
*	Cosmetics, n.o.s.	Combustible liquid	NA1998	None	173.118a	None	No limit	No limit	1,2	1,2	
*	Cosmetics, n.o.s.	Flammable liquid	NA1998	Flammable	173.118	173.119	1 quart	10 gallons	1,2	1	
*	Cosmetics, n.o.s.	Flammable solid	NA1325	Flammable	173.153	173.154	28 pounds	100 pounds	1,2	1,2	
*	Cosmetics, n.o.s.	Oxidizer	NA1478	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	
*	Cosmetics, n.o.s., liquid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
*	Cosmetics, n.o.s., solid	Corrosive material	NA1759	Corrosive	173.244	173.245b	25 pounds	100 pounds	1	4	
W	Cotton	ORM-C		None	173.605	173.965			1,2	1,2	Keep dry
W	Cotton batting	ORM-C		None	173.605	173.970			1,2	1,2	Segregation same as for flammable solids. See 176.900 to 176.904
W	Cotton batting dress. See Cotton batting										
W	Cotton, burnt. See Burnt cotton										
W	Cotton seed hull fiber or shavings, pulp, or cutinters. See Cotton batting										
W	Cotton sweepings. See Cotton waste										
W	Cotton wadding. See Cotton batting										
W	Cotton waste	ORM-C		None	173.605	173.976			1,2	1,2	Keep dry. Stow away from vegetable or animal oils. See 176.900 to 176.904
	Cotton waste, oily (with more than 5% of animal or vegetable oil)	Flammable solid	UN1564	Flammable			Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, ox- idizing materials, or organic peroxides
E	Coutaphos (RQ-10/4.54)	Poison B	NA2783	Poison	173.864	173.365	50 pounds	200 pounds	2	2	
	Crociatop, coal tar	Combustible liquid	NA1098	None	173.118a	None	No limit	No limit	1,2	1,2	
	Cresote oil. See Cresote coal tar										
E	Cresol (RQ-100/45.4)	Corrosive material	NA2016	Corrosive	173.244	173.245	1 gallon	55 gallons	2	2	
E	Crotonaldehyde (RQ-100/45.4)	Flammable liquid	UN1143	Flammable	173.118	173.119	1 quart	1 gallon	1,2	1	
	Crotonic acid	Corrosive material	UN2828	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Crotonylene	Flammable liquid	UN1144	Flammable	173.118	173.119	1 quart	10 gallons	1,2	4	
*	Crude nitrogen fertilizer solution (more than 25.5 p.s.i.g.)	Nonflammable gas	NA1048	Nonflammable	173.806	173.304	ForbIDDEN	800 pounds	1,2	1,2	
*	Crude oil, petroleum	Combustible liquid	NA1893	None	173.118a	None	No limit	No limit	1,2	1,2	

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§172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(8A) ID Number	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or aircar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
*	Crude oil, petroleum	Flammable liquid	NA1098	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Cumene hydroperoxide	Organic peroxide	NA2116	Organic peroxide	173.168	173.224	1 quart	1 quart	1,2	4		
E	Cupric acetate (RQ-100/45.4)	ORM-E	NA1016	None	173.510	No limit	No limit	2	2			
	Cupric cyanide. See Copper cyanide		UN1597									
E	Cupric nitrate (RQ-100/45.4)	Oxidizer	NA1479	Oxidizer	173.158	173.182	25 pounds	100 pounds	2	2		
E	Cupric oxalate (RQ-100/45.4)	ORM-E	NA2448	None	113.510	No limit	No limit	2	2			
E	Cupric sulfate, ammoniated (RQ-100/45.4)	ORM-E	NAP110	None	173.510	No limit	No limit	2	2			
E	Cupric sulfate (RQ-100/45.4)	ORM-E	NA5109	None	173.510	No limit	No limit	2	2			
E	Cupric sulfate (RQ-100/45.4)	ORM-E	NAP111	None	173.510	No limit	No limit	2	2			
*	Cupriethylene-diamine solution	Corrosive material	UN1701	Corrosive	173.244	173.249	1 quart	1 gallon	1,2	1,2		
*	Cyanide or cyanide mixture, dry	Poison B	UN1888	Poison	173.364	173.870	25 pounds	200 pounds	1,2	1,2		
	Cyanogen bromide	Poison B	UN1889	Poison	None	173.370	Forbidden	25 pounds	1	6		
E	Cyanogen chloride containing less than 0.9% water (RQ-10/4.54)	Poison A	UN1889	Nonflammable gas and Poison Gas	None	173.328	Forbidden	Forbidden	1	5	Keep dry. Stay away from acids. Shade from radiant heat. Segregation same as for corrosive materials.	
	Cyanogen gas	Poison A	UN1026	Flammable gas and Poison Gas	None	173.328	Forbidden	Forbidden	1	5	Shade from radiant heat.	
E	Cyclohexane (RQ-1000/454)	Flammable liquid	UN1145	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4		
	Cyclohexanone peroxide, 50 in 85% peroxide	Organic peroxide	NA2118	Organic peroxide	173.157	173.158	Forbidden	25 pounds	1	1		
	Cyclohexanone peroxide and bis (1- hydroxy cyclohexyl) peroxide mixture. See appropriate cyclohexanone peroxide entry immediately preceding.											
	Cyclohexanone peroxide, not over 50% peroxide											
	Cyclohexenyl trichlorosilane	Organic peroxide	NA2806	Organic peroxide	173.153	173.154	2 pounds	25 pounds	1,2	1,2		
	Cyclohexenyl trichlorosilane	Corrosive material	UN1702	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry.	
	Cyclopentane	Flammable liquid	UN1146	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4		
	Cyclopentane, methyl	Flammable liquid	UN2298	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4		
	Cyclopropane	Flammable gas	UN1027	Flammable gas	173.906	173.904	Forbidden	500 pounds	1,2	1		
	Cyclotetramethylenetrinitramine, wet with not less than 10 percent water. See high explosive.											
	Cyclotrimethylenetrinitramine, desensitized. See High explosive.											
	Cyclotrimethylenetrinitramine, wet with not less than 10% water. See High explosive.											
	Cylinder, empty, including ion tanks, must be classed for the hazardous material previously contained in cylinder. See 173.29											
EA	2,4-D esters. See 2,4-		NA2765									
	Dichlorophenoxyacetic acid esters											
EA	2,4-D. See 2,4-Dichlorophenoxyacetic acid	ORM-A	NA2765									
	DDT or Dichlorodiphenyltrichloroethane (RQ-1/454)		NA2761	None	173.505	173.510	No limit	No limit				
	Dead oil. See Creosote; coal tar											
	Decaborane	Flammable solid	UN1938	Flammable solid and Poison	173.118a	None	No limit	No limit	1,2	1,2		
	Decahydronaphthalene	Combustible liquid	UN1147	None	173.118a	None	No limit	No limit	1,2	1,2		
	Decalin. See Decahydronaphthalene		UN1127	Explosive C	None	173.108	50 pounds	150 pounds	1,2	1,2		
	Delay electric igniter	Class C explosive	NA0206	Explosive C	None	173.108	50 pounds	150 pounds	1,2	1,2		
	Denatured alcohol. See Alcohol, n.o.s.		UN1095									
	Depth bomb. See Explosive bomb											
	Detonating fuse, Class A, with or without radioactive components	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	3		
	Detonating fuse, Class C explosive	Class C explosive	UN0257	Explosive C	None	173.118	50 pounds	150 pounds	1,2	1,2		
	Detonating primer	Class A explosive		Explosive A	None	173.68	Forbidden	Forbidden	6	5		
*	Di-(2-ethylhexyl) phosphoric acid	Corrosive material	NA1802	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2		
*	Diacetone alcohol	Flammable liquid	UN1146	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Diacetyl	Flammable liquid	UN2340	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
EA	Diazinoon (RQ-1/454)	ORM-A	NA2768	None	173.505	173.510	No limit	No limit				
	Diazodinitrophenol. See initiating explosive											
A	Dibromodifluoromethane	ORM-A	UN1041	None	173.505	173.510	10 gallons	55 gallons				
W	1,2-Dibromoethane. See Ethylene dibromide		UN1605									
E	Dicamba (RQ-1000/454)	ORM-E	NA2769	None	None	173.510	No limit	No limit	2	2		
E	Dichlobenil (RQ-1000/54)	ORM-E	NA2769	None	None	173.510	No limit	No limit	2	2		
E	Dichlorone (RQ-1/454)	ORM-E	NA2761	None	None	173.510	No limit	No limit	2	2		
E	1,1-Dichloro-2,2-bis (p-chlorophenyl) ethane. See TDE											
	Dichloroacetic acid	Corrosive material	UN1764	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	Glass carboys in hampers not permitted under deck	

\$172.101 Hazardous Materials Table (cont'd)

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(1) */ E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(3A) ID Number	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package	(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments		(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Pas- senger vessel
	Dichloroacetyl chloride	Corrosive material	UN1785	Corrosive	178.244	178.247	1 quart	1 gallon	1	4	Keep dry
EA	Dichlorobenzene, ortho, liquid (RQ-100/ 45.4)	ORM-A	UN1591	None	173.505	173.510	No limit	No limit			
EA	Dichlorobenzene, para, solid (RQ-100/45.4)	ORM-A	UN1692	None	173.505	173.510	No limit	No limit			
	Dichlorobutene	Flammable liquid	NA2936	Flammable liquid	178.118	178.119	1 quart	10 gallons	1,2	1,2	
A	Dichlorodifluoroethylene	ORM-A	NA9018	None	178.505	178.510	10 gallons	55 gallons			
	Dichlorodifluoromethane	Nonflammable gas	UN1628	A Nonflammable gas	178.306	178.304 178.314	150 pounds	300 pounds	1,2	1,2	
	Dichlorodifluoromethane and difluoroethane mixture (constant boiling mixture)	Nonflammable gas	UN2402	Nonflammable gas	178.306	178.304 178.314	150 pounds	300 pounds	1,2	1,2	
	Dichlorodifluoromethane-dichlorotetrafluoroethane mixture	Nonflammable gas	NA1956	Nonflammable gas	178.306	178.304 178.314 178.315	150 pounds	300 pounds	1,2	1,2	
	Dichlorodifluoromethane-monochlorodifluoromethane mixture	Nonflammable gas	NA1856	Nonflammable gas	178.506	178.504 178.514 178.515	150 pounds	300 pounds	1,2	1,2	
	Dichlorodifluoromethane-trichloromonofluoromethane mixture	Nonflammable gas	NA1856	Nonflammable gas	178.306	178.304 178.314 178.315	150 pounds	300 pounds	1,2	1,2	
	Dichlorodifluoromethane-trichloromonofluoromethane-monochloro difluoromethane mixture	Nonflammable gas	NA1656	Nonflammable gas	178.306	178.304 178.314 178.315	150 pounds	300 pounds	1,2	1,2	
	Dichlorodifluoromethane-trichlorotrichlorofluoroethane mixture	Nonflammable gas	NA1856	Nonflammable gas	178.306	178.304 178.314 178.315	150 pounds	300 pounds	1,2	1,2	
	Dichlorodiphenyltrichlorethane. See DDT		NA2781								
	Dichloroethylene	Flammable liquid	UN1150	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Dichloroisopropyl ether	Corrosive material	UN2490	Corrosive	178.244	178.254	1 quart	10 gallons	1,2	1,2	
A	Dichloromethane or methylene chloride	ORM-A	UN1393	None	178.505	178.510	10 gallons	55 gallons			
	Dichloropentane	Flammable liquid	UN1162	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
EA	2,4-Dichlorophenoxyacetic acid esters (RQ- 100/45.4)	ORM-A	NA2765	None	None	173.510	50 pounds	No limit	2	2	
EA	2,4-Dichlorophenoxyacetic acid (RQ-100/ 45.4)	ORM-A	NA2765	None	178.505	173.510					
	Dichlorophenyltrichlorosilane	Corrosive material	UN1766	Corrosive	None	178.250	Forbidden	10 gallons	1	1	Keep dry
E	Dichloropropane. See Propylene dichloride		UN1279								
E	Dichloropropene and propylene dichloride mixture (RQ-5000/22.0)		NA2047	Flammable liquid	178.244	178.245	1 quart	10 gallons	1,2	1,2	
B	Dichloropropene (RQ-5000/22.0)		UN2047	Flammable liquid	173.119	173.119	1 quart	10 gallons	2	2	
E	2,2-Dichloropropionic acid (RQ-5000/22.0)	Corrosive material	NA1760	Corrosive	178.244	173.245	2 gallons	10 gallons	2	2	
E	Dichlorvos (RQ-10/4.5)	Poison B	NA2782	Poison	178.984	178.985	Forbidden	1 quart	2	2	
	Dicumyl peroxide 50% solution	Organic peroxide	NA2121	Organic peroxide	178.163	178.224	1 quart	1 quart	1,2	4	
	Dicumyl peroxide, dry	Organic peroxide	UN2121	Organic peroxide	173.163	173.194	2 pounds	25 pounds	1,2	1,2	
EA	Dieldrin (RQ-1/4.5)	ORM-A	NA2761	None	170.605	178.510	No limit	No limit			
	Diesel Fuel. See Fuel oil										
	Diethyl cellosolve. See Ethylene glycol		UN1165								
	Diethyl ether										
	Diethyl dichlorosilane	Flammable liquid	UN1767	Flammable liquid	None	178.135	Forbidden	10 gallons	1	1	Keep dry. Segregation same as for corrosives
	Diethyl ketone	Flammable liquid	UN1166	Flammable liquid	170.118	173.119	1 quart	10 gallons	1,2	1	
E	Diethylamine (RQ-1000/45.4)	Flammable liquid	UN1154	Flammable liquid	178.118	173.119	Forbidden	5 pints	1,8	4	
	Diethylene glycol dinitrate. See 173.51		UN2517								
	1,1-Difluoro 1-chloroethane. See Difluoromonochloroethane										
	Difluoroethane	Flammable gas	UN1080	Flammable gas	178.306	178.304 178.314 178.315	Forbidden	300 pounds	1,2	1	
	Difluoromonochloroethane	Flammable gas	UN2537	Flammable gas	173.300	178.304 178.314 178.315	Forbidden	300 pounds	1,2	1	
	Difluorophosphoric acid, anhydrous	Corrosive material	UN1768	Corrosive	None	178.275	Forbidden	1 gallon	1,2	1,2	
	Dihydropyran	Flammable liquid	UN2376	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4	
	Diisobutyl ketone	Combustible liquid	UN1157	None	178.118a	None	No limit	No limit	1,2	1,2	
	Diisooctyl acid phosphate	Corrosive material	UN1902	Corrosive	173.144	178.296	1 quart	1 quart	1,2	1,2	
	Diisopropylamine	Flammable liquid	UN1158	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Diisopropylbenzene hydroperoxide solution, not over 60% peroxide	Organic peroxide	NA2171	Organic peroxide	173.168	178.224	1 quart	1 quart	1,2	4	
	Diisopropylethanolamine	Corrosive material	UN2825	Corrosive	178.244	178.245	1 quart	10 gallons	1,2	1,2	
	Diisopropylether	Flammable liquid	UN1159	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,0	4	

Glass carboys in hampers not permitted under deck

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S172.101 Hazardous Materials Table (cont'd)

S172.101 Hazardous Materials Table (cont'd)

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(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(3A) ID Number	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments				
					(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements		
	Dye intermediate, liquid	Corrosive material	UN2801	Corrosive	173.244	173.245 173.249a	1 quart	10 gallons	1,2	1,2	Stow away from foodstuffs and living quarters		
E	Dynamite. See High explosive												
	EDTA. See Ethylenediaminetetraacetic acid												
	Electric blasting caps. See Blasting caps, electric												
	Electric squib												
	Electric storage battery, wet. See Battery, electric storage, wet												
	Electrolyte (acid), battery fluid (not over 47% acid)												
	Electrolyte (acid), or alkaline (corrosive) battery fluid packed with dry-storage battery												
	Electrolyte (acid), or alkaline (corrosive) battery fluid packed with battery charger, radio current supply device, or electronic equipment and actuating device.												
	Empty cartridge bag with black powder igniter	Glass C explosive	NA2794	Explosive C	None	173.244	173.237	1 quart	5 gallons	1,2	1,2	Glass carboys in hoppers not permitted under deck	
	Empty cartridge case, primed	Corrosive material	UN2796	Corrosive	173.244	173.237	50 pounds	150 pounds	1,3	1,3			
		Corrosive material	NA2797	Corrosive	None	173.258	Forbidden	5 pints	1,2	1,2			
		Corrosive material	NA2797	Corrosive	None	173.260	Forbidden	5 pints	1,2	1,2			
		Glass C explosive	NA0825	Explosive C	None	173.108	50 pounds	150 pounds	1,3	1,3			
		Glass C explosive	UN0055	Explosive C	None	173.107	50 pounds	150 pounds	1,3	1,3			
E	Enamel. See Paint, enamel, lacquer, etc.		UN1869	Poison	173.364	173.365	1 pound	10 pounds	1,2	1,2	If stowed under deck, must be stowed in a recoverable location.		
	Endosulfan (RQ-1/0.454)		NA2761	Poison B	173.364	173.366	60 pounds	200 pounds	1,2	1,2	If stowed under deck, must be stowed in a recoverable location.		
E	Endrin (RQ-1/0.454)		NA2761	Poison B	173.364	173.366	200 pounds	200 pounds	1,2	1,2	Not permitted in unventilated containers		
	Engine, internal combustion	Flammable gas	UN1960	Flammable gas	None	173.120	Forbidden	60 pounds	1,2	1,2			
	Engine starting fluid												
E	Epichlorohydrin (RQ-1000/454)	Flammable liquid	UN2028	Flammable liquid	173.118	173.118	1 quart	10 gallons	2	2			
	Eradicator, paint or grease, liquid	Flammable liquid	UN1850	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1			
	Etching acid, liquid, n.o.s.	Corrosive material	NA1760	Corrosive	None	173.298	Forbidden	10 pounds	1	5			
	Ethane	Flammable gas	UN1035	Flammable gas	173.906	173.904	Forbidden	500 pounds	1,2	4			
	Ether (ethyl)	Flammable liquid	UN1165	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	5			
E	Ether, Ethyl. See Ether	Poison II	NA2788	Poison II	173.364	173.365	Forbidden	1 quart	2	2			
	Ethion (RQ-10/4.54)	Flammable liquid	UN1173	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1			
	Ethyl acetate	Flammable liquid	UN1917	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1			
	Ethyl acrylate, inhibited												
E	Ethyl alcohol. See Alcohol, n.o.s.	Flammable liquid	UN1170	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1			
	Ethyl aldehyde. See Acetaldehyde												
	Ethyl benzene (RQ-1000/454)	Flammable liquid	UN1175	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1			
	Ethyl borate	Flammable liquid	UN1178	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	Keep dry		
	Ethyl butyl acetate	Combustible liquid	UN1177	None	173.118a	None	No limit	No limit	1,2	1,2			
	Ethyl butyl ether	Flammable liquid	UN1179	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1			
	Ethyl butyraldehyde	Flammable liquid	UN1176	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1			
	Ethyl butyrate	Flammable liquid	UN1180	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2			
	Ethyl chloride	Flammable liquid	UN1087	Flammable liquid	None	173.128	Forbidden	173.128	1,2	1	Segregation same as for flammable gases		
	Ethyl chloroacetate	Combustible liquid	UN1181	None	173.118	None	No limit	No limit	1,2	1,2			
	Ethyl chloroformate (chlorocarbonate)	Flammable liquid	UN1182	Flammable liquid and Poison	None	173.288	Forbidden	5 pints	1,2	1			
		Corrosive material	UN2558	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1,2	1			
	Ethyl crotonate	Flammable liquid	UN1862	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1			
	Ethyl dichlorosilane	Flammable liquid	UN1892	Flammable liquid	None	173.135	Forbidden	5 pints	1,2	1			
	Ethyl ether. See Ether	Poison II	UN1155	Poison II	173.118	173.119	1 quart	10 gallons	1,2	4			
	Ethyl formate	Flammable liquid	UN1190	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4			
	Ethyl lactate	Combustible liquid	UN1192	None	173.118a	None	No limit	No limit	1,2	1,2			
	Ethyl mercaptan	Flammable liquid	UN2363	Flammable liquid	None	173.141	Forbidden	10 gallons	1,2	1			
	Ethyl methyl ether	Flammable liquid	UN1039	Flammable liquid	None	173.118	Forbidden	10 gallons	1,2	1	Segregation same as for flammable gases		
	Ethyl methyl ketone	Flammable liquid	UN1193	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1			
	Ethyl nitrate (nitric ether)	Flammable liquid	NA1298	Flammable liquid	173.118	173.119	Forbidden	Forbidden	1,2	1			
	Ethyl nitrite (nitrous ether)	Flammable liquid	UN1164	Flammable liquid	None	173.118	Forbidden	Forbidden	1,2	5			
	Ethyl phenyl dichlorosilane	Corrosive material	UN2485	Corrosive	None	173.280	Forbidden	10 gallons	1	5			

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§172.101 Hazardous Materials Table (cont'd)

(1) * E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) ID Number	(5) Label(s) required (if not excepted)	Packaging		Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments	(a) Passenger carrying aircraft or rular	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
EAW	Ethyl phosphonochloro dichloride, anhydrous Ethyl phosphorous dichloride, anhydrous	Corrosive material	NA1760	Corrosive	173.244	173.245 173.246a	1 quart	1 quart	1	4		
	Ethyl phosphorodichloridate	Corrosive material	NA1760	Corrosive	173.244	173.245 173.246a	1 quart	1 quart	1	4		
EAW	Ethyl propionate	Corrosive material	NA1760	Corrosive	173.244	173.245 173.246a	1 quart	1 quart	1	4		
EAW	Ethyl silicate (tert ethyl ortho silicate)	Flammable liquid	UN1195	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
EAW	Ethyl trichlorosilane	Combustible liquid	UN1192	None	173.118a	None	No limit	No limit	1,2	1,2		
EAW	Ethylene	Flammable gas	UN1196	Flammable liquid	None	173.126	Forbidden	5 pints	1,2	1		
EAW	Ethylene chlorohydrin Ethylene dibromide (1,2-dibromethane) (RQ-1000/454)	Poison B ORM-A	UN1135 UN1608	Poison	173.846 173.505	173.346 173.620	1 quart 1 quart	500 pounds	1,2	4	Segregation same as for flammable liquids Slow away from living quarters	
E	Ethylene dichloride (RQ-5000/2270)	Flammable liquid	UN1184	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
E	Ethylene glycol diethyl ether (diethyl Cellosolve®)	Combustible liquid	UN1163	None	173.118a	None	No limit	No limit	1,2	1,2		
E	Ethylene glycol monoethyl ether (Cellosolve®)	Combustible liquid	UN1171	None	173.118a	None	No limit	No limit	1,2	1,2		
E	Ethylene glycol monoethyl ether acetate (Cellosolve acetate)	Combustible liquid	UN1172	None	173.118a	None	No limit	No limit	1,2	1,2		
E	Ethylene glycol monomethyl ether (methyl Cellosolve®)	Combustible liquid	UN1168	None	173.118a	None	No limit	No limit	1,2	1,2		
E	Ethylene glycol monomethyl ether acetate (methyl Cellosolve acetate)	Combustible liquid	UN1189	None	173.118a	None	No limit	No limit	1,2	1,2		
E	Ethylene imine, inhibited	Flammable liquid	UN1185	Flammable liquid and Poison	None	173.119	Forbidden	5 pints	1,2	1		
E	Ethylene oxide	Flammable liquid	UN1040	Flammable liquid	None	173.124	Forbidden	173.124	1,2	1	Segregation same as for flammable gases	
E	Ethylenediamine (RQ-1000/454)	Flammable liquid	UN1604	Flammable liquid	173.118	173.119	Forbidden	1 quart	2	2		
E	Ethylenediaminetetraacetic acid (RQ-5000/2270)	ORM-E	NA9117	None	173.510	No limit	No limit	2	2			
E	Ethylnexaldehyde	Combustible liquid	UN1191	None	173.118a	None	No limit	No limit	1,2	1,2		
E	Etiologic agent, n.o.s.	Etiologic agent	UN2814	Etiologic agent	173.988	173.987	173.988	4 liters				
W	Excelsior (shredded wood) when dry, clear, and free from oil	ORM-C	None	None	173.005	173.080			1,3	1,3		
W	Exothermic ferrochrome	ORM-C	None	None	173.005	173.085			1	1		
W	Exothermic ferromanganese. See Exothermic ferrochrome											
W	Exothermic silicon chrome. See Exothermic ferrochrome											
	Explosive auto alarm	Class C explosive	UN60001	Explosive C	None	173.121	50 pounds	150 pounds	1,2	1,2		
	Explosive bomb	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with these items	
	Explosive cable cutter	Class C explosive	UN0070	Explosive C	None	173.102	50 pounds	150 pounds	1,2	1,2		
	Explosive mine	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with these items	
	Explosive, new approval, and evaluation. See 173.86											
	Explosive power device, Class B	Class B explosive		Explosive B	None	173.94	Forbidden	150 pounds	1,2	5		
	Explosive power device, Class C	Class C explosive	NA0623	Explosive C	None	173.103	50 pounds	150 pounds	1,2	1,2		
	Explosive projectile	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with this material	
	Explosive release device	Class C explosive	UN0173	Explosive C	None	173.102	50 pounds	150 pounds	1,2	1,2		
	Explosive rivet	Class C explosive	UN0174	Explosive C	None	173.102	50 pounds	150 pounds	1,2	1,2		
	Explosive sample for laboratory examination											
	Explosive torpedo	Class A explosive		Explosive A	173.86	173.56	Forbidden	173.86	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with this material	
	Extract, liquid, flavoring	Flammable liquid	UN1197	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Fabric with animal or vegetable oil. See Fibers or fabric containing not more than 5% animal or vegetable fat											
AW	Feed, wet, mixed	ORM-C	None	None	173.505	173.090	Forbidden	Forbidden	3	3	Slow in cool, dry, well ventilated compartment. Do not stow bags over ten tiers high without flooring off. Do not overfill	
W	Felt, waste. See Cotton waste											
E	Felt, waste, wet. See Waste wool, wet											
E	Ferric ammonium citrate (RQ-1000/454)	ORM-E	NA8118	None	None	173.510	No limit	No limit	2	2		
E	Ferric ammonium oxalate (RQ-1000/454)	ORM-E	NA9119	None	None	173.510	No limit	No limit	2	2		
E	Ferric arsenite, solid	Poison B	UN1606	Poison	173.864	173.385	50 pounds	200 pounds	1,2	1,2		
E	Ferric arsenite, solid	Poison B	UN1607	Poison	173.864	173.385	50 pounds	200 pounds	1,2	1,2		
EA	Ferric chloride, solid, anhydrous (RQ-1000/454)	ORM-B	UN1773	None	173.505	173.510	20 pounds	100 pounds	1,2	1,2		
*E	Ferric chloride solution (RQ-1000/454)	Corrosive material	UN2582	Corrosive	173.244	173.245 173.245a	1 quart	10 quarts	1,2	1,2		

§172.101 Hazardous Materials Table (cont'd)

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(1)	(2)	(3)	(4)	(5)		(6)		(7)			
				Packaging		Maximum net quantity in one package ¹		Water shipments			
E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required if not excepted	(e) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
B	Ferric fluoride (RQ-100/45-4)	ORM-E	NA9120	None	173.510	No limit	No limit	2	2		
B	Ferric nitrate (RQ-1000/45-4)	Oxidizer ORM-E	UN1468 NA9121	Oxidizer None	173.169 173.510	25 pounds No limit	100 pounds No limit	2	2		
B	Ferric sulfate (RQ-1000/45-4)	ORM-A	NA9121	None	173.505	173.650					
W	Ferrophosphorus	ORM-A	UN1408	None	173.505	173.510	Forbidden	25 pounds	1,2	1,2	
AW	Ferrosilicon, containing 30% or more but not more than 70% silicon	ORM-A	NA9120	None	173.645						
B	Ferrous ammonium sulfate (RQ-1000/45-4)	ORM-B	NA9122	None	173.510	No limit	No limit	2	2		
B	Ferrous arsenate (iron arsenate), solid	Poison B ORM-B	UN1608 NA1769	Poison	173.964 None	173.985 173.510	50 pounds No limit	200 pounds No limit	2	2	
EA	Ferrous chloride, solid (RQ-100/45-4)	Corrosive material ORM-B	NA1760	Corrosive	173.244	173.245	1 quart	5 gallons	2	2	
E	Ferrous chloride, solution (RQ-100/45-4)	ORM-E	NA9125	None	173.510	No limit	No limit	2	2		
E	Fertilizer ammoniating solution containing free ammonia (more than 25.3 p.p.m.)	Nonflammable gas ORM-E	UN1043	Nonflammable gas	173.306	173.304	Forbidden	300 pounds	1,2	4	
	Fertilizer, tankage. See Garbage, tankage				173.314						
	Fibers, burnt	Flammable solid ORM-C	NA1872	Flammable solid	None	173.160	Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Fibers (jute, hemp, flax, sisal, coir, kapok, and similar vegetable fibers)	ORM-C	NA1872	None	173.505	173.965			1,2	1,2	Stow away from animal or vegetable oils. Segregation same as for flammable solids
W	Fibers or fabrics, containing not more than 5% animal or vegetable oil	Flammable solid NA1824	NA1873	Flammable solid	None	173.170	Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Film (nitrocellulose)	Flammable solid NA2002	NA1824	Flammable solid	None	173.177	50 pounds	200 pounds	1,2	1,2	Stow away from other flammable cargo or substances
	Film, photographic, (including scrap film), safety, nonflammable, or slow burning. Not subject to requirements of this subchapter	Nonflammable gas UN1044	NA1824	Nonflammable gas	173.906	150 pounds	300 pounds	1,2	1,2		
	Fire extinguisher	Corrosive material UN1774	NA0835	Corrosive	173.261		1 quart	1 gallon	1,2	1,2	
	Fire extinguisher charge containing sulfuric acid	Class C explosive NA0835	NA1774	Explosive C	None	173.100 173.105	50 pounds	200 pounds	1,2	1,2	Passenger vessels in metal lockers only
	Firecracker salute. See Fireworks, common or special	Class B explosive NA1774	NA1774	Explosive B	None	173.68 173.91	Forbidden	200 pounds	2	3	Passenger vessels in metal lockers only. Toy torpedoes must not be packed with other special fireworks
	Firecracker. See Fireworks, common or special										Segregation same as for flammable solids. Separate from flammable gases or liquids, oxidizing materials, or organic peroxides. Use double strip storage for cargo 6-12 percent moisture containing not more than 12 percent fat. Use single strip storage for cargo 6-12 percent moisture containing 12-15 percent fat.
W	Fireworks, exhibition display piece. See Fireworks, special	ORM-C	NA1974	None	173.505	173.995			1,2	1,2	
	Fireworks, special										Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Fish meal or fish scrap containing 6% to 12% water	ORM-C	NA1974	Flammable solid	None	173.171	Forbidden	Forbidden	1,2	1,2	
	Fish meal or fish scrap containing less than 6% or more than 12% water	UN2018	NA1974	Flammable solid	None	173.171	Forbidden	Forbidden	1,2	1,2	
	Fissile radioactive material. See Radioactive material, fissile	Corrosive material NA1760	NA1760	Corrosive	173.244	173.292	1 quart	10 gallons	1,2	1,2	
	Flame retardant compound liquid	UN1954	NA1760								
	Flammable Gas n.o.s. See Compressed gas, n.o.s.	UN1903	NA1760	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Flammable liquid, n.o.s.	UN1925	NA1760	Flammable solid	173.153	173.154	25 pounds	25 pounds	1,2	1,2	
	Flammable solid, n.o.s.										
	Flare, airplane. See Fireworks, special										
	Flare. See Fireworks, common										
	Flash cartridge. See Fireworks, special or Low explosives										
	Flash crackers. See Fireworks, common or special										
	Flash powder. See Fireworks, special or Low explosives										
	Flax. See Fibers										
	Flexible linear shaped charge, metal clad	Class C explosive UN0287	UN0287	Explosive C	None	173.104	50 pounds	300 pounds	1,2	1,2	
	Flowers of sulfur. See Sulfur	NA1850	NA1850								
	Flue dust, poisonous	Poison B UN1662	UN1662	Poison	173.964	173.985	50 pounds	200 pounds	1,2	1,2	
	Fluoboric acid	Corrosive material UN1775	UN1775	Corrosive	173.244	173.283	1 quart	1 gallon	1,2	1,2	
	Fluoride acid. See Hydrofluoric acid	UN1954	UN1954								
	Fluorine	UN1776	UN1776	Poison and Oxidizer	None	173.902	Forbidden	Forbidden	1	5	Stow in well ventilated space away from organic materials
	Fluorophosphoric acid, anhydrous. See Mono-fluorophosphoric acid, anhydrous	UN1776	UN1776								
	Fluorsulfuric acid. See Hydrofluosulfuric acid	UN1777	UN1777	Corrosive	None	173.274	Forbidden	1 gallon	1	5	
	Fluorosulfonic acid or Fluosulfonic acid	Corrosive material ORM-A	NA2209	Corrosive	173.505	173.510	10 gallons	55 gallons	1,2	4	Keep dry
EW	Formaldehyde, or formalin solution (in containers of 110 gallons or less) (RQ-1000/45-4)	ORM-A	NA2209	None	173.505						

S172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required (if not excepted)	(3) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railear	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
E	Formaldehyde, or formalin solution (in containers over 110 gallons) (RQ-1000/ 450)	Combustible liquid	NA1909	None	173.118a	None	10 gallons	55 gallons	1,2	1,2		
E	Formic acid. See Formaldehyde solution	UN4209	UN1778	Corrosive	173.244	173.245 173.249	1 quart	5 gallons	1,2	1,2		
E	Formic acid solution (RQ-5000/2270)	Corrosive material	NA1775	Corrosive	173.244	173.245 173.249	1 quart	5 gallons	1,2	1,2		
* E	Fuel, aviation, turbine engine	Flammable liquid	UN1888	Flammable	173.118	173.119	1 quart	10 gallons	1,2	1		
* E	Fuel oil	Combustible liquid	NA1998	None	173.118a	None	No limit	No limit	1,2	1,2		
	Fuel oil, Diesel. See Fuel oil	NA1998	NA1998	None	173.118a	None	No limit	No limit	1,2	1,2		
	Fuel oil, No. 1, 2, 4, 5 or 6											
	Fulminate of mercury, dry											
	Fulminate of mercury, wet. See Initiating explosive											
E	Fumaric acid (RQ-5000/2270)	ORM-E Corrosive material	NA9128	None	173.244	173.245	No limit	No limit	2	2		
	Parmaryl chloride	UN1780		Corrosive			1 quart	1 quart	1	1	Glass carboys not permitted	
* E	Fumigant											
	Furfural (RQ-1000/450)	Combustible liquid	UN1199	None	173.118a	None	No limit	No limit	1,2	1		
	Fuse igniter	Class O explosive	NA0825	Explosive C	None	173.100	50 pounds	150 pounds	1,0	1,0		
	Fuse, instantaneous	Class O explosive	UN0401	Explosive C	173.100		50 pounds	150 pounds	1,2	1,2		
	Fuse lighter	Class O explosive	UN0131	Explosive C	None	173.100	50 pounds	150 pounds	1,3	1,3		
	Fuse, mild detonating, metal clad	Class O explosive	NA0104	Explosive C	None	173.101	50 pounds	300 pounds	1,2	1,2		
	Fuse, safety	Class C explosive	UN0105	Explosive C	173.100		50 pounds	300 pounds	1,2	1,2		
	Fusee (railway or highway)	Flammable solid	NA2254	None	173.161a	50 pounds	200 pounds	1,0	1,0			
	Fusel oil	Combustible liquid	UN1201	None	173.118a	None	No limit	No limit	1,2	1,2		
	Fuze, combination	Class C explosive	NA0257	Explosive C	None	173.100	50 pounds	150 pounds	1,3	1,3		
	Fuze, detonating	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5		
	Fuze, detonating, Class C explosive	Class C explosive	NA0257	Explosive C	None	173.118	50 pounds	150 pounds	1,3	1,3		
	Fuze, detonating, radioactive	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5		
	Fuze, percussion	Class C explosive	NA0320	Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3		
	Fuze, time	Class C explosive	NA0257	Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3		
	Fuze, tracer	Class C explosive	NA0006	Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3		
	Galium metal, liquid	ORM-B	NA2803	None	None	173.861	Forbidden	Forbidden	1	5		
	Galium metal, solid	ORM-B	NA2803	None	None	173.862	40 pounds	40 pounds	1,3	1		
	Garbage tankage containing 8% or more water	ORM-C			173.906	173.1000			1,2	1,2	Shade from radiant heat	
	Garbage tankage, containing less than 8%	Flammable solid	NA1825	Flammable solid	None	173.209	Forbidden	Forbidden	1	1	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Gas cylinder, empty. See Cylinder, empty	UN1864										
	Gas drips, hydrocarbon	Combustible liquid										
	Gas drips, hydrocarbon	Flammable liquid	UN1804	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Gas identification set	Poison A	NA0035	Poison gas	None	173.331	Forbidden	Forbidden	1	5		
	Gas identification set	Irritating material	NA0035	Irritant	None	173.331	Forbidden	Forbidden	1	5		
	Gas mine. See Explosive mine											
	Gas oil. See Fuel oil											
	Gasoline (including casting-head and natural)	Flammable liquid	NA1257	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4		
	Gelatine Dynamite. See High explosive											
	Germane	Poison A	UN2192	Poison gas and Flammable gas	None	173.326	Forbidden	Forbidden	1	5		
	Grenade, empty, primed	Class C explosive	NA0110	Explosive C	None	173.107	50 pounds	150 pounds	1,3	1,3		
	Grenade, hand or rifle, explosive (with or without gas, smoke, or incendiary material)	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	No other cargo may be stowed in the same hold with these items	
	Grenade, tear gas	Irritating material	NA1700	Irritant	None	173.385	Forbidden	Forbidden	75 pounds	1,2	1	
	Grenade without bursting charge: With incendiary material (Special fireworks)	Class B explosive		Explosive B	173.81		Forbidden	Forbidden	8	8	Passenger vessels in metal lockers only	
	Grenade without bursting charge: With smoke charge (Smoke grenade)	Class C explosive	NA0808	Explosive C	173.108	50 pounds	150 pounds	1,3	1,3			
	Grenade without bursting charge: With Poison A gas charge	Poison A		Poison gas	173.380		Forbidden	Forbidden			See correct shipping name of applicable Poison A material for stowage, special handling, and special segregation re- quirements	
	Grenade without bursting charge: With Poison B charge	Poison B		Poison	173.360		Forbidden	Forbidden			See correct shipping name of applicable Poison B material for stowage, special handling, and special segregation re- quirements	

S172.101 Hazardous Materials Table (cont'd)

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S172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments	(a) Passenger carrying aircraft or raicar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Pas- senger vessel	(e) Other requirements	
	Hydrobromic acid, more than 49% strength	Corrosive material	UN1788	Corrosive	None	170.262	Forbidden	Forbidden	1	1	Glass carboys not permitted on passenger vessel	
*	Hydrobromic acid not more than 49% strength	Corrosive material	UN1788	Corrosive	170.244	170.262	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel	
	Hydrocarbon gas, liquefied	Flammable gas	UN1905	Flammable gas	170.306	170.304	Forbidden	500 pounds	1,2	1		
*	Hydrocarbon gas, nonliquefied	Flammable gas	UN1804	Flammable gas	170.306	170.314	Forbidden	500 pounds	1,2	1		
E	Hydrochloric acid, anhydrous. See Hydrogen chloride		UN1050									
*E	Hydrochloric acid mixture (RQ-5000/2270)	Corrosive material	NA1789	Corrosive	170.244	170.263	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel	
*E	Hydrochloric acid solution, inhibited (RQ- 5000/2270)	Corrosive material	NA1789	Corrosive	170.244	170.263	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel	
*E	Hydrochloric (muriatic) acid (RQ-5000/ 2270)	Corrosive material	UN1789	Corrosive	170.244	170.263	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel	
E	Hydrocyanic acid, liquefied (RQ-10/4.54)	Poison A	UN1051	Flammable gas and Poison gas	None	170.882	Forbidden	Forbidden	1	5		
E	Hydrocyanic acid (prussic), solution (5% or more hydrocyanic acid) (RQ-10/4.54)	Poison A	NA1618	Flammable gas and Poison gas	None	170.882	Forbidden	Forbidden	1	5	Shade from radiant heat. Aqueous solutions containing more than 20 percent hydrogen cyanide are not permitted in transportation by water	
*	Hydrocyanic acid (prussic), unstabilized	Forbidden										
*	Hydrocyanic acid solution, less than 5% hydrocyanic acid (RQ-10/4.54)	Poison B	NA1618	Poison	None	170.851	Forbidden	25 pounds	01	5	Shade from radiant heat	
	Hydrofluoric acid, anhydrous. See Hydrogen fluoride		UN1052									
*E	Hydrofluoric acid solution (RQ-5000/2270)	Corrosive material	UN1789	Corrosive	170.244	170.264	1 quart	1 gallon	1	4		
*E	Hydrofluoric and sulfuric acids, mixture (RQ-5000/2270)	Corrosive material	UN1786	Corrosive	None	170.290	Forbidden	1 gallon	1	5		
	Hydrofluoroboric acid. See Fluoroboric acid		UN1775									
	Hydrofluorosilicic acid	Corrosive material	UN1778	Corrosive	None	170.285	1 quart	1 gallon	1,2	1,2		
	Hydrogen	Flammable gas	UN1049	Flammable gas	170.306	170.302 170.314	Forbidden	500 pounds	1,2	64		
	Hydrogen bromide	Nonflammable gas	UN1048	Nonflammable gas	170.306	170.304	Forbidden	500 pounds	1	4		
	Hydrogen chloride	Nonflammable gas	UN1060	Nonflammable gas	170.306	170.304	Forbidden	500 pounds	1	4		
	Hydrogen fluoride	Corrosive material	NA1780	Corrosive	None	170.284	Forbidden	110 pounds	1	5	Segregation same as for nonflammable gases	
	Hydrogen iodide solution. See Hydroiodic acid		UN1787									
	Hydrogen, liquefied	Flammable gas	UN1968	Flammable gas	None	170.816	Forbidden	Forbidden			Forbidden	
	Hydrogen peroxide solution (5% to 40% peroxide)	Oxidizer	NA2014	Oxidizer	170.244	170.206	1 quart	1 gallon	1,2	1	Shade from radiant heat. Separate from per- manganates. Keep away from powdered metals	
	Hydrogen peroxide solution (40% to 52% peroxide)	Oxidizer	NA2015	Oxidizer	None	170.260	Forbidden	Forbidden	1	4	Shade from radiant heat. Separate from per- manganates. Keep away from powdered metals	
	Hydrogen peroxide solution (over 52% peroxide)										Shade from radiant heat. Separate from per- manganates. Keep away from powdered metals. Concentrations greater than 60% hy- drogen peroxide not permitted on any vessel except under conditions approved by the De- partment	
	Hydrogen selenide	Flammable gas	UN2202	Flammable gas and Poison	None	170.838	Forbidden	Forbidden	1	6		
E	Hydrogen sulfate. See Sulfuric acid		UN1880									
	Hydrogen sulfide (RQ-100/45.0)	Flammable gas	UN1953	Flammable gas and Poison	None	170.804 170.314	Forbidden	300 pounds	1	5		
	Hydrochlorofluoric acid. See Hydrofluorosilicic acid		UN1778									
*	Hypochlorite solution containing more than 7% available chlorine by weight	Corrosive material	NA1791	Corrosive	170.244	170.277	1 quart	4 gallons	1,2	1	Glass carboys in hampers not permitted under deck	
A	Hypochlorite solution containing not more than 7% available chlorine by weight	ORM-B	NA1791	None	170.505	170.510	No limit	No limit				
	Igniter	Class C explosive	UN0325	Explosive C	None	170.106	50 pounds	150 pounds	1,3	1,3		
	Igniter cord	Class C explosive	UN0066	Explosive C	None	170.100	50 pounds	150 pounds	1,3	1,3		
	Igniter fuse, metal clad.	Class C explosive	NA0103	Explosive C	None	170.106	50 pounds	150 pounds	1,3	1,3		
*	Igniter, jet thrust (jato)	Class A explosive		Explosive A	None	170.78	Forbidden	Forbidden	6	5		
*	Igniter, jet thrust (jato)	Class B explosive		Explosive B	None	170.92	Forbidden	550 pounds	1,3	5		
*	Igniter, rocket motor	Class A explosive		Explosive A	None	170.79	Forbidden	Forbidden	6	5		
*	Igniter, rocket motor	Class B explosive		Explosive B	None	170.92	Forbidden	550 pounds	1,3	5		
	Illuminating projectile. See Fireworks, special											
	Iminobispropylamine	Corrosive material	UN2269	Corrosive	170.244	170.245	1 quart	10 gallons	1,2	1,2		
	Initiating explosive Diazoedinitrophenol	Class A explosive		Explosive A	None	170.70	Forbidden	Forbidden	6	5		
	Initiating explosive Fulminate of mercury	Class A explosive		Explosive A	None	170.71	Forbidden	Forbidden	6	5		

§172.101 Hazardous Materials Table (cont'd)

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§172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	(3A) ID Number	Label(s) required if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
W	Kapok. See Fibers	ORM-E	NA2761	None	None	173.510	No limit	No limit	2	2		
E	Kelthane (RQ-5000/2270)	ORM-E	NA2761	None	None	173.510	No limit	No limit	2	2		
E	Kepone (RQ-1/0.454)	Combustible liquid	UN1223	None	173.118a	None	No limit	No limit	1,2	1,2		
-	Lacquer base, liquid. See Paint, enamel, lacquer, stain, etc.	UN1263										
-	Lacquer base, or Lacquer chips, dry	Flammable solid	NA2557	Flammable solid	173.103	173.175	25 pounds	100 pounds	1	1		
-	Lacquer base or lacquer chips, plastic (With alcohol or solvent)	Flammable liquid	NA1268	Flammable liquid	173.118	173.127	1 quart	25 pounds	1,2	1		
-	Lacquer removing, reducing, or thinning compound. See Compound, lacquer, paint, or varnish, etc., removing, reducing or thinning liquid	NA1142										
-	Lacquer. See Paint, enamel, lacquer, stain, etc.	UN1263										
-	Lauroyl peroxide	Organic peroxide	UN2124	Organic peroxide	173.153	173.187	2 pounds	25 pounds	1,2	1		
E	Lead acetate (RQ-5000/2270)	ORM-E	UN1616	None	None	173.510	No limit	No limit	2	2		
E	Lead arsenate, solid (RQ-5000/2270)	Poison B	UN1617	Poison	173.964	173.987	50 pounds	200 pounds	1,2	1,2		
E	Lead arsenic, solid	Poison B	UN1618	Poison	173.364	173.805	50 pounds	200 pounds	1,2	1,2		
EA	Lead azide. See Initiating explosive	UN2291										
EA	Lead chloride (RQ-5000/2270)	ORM-B	NA2291	None	173.505	173.510	25 pounds	100 pounds				
-	Lead cyanide	Poison B	UN1620	Poison	173.870	173.800	25 pounds	No limit	1,2	1,2	Stow away from acids	
W	Lead dross	ORM-O	NA1784	None	173.505	173.1010	25 pounds	100 pounds	1,2	1,2	Segregation same as for corrosive materials	
EA	Lead fluoroborate (RQ-5000/2270)	ORM-B	NA2291	None	None	173.510	25 pounds	100 pounds	2	2		
EA	Lead fluoride (RQ-1000/454)	ORM-B	NA2511	None	None	173.510	25 pounds	100 pounds	2	2		
E	Lead iodide (RQ-5000/2270)	ORM-E	NA2811	None	None	173.510	No limit	No limit	2	2		
-	Lead mononitroresorcinate. See Initiating explosive	UN1281										
B	Lead nitrate (RQ-5000/2270)	Oxidizer	UN1489	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	Stow away from foodstuffs	
-	Lead peroxide	Oxidizer	UN1872	Oxidizer	173.128	173.154	25 pounds	100 pounds	1,2	1,2	Stow away from foodstuffs	
V	Lead scrap. See Lead dross	ORM-E	NA2811	None	None	173.510	No limit	No limit	2	2		
E	Lead stearate (RQ-5000/2270)	UN1281										
-	Lead stibophosphate (lead stibotrioresorcinate). See Inhibiting explosive	UN1281										
E	Lead sulfate, solid (containing more than 3% free acid) (RQ-5000/2270)	Corrosive material	UN1704	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2		
E	Lead sulfide (RQ-5000/2270)	ORM-E	NA2291	None	None	173.510	No limit	No limit	2	2		
E	Lead thiocyanate (RQ-5000/2270)	ORM-E	NA2291	None	None	173.510	No limit	No limit	2	2		
-	Leather bleach or dressing	Flammable liquid	NA1993	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
-	Leather bleach or dressing	Combustible liquid	NA1903	None	173.118a	None	No limit	No limit	1,2	1,2		
-	Life-rafts, inflatable	ORM-C		None	None	173.006	1 per inaccess- ible cargo compart- ment	No limit	1,2	1,2		
-	Lighter fluid	Flammable liquid	UN1226	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
-	Lime-nitrogen. See Calcium cyanamide, not hydrated, etc.	NA1408										
B	Lime, slaked. See Calcium hydroxide	ORM-A	NA1919	None	173.505	173.510	No limit	No limit				
EA	Lindane (RQ-J/454)	ORM-A	NA2761	None	173.505	173.510	No limit	No limit				
-	Liquefied hydrocarbon gas. See Hydrocarbon gas, liquefied	NA1905										
-	Liquefied nonflammable gas (charged with nitrogen, carbon dioxide, or air)	Nondammable gas	NA1956	Nondammable gas	173.308	173.804	300 pounds	300 pounds	1,2	1,2		
-	Liquefied petroleum gas	Flammable gas	UN1075	Flammable gas	173.308	173.904	Forbidden	900 pounds	1,2	1		
-	Liquid other than one classed as flammable, corrosive, poison or irritant, charged with nitrogen, carbon dioxide, or air. See Compressed gas n.o.s.				173.814							
-	Lithium acetylidy-ethylene diamine complex	Flammable solid	NA2819	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solid labeled Dangerous When Wet	
-	Lithium aluminum hydride	Flammable solid	UN1410	Flammable solid and Dangerous when wet	None	173.208	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solid labeled Dangerous When Wet	
-	Lithium aluminum hydride, ethereal	Flammable liquid	UN1411	Flammable solid and Dangerous when wet	None	173.157	Forbidden	1 quart	1	5	Segregation same as for flammable solids la- beled Dangerous When Wet	
-	Lithium amide, powdered	Flammable solid	UN1412	Flammable solid	173.158	173.168	25 pounds	100 pounds	1,2	4	Segregation same as for flammable solids la- beled Dangerous When Wet	
-	Lithium borohydride	Flammable solid	UN1413	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids la- beled Dangerous When Wet	
E	Lithium chromate (RQ-1000/454)	ORM-E	NA9184	None	173.510	No limit	No limit	2	2			
-	Lithium ferrosilicon	Flammable solid	UN2880	Flammable solid and Dangerous when wet	None	173.208	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids la- beled Dangerous When Wet	

§172.101 Hazardous Materials Table (cont'd)

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(1)	(2)	(3)	(3A)	(4)	(5)		(6)		(7)			
					Packaging		Maximum net quantity in one package		Water shipments			
E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required if not excepted	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
Lithium hydride	Flammable solid	UN1414	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet		
Lithium hydride in fused solid form	Flammable solid	UN2805	Flammable solid and Dangerous when wet	None	173.206	Forbidden	100 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet		
Lithium hypochlorite compound, dry (containing more than 35% available chlorine)	Oxidizer	UN1471	Flammable solid and Dangerous when wet	Oxidizer	173.153	173.217	50 pounds	100 pounds	1,2	1,2		
Lithium metal	Flammable solid	UN1415	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet		
Lithium metal, in cartridges	Flammable solid	NA1415	Flammable solid and Dangerous when wet	None	173.206	1 pound	25 pounds	1,2	4	Segregation same as for flammable solids labeled Dangerous When Wet		
Lithium nitride	Flammable solid	UN2806	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet		
Lithium peroxide	Oxidizer	UN1472	Flammable solid	None	173.153	173.154	25 pounds	100 pounds	1,2	1,2		
Lithium silicon	Flammable solid	UN1417	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	1,2	Keep dry Segregation same as for flammable solids labeled Dangerous When Wet		
London purple, solid Low blasting explosive. See Low explosive Low explosive	Poison B Class A explosive	UN1621	Poison	None	173.264	173.365	50 pounds	200 pounds	1,2	1,2		
Lye. See Sodium hydroxide, solid	UN1828	Explosive A	None	173.00	Forbidden	Forbidden	6	5				
Magnesium aluminum phosphide	UN1410	Flammable solid	None	173.206	Forbidden	25 pounds	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet			
Magnesium arsenate, solid Magnesium dross, wet or hot	Poison B Forbidden Flammable solid	UN1622	Flammable solid and Dangerous when wet	Poison	173.264	173.367	50 pounds	200 pounds	1,2	1,2		
Magnesium, metal (powdered, pellets, turnings, or ribbons)	NA1418	Flammable solid	None	173.153	173.220	25 pounds	100 pounds	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet		
Magnesium nitrate Magnesium perchlorate Magnesium peroxide, solid	Oxidizer Oxidizer Oxidizer Flammable solid	UN1474 UN1475 UN1470 NA1620	Flammable solid and Dangerous when wet	Oxidizer Oxidizer Oxidizer None	173.153 173.153 173.153 173.153	173.152 173.154 173.154 173.220	25 pounds 25 pounds 25 pounds ForbIDDEN	100 pounds 100 pounds 100 pounds Forbidden	1,2	1,2	Keep away from powdered metals Keep dry Segregation same as for flammable solids labeled Dangerous When Wet	
Magnesium scrap (barrings, clippings, shavings, sheet, turnings, or scalplings)	NA1418	Flammable solid	None	173.153	173.220	25 pounds	100 pounds	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet		
A Magnetized material	ORM-C	UN2907	Magnetized material	None	173.107	No limit	No limit	No limit				
EA	Mulathion (RQ-10/4.5%)	ORM-A	NA2788	None	173.506	173.510	No limit	No limit				
EA	Maleic acid (RQ-5000/2270)	ORM-A	NA2215	None	None	172.510	25 pounds	100 pounds	2	2	Keep tightly closed.	
EA	Matcho anhydride (RQ-5000/2270)	ORM-A	NA2215	None	None	173.510	25 pounds	100 pounds	1	1		
A	Manganese dioxide	NA1470	None	173.506	173.510	No limit	No limit	No limit				
•	Matches, block. See Matches, strike anywhere	NA1831	Flammable solid	None	173.176	50 pounds	50 pounds	1,2	1			
•	Matches, safety, book, card, or strike-on-box	UN1944	Flammable solid	None	173.176	Flammable solid	Forbidden	ForbIDDEN	1,2	1		
•	Matches, strike anywhere	UN1091	Flammable solid	None	173.176	Flammable solid	Forbidden	ForbIDDEN	1,2	1		
•	Matting acid. See Sulfuric acid	UN1880	Combustible liquid	None	173.118	None	No limit	No limit	1,2	1,2		
•	Medicines, n.o.s.	NA1851	Flammable liquid	None	173.118	173.110	1 quart	10 gallons	1,2	1		
•	Medicines, n.o.s.	NA1851	Flammable liquid	None	173.153	173.154	25 pounds	100 pounds	1,2	1,2		
•	Medicines, n.o.s.	NA1851	Flammable solid	None	173.153	173.154	25 pounds	100 pounds	1,2	1,2		
•	Medicines, n.o.s., liquid	NA1851	Oxidizer	None	173.153	173.154	25 pounds	100 pounds	1,2	1,2		
•	Medicines, n.o.s., liquid	NA1851	Carcinogenic material	None	173.244	173.245	1 quart	1 quart	1,2	1,2		
•	Medicines, n.o.s., liquid	NA1851	Poison B	None	173.246	173.246	1 quart	55 gallons	1,2	1		
•	Medicines, n.o.s., solid	NA1851	Carcinogenic material	None	173.244	173.245	25 pounds	100 pounds	1,2	1,2	Keep dry	
•	Mediobine, n.o.s., solid	NA1951	Poison B	None	173.246	173.285	50 pounds	200 pounds	1,2	1,2		
•	Metacetyldihydro phthalic anhydride	NA1760	Poison Corrosive material	None	173.246	173.288	ForbIDDEN	1 quart	1,2	1		
•	Mercaptan mixture, aliphatic	NA1228	Flammable liquid	None	173.141	ForbIDDEN	10 gallons	1,2	5			
•	Mercaptan mixture, aliphatic (in containers over 110 gallons). See 173.141(b)	NA1228	Combustible liquid	None	173.118	None	ForbIDDEN	10 gallons	1,2	1,2		
AW	Mercaptan mixture, aliphatic (in containers over 110 gallons). See 173.141(b)	ORM-A	NA1228	None	173.505	173.510	ForbIDDEN	10 gallons	1,2	5	Stow in well ventilated space away from living quarters	
R	Mercaptodimethyl (RQ-100/45.4)	ORM-E	NA2757	None	None	173.510	No limit	No limit	2	2		
	Mercuric acetate	Poison B	UN1091	None	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercurio-ammonium chloride, solid	Poison B	UN1630	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric benzoate, solid	Poison B	UN1631	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric bromide, solid	Poison B	UN1634	Poison	173.364	173.365	ForbIDDEN	25 pounds	1,2	1,2		
	Mercuric chloride, solid	Poison B	UN1634	Poison	173.364	173.372	ForbIDDEN	25 pounds	1,2	1,2		
E	Mercuric cyanide, solid (RQ-J-450)	Poison B	UN1636	Poison	173.370	173.370	25 pounds	200 pounds	1,2	1,2		
	Mercuric iodide, solid	Poison B	UN1638	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	Stow away from acids	
	Mercuric iodide solution	Poison B	NA1638	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2		

§172.101 Hazardous Materials Table (cont'd)

(1)	(2)	(3)	(4)	(5)		(6)	(7)					
				Packaging			Maximum net quantity in one package		Water shipments			
+/ B/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required if not excepted	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
	Mercuric nitrate (RQ-10/4.54)	Oxidizer	UN1625	Oxidizer	173.158	173.182	25 pounds	100 pounds	1,2	1,2	If stowed under deck, must be stowed in a recoverable location.	
	Mercuric oleate, solid	Poison B	UN1640	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric oxide, solid	Poison B	UN1641	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric oxycyanide, solid	Poison B	UN1642	Poison	173.364	173.365	25 pounds	200 pounds	1,2	1,2		
	Mercuric-potassium cyanide, solid	Poison B	UN1626	Poison	173.364	173.365	25 pounds	200 pounds	1,2	1,2		
	Mercuric-potassium iodide, solid	Poison B	UN1643	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
E	Mercuric salicylate, solid	Poison B	UN1644	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
B	Mercuric sulphate, solid	Poison B	NA1626	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric sulfate, solid (RQ-10/4.54)	Poison B	UN1645	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric sulphate, solid or mercuric thiocyanate, solid (RQ-10/4.54)	Poison B	UN1639	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric acetate, solid	Poison B	NA1629	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric bromide, solid	Poison B	NA1634	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercuric gluconate, solid	Poison B	NA1637	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
E	Mercuric iodide, solid	Poison B	NA1687	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercurous nitrate, solid (RQ-10/4.54)	Oxidizer	UN1627	Oxidizer	173.153	173.154	50 pounds	100 pounds	1,2	1,2		
	Mercurous oxide, black, solid	Poison B	NA1641	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercurous sulfate, solid	Poison B	UN1638	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
	Mercury compound, n.o.s., solid	Poison B	UN2025	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
A	Mercury, metallic	ORM-B	NA2809	None	173.860	173.860	173.860	173.860				
	Methyl oxide	Flammable liquid	UN1239	Flammable liquid	173.119	173.119	1 quart	10 gallons	1,2	1,2		
W	Metal borings, shavings, turnings, or cuttings	ORM-C	NA2793	None	173.905	173.1025			1,2	1,2	Keep dry. Not permitted if temperature of material is at or above 130 deg F.	
	Methane	Flammable gas	UN1971	Flammable gas	173.906	173.303	Forbidden	300 pounds	1,2	4		
	Methanol. See Methyl alcohol	UN1280										
E	Methoxychlor (RQ-1/4.54)	ORM-E	NA2761	None	173.510	No limit	No limit	No limit	2	2		
	Methyl acetate	Flammable liquid	UN1281	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Methyl acetone	Flammable liquid	UN1232	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Methyl acrylate, inhibited	Flammable liquid	UN1919	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Methyl alcohol	Flammable liquid	UN1280	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Methyl amyl acetate	Flammable liquid	UN1233	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2		
	Methyl amyl ketone	Combustible liquid	UN1110	None	173.118a	None	No limit	No limit	1,2	1,2		
	Methyl bromide and ethylene dibromide mixture, liquid	Poison B	UN1647	Poison	173.363	Forbidden	55 gallons	1	1			
	Methyl bromide and more than 2% chloroplatin mixture, liquid	Poison B	NA1581	Poison	173.363	Forbidden	Forbidden	1	5		Shade from radiant heat	
	Methyl bromide and nonflammable, nonliquefied compressed gas mixture, liquid (including up to 2% chloroplatin)	Poison B	NA1955	Poison	173.353a	Forbidden	300 pounds	1	5		Stow away from living quarters	
	Methyl bromide, liquid (anisomethane) (including up to 2% chloroplatin)	Poison B	NA1581	Poison	173.353b	Forbidden	55 gallons	1	5		Stow away from living quarters. Segregation same as for nonflammable gas.	
	Methyl butene	Flammable liquid	NA2400	Flammable liquid	173.119	Forbidden	10 gallons	1,2	5			
	Methyl butyrate	Flammable liquid	UN1287	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Methyl cellosolve acetate. See Ethylene glycol monomethyl ether acetate	UN1189										
	Methyl cellosolve. See Ethylene glycol monomethyl ether	UN1188										
	Methyl chloride	Flammable gas	UN1068	Flammable gas	173.308	173.304	173.314	Forbidden	300 pounds	1,2	4	
	Methyl chloride-methylene chloride mixture	Flammable gas	UN1812	Flammable gas	173.308	173.304	173.314	Forbidden	300 pounds	1,2	4	
	Methyl chloroformate. See Methyl chloroformate	UN1298										
A	Methyl chloroform	ORM-A	UN1281	None	173.505	173.610	10 gallons	55 gallons				
	Methyl chloroformate	Flammable liquid	UN1298	Flammable liquid	None	173.288	Forbidden	5 pints	1,2	1		
	Methyl dichloroacetate	Corrosive material	UN2289	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2		
	Methyl dichlorosilane	Flammable liquid	UN1242	Flammable liquid	None	173.186	Forbidden	5 pints	1,2	1		
	Methyl ethyl ether. See Ethyl methyl ether	UN1030										
	Methyl ethyl ketone	Flammable liquid	UN1183	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Methyl ethyl pyridine	Corrosive material	UN2300	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2		
	Methyl formate	Flammable liquid	UN1243	Flammable liquid	173.118	173.119	Forbidden	10 gallons	1,2	4		
	Methyl isopropenyl ketone, inhibited	Flammable liquid	UN1248	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Methyl magnesium bromide in ethyl ether not over 40% concentration	Flammable liquid	UN1928	Flammable liquid	None	173.149	Forbidden	Forbidden	1	1	Segregation same as for flammable solids. Separate from flammable gases or liquids, oxidizing materials or organic peroxides	
E	Methyl mercaptan (RQ-100/45.4)	Flammable gas	UN1064	Flammable gas	173.303	173.304	173.315	Forbidden	600 pounds	1,2	1	
E	Methyl methacrylate monomer, inhibited (RQ-3000/2270)	Flammable liquid	UN1247	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		

S172.101 Hazardous Materials Table (cont'd)

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(1) Ex/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) ID Number	(5) Label(s) required (if not excepted)	(6) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments	(c) Passenger carrying aircraft or railcar	(d) Cargo only aircraft	(e) Cargo vessel	(f) Passenger vessel	(g) Other requirements	
B	Methyl methacrylate monomer, uninhibited (high-purity, if acceptable under Sec 173.2) of this subchapter) (RQ-1000/2270) Methyl norbornene dicarboxylic anhydride. See Menthene	Flammable liquid	NA1247 NA1760	Flammable liquid	173.318 173.319	173.319	Forbidden	Forbidden	1,2	1		
E	Methyl parathion, liquid (RQ-100/45.4)	Poison B Poison II	NA2770 NA2782	Poison Poison	None 173.377	173.378 173.377	Forbidden 50 pounds	1 quart 200 pounds	1,3 1,2	1,3 1,2		
E	Methyl parathion mixture, dry (RQ-100/ 45.4)	Poison B	NA2782	Poison	None	173.350	1/2 pint	1 quart	1,2	1,2		
*B	Methyl parathion mixture, liquid, (containing 25% or less methyl parathion) (RQ-100/45.4)	Poison B	NA2782	Poison	None	173.350	1/2 pint	1 quart	1,2	1,2		
E	Methyl parathion mixture, liquid, (containing over 25% methyl parathion) (RQ-100/45.4)	Poison B	NA2783	Poison	None	173.350	Forbidden	1 quart	1,2	1,2		
	Methyl pentane	Flammable liquid	UN2402	Flammable liquid	173.318	173.319	1 quart	10 gallons	1,2	1		
	Methyl phosphonothioic dichloride, anhydrous	Corrosive material	NA1760	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1	4		
	Methyl phosphorous dichloride	Carcinogenic material	NA1760	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1	4		
	Methyl propionic	UN1248	Flammable liquid	173.318	173.319	1 quart	10 gallons	1,2	1			
	Methyl propyl ketone	UN1240	Flammable liquid	173.318	173.319	1 quart	10 gallons	1,2	1			
	Methyl sulfate. See Dimethyl sulfate	Flammable liquid	UN1595	Flammable liquid	173.317	173.317	6 ounces	10 gallons	1,2	1		
	Methyl sulfide. See Dimethyl sulfide	Flammable liquid	UN1164	Flammable liquid	173.308	173.314 173.315	Forbidden	300 pounds	1,2	1		
	Methyl vinyl ketone, inhibited	Flammable gas	UN1251	Flammable gas	173.308	173.314 173.315	Forbidden	300 pounds	1,2	1		
	Methylacetylene-propadiene, stabilized	NA1060	Flammable gas	None	173.317	173.317	Forbidden	10 gallons	1,2	1		
	Methylal	UN1234	Flammable liquid	None	173.306	173.306	10 gallons	1,2	1			
	Methylaniline, anhydrous or Monomethylamine	UN1061	Flammable gas	173.306	173.306	Forbidden	300 pounds	1	4			
	Methylchloromethyl ether, anhydrous	Flammable liquid	UN1209	Flammable liquid and Poison	None	173.318	173.319	Forbidden	1	5	Shade from radiant heat	
	Methylcyclohexane	UN2206	Flammable liquid	173.318	173.319	1 quart	10 gallons	1,2	1			
	Methylcyclopentane	UN2208	Flammable liquid	173.318	173.319	1 quart	10 gallons	1,2	1			
	Methyl dichloroarsine	Poison A	NA1055	Poison gas	None	173.328	Forbidden	1	5			
	Methylene chloride. See Dichloromethane	UN1593										
	Methyl furan	UN2301	Flammable liquid	173.318	173.319	1 quart	10 gallons	1,2	1			
	Methylhydrazine	UN1244	Flammable liquid and Poison	None	173.345	173.345	Forbidden	6 pints	1,2	1	Stow separate from oxidizing materials and corrosives	
	Methylpentadene	UN2461	Flammable liquid	173.318	173.319	1 quart	10 gallons	1,2	1			
	Methyltrichlorosilane	UN1250	Flammable liquid	None	173.335	173.335	Forbidden	10 gallons	1,2	1		
B	Mevinphos (RQ-1/0.454)	NA2022	Nonflammable gas Corrosive material	173.306	173.306	150 pounds	300 pounds	1,2	1,2			
E	Mexacarbate (RQ-1000/454) Mild detonating fuse, metal clad. See Fuse, mild detonating, metal clad	NA1796	Corrosive material	173.244	173.245 173.245a	1 quart	10 gallons	1,2	1,2			
	Mine, empty. See 173.35	None	NA1796	None	173.505	173.510	No limit	No limit				
	Mine explosive, with gas material. See Explosive mine	None	NA1796	None	173.505	173.510	25 pounds	100 pounds				
	Mine rescue equipment containing carbon dioxide	NA2508	Nonflammable gas	173.306	173.306	150 pounds	300 pounds	1,2	1,2			
	Mining reagent, liquid (containing 20% or more caustic acid)	NA2763 NA2767	Poison B Poison	173.304	173.304 173.305	50 pounds	1 quart 200 pounds	2	2			
A	Mipaflox	OHM-A	None	173.305	173.310							
	Mixed acid. See Nitrating (mixed) acid	OHM-B	None	173.305	173.310							
A	Molybdenum pentachloride	UN1000	Nonflammable gas	173.306	173.306	150 pounds	300 pounds	1,2	1,2			
	Monobromotrifluoromethane	UN1750	Corrosive material	173.314	173.314	1 quart	1 quart	1,2	1,2			
	Monochloroacetic acid, liquid or solution	NA1795	Irritant	None	173.384	173.384	5 gallons	1	1		Glass carboys in dampers not permitted under deck	
	Monochloroacetone	UN1018	Nonflammable gas	173.305	173.304 173.314 173.315	160 pounds	300 pounds	1,2	1,2		Stow away from living quarters	
	Monochloroacetone, stabilized or inhibited	UN1086	Nonflammable gas	173.306	173.304 173.314 173.315	150 pounds	300 pounds	1,2	1,2			
	Monochlorodifluoromethane	UN1020	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2			
	Monochloroethylene. See Vinyl chloride	UN1021	Nonflammable gas	173.306	173.304 173.314	150 pounds	300 pounds	1,2	1,2			
	Monochloropentfluoroethane	UN1022	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2			
	Monochlorotrifluoromethane	UN1022	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2			
	Monooethanolamine	UN9401	Corrosive material	173.244	173.246	1 quart	10 gallons	1,2	1,2			
	Monooethanolamine solution	UN9401	Corrosive material	173.244	173.246	1 quart	10 gallons	1,2	1,2			
E	Monoethylamine (RQ-100/454)	UN1086	Flammable liquid	None	173.148	173.148	5 pints	1,2	5		Segregation same as for flammable gas	
	Monofluorophosphoric acid, anhydrous	UN1778	Corrosive material	None	173.275	173.275	1 gallon	1,2	1,2		Keep dry	

§172.101 Hazardous Materials Table (cont'd)

(1)	(2)	(3)	(6A)	(4)	(5)		(6)	(7)				
					Packaging			Maximum net quantity in one package		Water shipments		
					(a)	(b)		(a)	(b)	(a)	(b)	
/ E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required (if not excepted)	Exceptions	Specific requirements	(a)	Passenger carrying aircraft or railcar	Cargo only aircraft	Cargo vessel	Pasenger vessel	
E	Monomethylamine, anhydrous (RQ-1000/454)	Flammable gas	UN1041	Flammable gas	173.306 173.314 173.315	Forbidden	300 pounds	1,2	4			
E	Monomethylamine, aqueous solution (RQ-1000/454) Mortar stain, liquid	Flammable liquid	UN1295	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	Stow away from mercury and its compounds	
*	Mortar stain, liquid	Combustible liquid	NA1983	None	173.118a	None	No limit	No limit	1,2	1,2		
*	Motor fuel, liquid	Flammable liquid	NA1993	Flammable liquid	173.118	173.128	1 quart	55 gallons	1,2	1		
*	Motor balls. See Naphthalene		UN1841									
*	Motor picture film. See Film											
*	Motor fuel antiknock compound or antiknock compound											
*	Motor fuel, n.o.s.											
*	Motor fuel, n.o.s.	Combustible liquid	NA1203	Flammable liquid	173.118	173.118	1 quart	40 gallons	1,2	1,1		
*	Motor, internal combustion											
*	Motor vehicle, etc., including automobile, motorcycle, truck, tractor, and other self-propelled vehicle or equipment powered by internal combustion engine, when offered new or used for transportation and which contain fuel in the engine or fuel tank or the electric storage battery is connected to other terminals of the electrical system	ORM-D		None	173.120 173.250 178.257 173.308 175.305 176.905				1,2	1,2		
*	Muriatic acid. See Hydrochloric (muriatic) acid		UN1789									
E	Naled (RQ-10-454)	ORM-E	NA2783	None	173.118a	173.510	No limit	No limit	2	2		
*	Naphtha	Combustible liquid	NA2563	None	173.118a	None	No limit	No limit	1,2	1,2		
*	Naphtha	Flammable liquid	NA2553	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
*	Naphtha distillate	Combustible liquid	NA2558	None	173.118a	None	No limit	No limit	1,2	1,2		
*	Naphtha distillate	Flammable liquid	NA2658	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
*	Naphtha petroleum. See Petroleum naphtha		UN1295									
*	Naphtha, solvent	Combustible liquid	UN1266	None	173.118a	None	No limit	No limit	1,2	1,2		
*	Naphtha, solvent	Flammable liquid	UN1266	None	173.118	173.110	1 quart	10 gallons	1,2	1		
EAW	Naphthalene or Naphthalin (RQ-3000/2270)	ORM-A	NA1394	None	173.505	173.555	25 pounds	300 pounds	1,2	1,2	Segregation same as for flammable solids	
E	Naphthalene acid (RQ-100/454)	ORM-E	NA9187	None	173.510	173.510	No limit	No limit	2	2		
*	Natural gasoline. See Gasoline											
*	Noobexane											
*	Neon	Flammable liquid	UN1205	Flammable liquid	173.118	173.110	1 quart	10 gallons	1,3	4		
E	New explosive or explosive device											
E	Nickel ammonium sulfate (RQ-5000/2270)	ORM-E	NA8188	None	173.51	173.66						
E	Nickel carbonyl	Flammable liquid	UN1209	None	173.510	173.510	No limit	Forbidden	1	5	Not permitted on a vessel carrying explosives. Shade from radiant heat. Segregation same as for flammable liquids in *	
E	Nickel catalyst, wet, finely divided, activated, or spent. With not less than 40% water or other suitable liquid	Flammable solid	UN1278	Flammable solid	None	173.238	Forbidden	100 pounds	1,2	1	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
E	Nickel chloride (RQ-3000/2270)	ORM-B	NA9189	None	173.510	No limit	No limit	No limit	2	2		
E	Nickel cyanide, solid	Poison B	UN1658	Poison	173.370	25 pounds	200 pounds	1,2	1,2			
E	Nickel hydroxide (RQ-1000/454)	ORM-E	NA8140	None	173.510	No limit	No limit	2	2			
E	Nickel nitrate (RQ-3000/2270)	Oxidizer	UN2725	Oxidizer	173.158	173.182	25 pounds	100 pounds	2	2		
E	Nickel sulfate (RQ-5000/2270)	ORM-E	NA9141	None	173.510	No limit	No limit	2	2			
*	Nicotine hydrochloride	Poison B	UN1656	Poison	173.345	173.540	1 quart	55 gallons	1,2	1,3		
*	Nicotine, liquid	Poison B	UN1654	Poison	173.358	173.358	Forbidden	55 gallons	1,2	1,2		
*	Nicotine salicylate	Poison B	UN1657	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
*	Nicotine sulfate, liquid	Poison B	UN1656	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2		
*	Nicotine sulfate, solid	Poison B	UN1655	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
*	Nicotine sulfate, solid	Poison B	UN1659	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
*	Nicotine tartrate	Poison B	UN1659	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2		
*	Nitrate, n.o.s.	Oxidizer	NA1477	Oxidizer	173.158	173.182	25 pounds	100 pounds	1,2	1,2		
E	Nitrate of ammonia explosives. See High explosive											
E	Nitration (mixed) acid	Oxidizer	NA1796	Oxidizer	None	173.287	Forbidden	1 quart	1	5	Segregation same as for corrosive materials	
E	Nitration (mixed) acid, spent	Corrosive material	UN1826	Corrosive	None	173.248	Forbidden	1 quart	1	5		
E	Nitric acid, 40% or less (RQ-1000/454)	Corrosive material	NA1780	Corrosive	None	173.268	Forbidden	5 pints	1	5	Stow away from hydrazine, separate from diethylenetriamine	
E	Nitric acid, fuming (RQ-1000/454)	Oxidizer	NA2032	Oxidizer and Poison	None	173.268	Forbidden	Forbidden	1	5	Segregation same as for corrosive materials. Stow away from hydrazine, separate from diethylenetriamine	
E	Nitric acid, (over 40%) (RQ-1000/454)	Oxidizer	NA2031	Oxidizer and Corrosive	None	173.268	Forbidden	5 pints	1	5	Segregation same as for corrosive materials. Stow away from hydrazine, separate from diethylenetriamine	
E	Nitro ether. See Ethyl nitrate	Poison A	UN1920	Poison gas	None	173.387	Forbidden	Forbidden	1	5		
*	Nitro ester											
*	Nitro carbonate. See Blasting agent											
*	Nitro carbonitrile. See High explosive											
*	Nitramiline											
*	p-Nitroaniline. See Nitroaniline											
*	Nitrobenzene, liquid (oil of mace, aniseed) (RQ-1000/454)	Poison B	UN1661	Poison	173.384	173.378	50 pounds	200 pounds	1,2	1,2		
*	Nitrocetophenone. See Nitroaniline	Poison B	UN1662	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2		
E	Nitrocellulose, colloided, granular or flake, wet with not less than 20% alcohol or solvent, or block, wet with not less than 25% alcohol	Flammable liquid	NA2556	Flammable liquid	173.148	173.127	1 quart	25 pounds	1,3	1		

S172.101 Hazardous Materials Table (cont'd)

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(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) ID Number	Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package	(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments		(a) Passenger carrying aircraft or airliner	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel
	Nitrocellulose, colloidal, granular or flake, wet with not less than 20% water Nitrocellulose, dry. See High explosive Nitrocellulose flakes, wet with not less than 20% alcohol or solvent Nitrocellulose, wet with not less than 30% alcohol or solvent Nitrocellulose, wet with not less than 20% water Nitrochlorobenzene, meta or para, solid Nitrochlorobenzene, ortho, liquid Nitrogen	Flammable solid	NA2565	Flammable solid	173.162	173.164	25 pounds	100 pounds	1,2	1	
		Flammable liquid	NA2566	Flammable liquid	173.118	173.127	1 quart	25 pounds	1,2	1	
		Flammable liquid	NA2566	Flammable liquid	173.118	173.127	1 quart	25 pounds	1,2	1	
		Flammable solid	NA2565	Flammable solid	173.163	173.164	25 pounds	100 pounds	1,2	1	
	Poison B Poison B	NA1578	Poison	173.884	173.874	50 pounds	200 pounds	1,2	1,2		
	Poison B	NA1578	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2		
	Nonflammable gas	NA1068	Nonflammable gas	173.806	173.802	150 pounds	300 pounds	1,2	1,2		
E	Nitrogen dioxide, liquid (RQ-1000/454)	Poison A	UN1067	Oxidizer and Poison gas	None	173.386	Forbidden	Forbidden	1	5	Segregation same as for nonflammable gases. Stow away from organic materials
	Nitrogen fertilizer solution	Nonflammable gas	NA1043	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2	
	Nitrogen peroxide, liquid	Poison A	NA1067	Oxidizer and Poison gas	None	173.314	Forbidden	Forbidden	1	5	Segregation same as for nonflammable gas. Stow away from organic materials
	Nitrogen, pressurized Liquid	Nonflammable gas	NA1077	Nonflammable gas	None	173.304	Forbidden	300 pounds	1,2	1,2	
	Nitrogen tetroxide, liquid	Poison A	UN1067	Oxidizer and Poison gas	None	173.336	Forbidden	Forbidden	1	5	Segregation same as for nonflammable gases. Stow away from organic materials
	Nitroglycerin, liquid, desensitized. See High explosive, liquid Nitroglycerin, liquid, undesensitized. See 173.31	Forbidden	NA1204								
	Nitroglycerin, spirits of. See Spirits of nitroglycerin										
	Nitrogummidine, dry. See High explosive Nitrogummidine, wet with not less than 20% water	Flammable solid	UN1336	Flammable solid	173.163	173.164	25 pounds	100 pounds	1,2	4	
	Nitrohydrochloric acid	Corrosive material	UN1708	Corrosive	None	173.278	Forbidden	5 pints	1	5	
	Nitrohydrochloric acid, diluted	Corrosive material	NA1708	Corrosive	None	173.278	Forbidden	5 pints	1	5	
	Nitromannite. See High explosive										
	Nitromethane	Flammable liquid	UN1261	Flammable liquid	173.118	173.149a	1 quart	10 gallons	1,2	1,2	
	Nitromuriatic acid. See Nitrohydrochloric acid		UN1708								
E	Nitrophenol (RQ-1000/454)	ORM-E	UN1603	None	None	173.510	No limit	No limit	2	2	
	Nitrosoguanidine. See Initiating explosive		NA1598	Flammable liquid	173.118	173.127	1 quart	25 pounds	1,2	1	
	Nitrostarch, dry. See High explosive		UN1337	Flammable solid	173.153	173.164	25 pounds	100 pounds	1	4	
	Nitrostarch, wet with not less than 20% alcohol or solvent		UN1069	Nonflammable gas	173.806	173.804	Forbidden	300 pounds	1	4	
	Nitrostarch, wet with not less than 20% water		NA1069	None	173.810	173.814	No limit	No limit	2	2	
	Nitrosoyl chloride		UN1936	Nonflammable gas	None	173.810	No limit	300 pounds	1,2	1,2	Under deck stowage must be in well-ventilated space
E	Nitrotoluene (RQ-1000/454)	ORM-E	UN1604	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2	
	Nitrourea. See High explosive		UN1070	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2	
	Nitrous oxide	Poison B	NA1005	Poison	173.345	173.346	1 quart	55 gallons	1,2	1	
	Nitroxylol		UN1936								
	Nonflammable gas, n.o.s. See Compressed gas, n.o.s.		NA1804	Flammable gas	173.306	173.302	Forbidden	300 pounds	1,2	1	
	Nonliquefied hydrocarbon gas	Corrosive material	UN1799	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Nonyltrichlorosilane										
	Nordhausen acid. See Sulfuric acid		NA1830	None	173.503	173.1080	Forbidden	10 gallons	1,2	1,2	
	Oakum	ORM-C	UN1800	Corrosive	None	173.500	173.500	Forbidden	10 gallons	1	Keep dry
	Octadecyltrichlorosilane										
	Octane		UN1262	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Ocytetrachlorosilane	Corrosive material	UN1801	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Oil, described as oil, n.o.s., petroleum oil, or petroleum oil, n.o.s.	Combustible liquid	NA1270	None	173.118a	None	No limit	No limit	1,2	1,2	
	Oil, described as oil, oil, n.o.s., petroleum oil, or petroleum oil, n.o.s.	Flammable liquid	NA1270	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Oil of mink. See Nitrobenzol, liquid		UN1002								
	Oil of vitriol. See Sulfuric acid		NA1880								
	Oil well cartridge	Class C explosive	UN0276	Class C explosive	None	173.112	50 pounds	150 pounds	1,2	1,2	
	Oiled clothing (manufactured article properly dried to prevent spontaneous heating). See Oiled material		NA1856	Class C explosive	None	173.112	50 pounds	150 pounds	1,2	1,2	
AW	Oiled material (manufactured article properly dried to prevent spontaneous heating)	ORM-C	NA9053	None	173.505	173.1080	No limit	No limit	1,2	1,2	
	Oiled paper (manufactured article properly dried to prevent spontaneous heating). See Oiled material		NA1370								
E	Oleum (sulfuric acid fuming) (RQ-1000/454)	Corrosive material	NA1851	Corrosive	None	173.272	Forbidden	5 pints	1,2	1	Under deck stowage must be in metal drums only. Keep dry.
	Organic peroxide, liquid, or solution, n.o.s.	Organic peroxide	NA9183	Organic peroxide	173.153	173.321	Forbidden	1 quart	1,2	1,2	Stow separate from combustible materials, ox- idatives, or acids.
	Organic peroxide liquid or solution, n.o.s.	Flammable liquid	NA1938	Organic peroxide and Flammable liquid	None	173.118	Forbidden	1 quart	1,2	5	Stow separate from combustible materials, ox- idatives, or acids.

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§172.101 Hazardous Materials Table (cont'd)

S172.101 Hazardous Materials Table (cont'd)

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(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	(3A) ID Number	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
W	Pesticide, water reactive. <i>Including but not limited to fungicides, and herbicides, etc., which contain manganese ethylenebis(2-hydroxybutyrate)</i>	ORM-C	NA2210	None	178.505	178.1040			2	2	Keep dry	
W	Petroleum coke (uncalched)	ORM-C		None	178.505	178.1045			1,2	1,2		
	Petroleum crude. See Crude oil	Combustible liquid	NA1267 UN1268	None	178.118a	None	No limit	No limit	1,2	1,2		
	Petroleum distillate	Flammable liquid	UN1268	Flammable liquid	178.118	178.119	1 quart	10 gallons	1,3	4		
	Petroleum ether	Flammable liquid	UN1271	Flammable liquid	178.118	178.119	1 quart	10 gallons	1,3	4		
	Petroleum gas, liquefied. See Liquefied petroleum gas		UN1075									
	Petroleum naphtha	Combustible liquid	UN1255	None	178.118a	None	No limit	No limit	1,2	1,2		
	Petroleum naphtha	Flammable liquid	UN1255	Flammable liquid	178.118	178.119	1 quart	10 gallons	1,2	1		
A	Phenaceton	OEM-A	NA2783	None	178.505	178.510	No limit	No limit				
	Phenol. See Carbolic acid		UN1673									
	Phenyl dichloroarsine	Poison B	NA2810	Poison	None	178.355	Forbidden	30 gallons	1	5		
	Phenyl trichlorosilane	Corrosive material	UN1604	Corrosive	None	178.280	Forbidden	10 gallons	1	5		
A	Phenylenediamine, meta or para, solid	ORM-A	UN1873	None	178.505	178.510	No limit	No limit				
E	Phosgene (diphosgene) (RQ-5000/2270)	Poison A	UN1076	Poison	None	178.355	Forbidden	100 pounds	1,2	1,2		
	Phosphine	Poison A	UN2169	Poison	None	178.328	Forbidden	100 pounds	1	5		
E	Phosphoric acid or Phosphoric Acid Solution (RQ-5000/2270)	Corrosive material	UN1805	Corrosive	178.244	178.245	1 quart	10 gallons	1,2	1,2	Glass carboys in hampers not permitted under deck	
	Phosphoric acid triethylencimine. See Tri-(1-aziridinyl phosphine oxide)		NA2601									
	Phosphoric anhydride (phosphorus pentoxide)	Corrosive material	NA1807	Corrosive	None	178.188	Forbidden	100 pounds	1,2	1,2		
E	Phosphorus, amorphous, red (RQ-1/454)	Flammable solid	UN1388	Flammable solid	None	178.189	Forbidden	11 pounds	1,2	1,2		
	Phosphorus bromide. See Phosphorus tribromide		UN1803									
	Phosphorus chloride. See Phosphorus trichloride		UN1809									
	Phosphorus heptasulfide	Flammable solid	UN1839	Flammable solid	None	178.225	Forbidden	10 pounds	1,2	1	Separate from oxidizing materials	
	Phosphorus oxybromide	Corrosive material	UN1029	Corrosive	None	178.271	Forbidden	1 quart	2	1	Keep dry. Glass carboys not permitted on passenger vessels	
E	Phosphorus oxychloride (RQ-5000/2270)	Corrosive material	UN1810	Corrosive	None	178.271	Forbidden	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels	
	Phosphorus pentachloride, solid	Corrosive material	UN1806	Corrosive	None	178.191	Forbidden	5 pounds	1	1	Keep dry	
E	Phosphorus pentasulfide (RQ-1000/454)	Flammable solid	UN1340	Flammable solid and Dangerous when wet	None	178.225	Forbidden	11 pounds	1,2	1,2	Separate from oxidizing material	
	Phosphorus sesquikulfide	Flammable solid	UN1341	Flammable solid and Dangerous when wet	None	178.225	Forbidden	11 pounds	1,2	1	Separate from oxidizing materials	
	Phosphorus tribromide	Corrosive material	UN1808	Corrosive	None	178.270	Forbidden	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels	
E	Phosphorus trichloride (RQ-5000/2270)	Corrosive material	UN1809	Corrosive	None	178.271	Forbidden	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels	
	Phosphorus trisulfide	Flammable solid	UN1843	Flammable solid	None	178.225	Forbidden	10 pounds	1,2	1	Separate from oxidizing materials	
E	Phosphorus, white or yellow, dry (RQ-1/454)	Flammable solid	UN1381	Flammable solid and Poison	None	178.190	Forbidden	25 pounds	1,2	5	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Phosphoryl chloride. See Phosphorus oxychloride		UN1810									
	Photographic film. See Film											
	Photographic flash powder. See Fireworks, special or low explosives											
	Picrate, dry. See High explosive											
	Picrate of ammonia. See High explosive											
	Picric acid, dry. See High explosive											
	Picric acid, wet, with not less than 10% water	Flammable solid	NA1344	Flammable solid	None	178.192 178.193	1 pound	25 pounds	1	5	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Picric acid, wet, with not less than 10% water, over 25 pounds. See High explosive											
	Pinane hydroperoxide solution not over 45% peroxide.	Organic peroxide	NA2162	Organic peroxide	178.153	178.324	1 quart	1 quart	1,2	4		
	Pine oil	Combustible liquid	UN1272	None	178.118a	None	No limit	No limit	1,2	1,2		
	Pinwheels. See Fireworks, common											
	Pivaloyl chloride. See Trimethyl acetylchloride											
	Plastic solvent, n.o.s.	Combustible liquid	NA1939	None	178.118a	None	No limit	No limit	1,2	1,2		
	Plastic solvent, n.o.s.	Flammable liquid	NA1993	Flammable liquid	178.118	178.119	1 quart	10 gallons	1,2	1		

§172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) ID Number	Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments	(a) Passenger carrying aircraft or racing car	(b) Cargo only aircraft	(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements	
	Plutonium nitrate solution	Radioactive material	NA3185	Radioactive (See Sec. 172.408)	173.393	173.393			1,2	1,3		
	Poisonous liquid, n.o.s. or Poison B, liquid, n.o.s.	Poison B	NA2810	Poison	173.345	173.346	1 quart	55 gallons	1,2	1		
	Poisonous liquid or gas, n.o.s.	Poison A	NA3030	Poison gas	None	173.328	Forbidden	1	5			
	Poisonous solid, n.o.s. or Poison B, solid, n.o.s.	Poison B	NA2811	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1		
	Polish, metal, stove, furniture or wood, liquid	Combustible liquid	NA1142	None	173.118a	None	No limit	No limit	1,2	1,2		
	Polish, metal, stove, furniture or wood, liquid	Flammable liquid	NA1142	Flammable liquid	173.118	173.129	1 quart	55 gallons	1,2	1		
E	Polychlorinated biphenyls (RQ-10/4.54)	ORM-E	UN2915	None	173.510	No limit	No limit	1,2	1,2		If stowed under deck, must be stowed in a recoverable location.	
	Polymerizable material				173.21							
E	Potassium arsenite, solid (RQ-100/4.54)	Poison B	UN1677	Poison	173.304	173.305	50 pounds	200 pounds	1,2	1,2		
E	Potassium arsenite, solid (RQ-100/4.54)	Poison B	UN1678	Poison	173.304	173.305	50 pounds	200 pounds	1,2	1,2		
E	Potassium bifluoride solution. See Potassium hydrogen fluoride solution		UN1611									
	Potassium bromate	Oxidizer	UN1484	Oxidizer	173.168	173.164	25 pounds	100 pounds	1,2	1,2		
	Potassium chlorate (potash chlorate)	Oxidizer	UN1485	Oxidizer	173.169	173.168	25 pounds	100 pounds	1,2	1,2		
B	Potassium chromate (RQ-100/4.54)	ORM-E	NA9142	None	173.510	No limit	No limit	2	2			
E	Potassium cyanide, solid (RQ-10/4.54)	Poison B	UN1680	Poison	173.370	25 pounds	200 pounds	1,2	1,2			
E	Potassium cyanide solution (RQ-10/4.54)	Poison B	UN1680	Poison	173.346	173.352	1 quart	55 gallons	1,2	1,2		
	Potassium dichloro-isocyanurate. See Potassium dichloro-s-triazinecarbone		NA2450									
	Potassium dichloro-s-triazinecarbone, dry (containing more than 39% volatile chlorine)	Oxidizer	NA2465	Oxidizer	173.158	173.217	50 pounds	100 pounds	1,2	1,2		
EA	Potassium dichromate (RQ-100/4.54)	ORM-A	NA1464	None	173.505	173.510	No limit	No limit				
A	Potassium fluoride	ORM-B	UN1612	None	173.505	173.510	No limit	No limit				
	Potassium fluoride solution	Carcinogenic material	UN1612	Carcinogenic material	173.244	173.249	1 quart	5 gallons	1,2	1,2		
	Potassium hydrate. See Potassium hydroxide		NA1814									
	Potassium hydrogen fluoride solution	Carcinogenic material	NA1811	Carcinogenic material	173.244	173.249	1 quart	5 gallons	1,2	1,2		
A	Potassium hydrogen sulfate, solid	ORM-B	UN2608	None	173.505	173.510	25 pounds	100 pounds				
E	Potassium hydroxide, dry solid, flake, bead, or granular (RQ-100/4.54)	Carcinogenic material	NA1813	Carcinogenic material	173.244	173.245b	25 pounds	100 pounds	1,2	1,2		
	Potassium hydroxide, liquid or solution (RQ-100/4.54)	Carcinogenic material	UN1614	Carcinogenic material	173.244	173.249	1 quart	10 gallons	1,2	1,2		
	Potassium hypochloritic solution. See Hypochlorite solutions containing more than 7% available chlorine by weight		NA1701									
A	Potassium metabisulfite.	ORM-B	UN2257	None	173.505	173.510	No limit	No limit	1,2	5	Segregation same as for flammable solids la- belled Dangerous When Wet	
	Potassium, metal	Flammable solid	UN1420	Flammable solid	None	173.202	Forbidden	1 pound	1,2	5	Segregation same as for flammable solids la- belled Dangerous When Wet	
	Potassium, metal, liquid alloy	Flammable solid										
	Potassium nitrate	Oxidizer	UN1486	Oxidizer	173.163	173.182	25 pounds	100 pounds	1,2	1,2		
	Potassium nitrate mixed (fused) with sodium nitrite	Oxidizer	UN1487	Oxidizer	173.163	173.183	25 pounds	100 pounds	1,2	1,2		
	Potassium nitrite	Oxidizer	UN1488	Oxidizer	173.163	173.184	25 pounds	100 pounds	1,2	1,2		
E	Potassium perchlorate	Oxidizer	UN1489	Oxidizer	173.163	173.219	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds and cyanides. Stow away from foodstuffs	
	Potassium permanganate (RQ-100/4.54)	Oxidizer	UN1490	Oxidizer	173.163	173.184	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds and cyanides. Stow away from foodstuffs	
	Potassium peroxide	Oxidizer	UN1491	Oxidizer	None	173.164	Forbidden	100 pounds	1,2	1,2	Separate from ammonium compounds and hy- drogen peroxide	
	Potassium sulfide	Flammable solid	NA1862	Flammable solid	173.153	173.207	25 pounds	100 pounds	1,2	1,2	Keep dry Separate from liquid acids, flammable gases or liquids, oxidizing materials or organic perox- ides	
	Pressurized product. See Compressed gas, n.o.s.											
	Primer, detonating. See Detonating primer											
	Primer. See Cartridge primer, combination primer, or small-arm primer											
	Projectile explosive. See Explosive projectile											
	Projectile, illuminating, incendiary or smoke, with expelling charge but without bursting charge. See Fireworks, special											
	Projectile, sand-filled, empty or solid. See 173.55											
	Propane or Liquefied petroleum gas. See Liquefied petroleum gas		UN1978									
E	Propargite (RQ-10/4.54)	ORM-B	NA2765	None	173.510	No limit	No limit	2	2			
	Propellant explosive	Class A explosive		None	173.64	Forbidden	Forbidden	6	6			
	Propellant explosive in water (Smokeless powder)	Class B explosive		Explosive B	None	173.93	Forbidden	Forbidden	1,2	5	Magazine stowage authorized	

§172.101 Hazardous Materials Table (cont'd)

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(1)	(2)	(3)	(8A)	(4)	(5)		(6)		(7)			
					Packaging		Maximum net quantity in one package		Water shipments			
* / E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required if not exempted	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c)	Other requirements
	Propellant explosive in water, unstable, contaminated, or deteriorated (smokeless powder)	Class B explosive		Explosive B	None	173.98	Forbidden	Forbidden	1,8	5		Magazine stowage authorized
	Propellant explosive, liquid	Class B explosive		Explosive B	None	173.98	Forbidden	10 pounds	1,2	5		Magazine stowage authorized
	Propellant explosive, solid	Class B explosive		Explosive B	None	173.98	Forbidden	10 pounds	1,3	5		Magazine stowage authorized
	Propellant explosive (solid, Class B, and small-arms primer). See Propellant											
	Propionaldehyde	Flammable liquid	UN1276	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
B	Propionic acid (RQ-5000/2270)	Corrosive material	UN1848	Corrosive	173.944	173.245	1 quart	5 gallons	1,2	1,2		Separated by a complete compartment or hold from organic peroxides
* E	Propionic acid solution (RQ-5000/2270)	Corrosive material	NA1848	Corrosive	173.944	173.245	1 quart	10 gallons	1,2	1,2		Separated by a complete compartment or hold from organic peroxides
E	Propionic anhydride (RQ-5000/2270)	Corrosive material	UN2496	Corrosive	173.944	173.245	1 quart	1 quart	1,2	1		Keep dry
	Propyl acetate	Flammable liquid	UN1276	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
	Propyl alcohol. See Alcohol, n.o.s.		UN1274									
	Propyl chloride	Flammable liquid	UN1270	Flammable liquid	None	173.118	Forbidden	10 gallons	1,3	5		
	Propyl formate	Flammable liquid	UN1281	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
	Propyl mercaptan	Flammable liquid	UN2704	Flammable liquid	None	173.141	Forbidden	10 gallons	1,2	5		
	Propyl trichlorosilane	Corrosive material	UN1816	Corrosive	None	173.260	Forbidden	10 gallons	1	1		Keep dry
	Propylamine	Flammable liquid	UN1277	Flammable liquid	None	173.118	Forbidden	10 gallons	1,3	5		
	Propylene diamine	Flammable liquid	UN2258	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
E	Propylene dichloride (RQ-5000/2270)	Flammable liquid	UN1279	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
	Propylene imine, inhibited	Flammable liquid	UN1821	Flammable liquid	None	173.109	Forbidden	5 pints	1,2	1		
	Propylene or Liquefied petroleum gas. See Liquefied petroleum gas		UN1077									
E	Propylene oxide (RQ-5000/2270)	Flammable liquid	UN1260	Flammable liquid	173.118	173.118	Forbidden	1 gallon	1,3	4		
	Prussic acid. See Hydrocyanic acid (prussic), liquid or stabilized											
E	Pyrethrins (RQ-1000/454)	ORM-E	NA0184	None	None	173.510	No limit	No limit	2	2		
	Pyridine	Flammable liquid	UN1282	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
	Pyroforic liquid, or Pyroforic liquids, n.o.s.	Flammable liquid	UN2645	Flammable liquid	None	173.134	Forbidden	Forbidden	1	5		Shade from radiant heat. Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Pyrosulfuryl chloride	Corrosive material	UN1817	Corrosive	170.244	173.247	1 quart	1 quart	1	4		Keep dry. Glass carboys not permitted on passenger vessels
	Pyroxylon plastic scrap	Flammable solid	NA2006	Flammable solid	None	173.195	Forbidden	Forbidden	1	5		Shade from radiant heat
	Pyroxylon plastics, rods, sheets, rolls, or tubes	Flammable solid	NA2006	Flammable solid	173.197		50 pounds	350 pounds	1,3	1		
	Pyroxylon solution	Combustible liquid	NA2060	None	173.118a	None	No limit	No limit	1,2	1,2		
	Pyroxylon solution	Flammable liquid	NA2060	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
	Pyroxylon solvent, n.o.s.	Combustible liquid	NA2060	None	173.118a	None	No limit	No limit	1,2	1,2		
	Pyroxylon solvent, n.o.s.	Flammable liquid	NA2060	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1		
	Pyrrolidine	Flammable liquid	UN1922	Flammable liquid	173.118	173.119	Forbidden	10 gallons	1,2	1		
E	Quicklime. See Calcium oxide		NA1910									
	Quinoline (RQ-1000/454)	ORM-E	None	None	None	173.510	No limit	No limit	2	2		
	Radioactive device, n.o.s.	Radioactive material	UN2656	None	173.391				1,2	1,2		
	Radioactive material, fissile, n.o.s.	Radioactive material	UN2909	None	173.391							
	Radioactive material, limited quantity, n.o.s.	Radioactive material	UN2918	Radioactive	173.398	173.398			1,2	1,2		
	Radioactive material, low specific activity or LSA, n.o.s.	Radioactive material	UN2910	None	173.391				1,2	1,2		
	Radioactive material, p.o.s.	Radioactive material	UN2912	Radioactive	173.392	173.398			1,2	1,2		
	Radioactive material, special form, n.o.s.	Radioactive material	NAS181	Radioactive	173.398	173.395			1,2	1,2		
	Rags, oily	Radioactive material	NAS182	Radioactive	173.393	173.394			1,2	1,2		
	Rags, wet	Flammable solid	UN1866	Flammable solid	None	173.109	Forbidden	Forbidden	1,2	1,2		Keep dry. Separate from flammable gases, or liquids, oxidizing materials, or organic peroxides
	Railway Fuse. See Fuse	Flammable solid	NA1325	Flammable solid	None	173.200	Forbidden	Forbidden	1	1		Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Railway torpedo. See Torpedo, railway		NA1993									
	Range oil. See Fuel oil											
	Reducing compound, paint, varnish, lacquer, etc. See Compound, lacquer, paint or varnish, etc., removing, reducing, or thinning, liquid											
	Refrigerant gas. See Dispersant Gas		UN1078	Nonflammable gas	173.808		No limit	No limit	1,8	1,8		
	Refrigerating machine	Nonflammable gas	UN2857	Nonflammable gas	173.808		No limit	No limit	1,8	1,8		

§172.101 Hazardous Materials Table (cont'd)

§172.101 Hazardous Materials Table (cont'd)

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§172.101 Hazardous Materials Table (cont'd)

S172.101 Hazardous Materials Table (cont'd)

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(1)	(2)	(3)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
				(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required (if not excepted)							
	Spirits of nitroglycerin, (I to 10%) Spirits of nitroglycerin, not exceeding 1% nitroglycerin by weight Spirits of salt. See Hydrochloric acid Sporting powder. See Black powder or Propellant explosive, solid, Class D explosive Spray starting fluid. See Engine starting fluid Spreader cartridge. See Fireworks, special Squib, electric or safety. See Electric squib or Safety squib • Stain. See Paint, enamel, lacquer, stain, shellac, varnish, etc. Stannic phosphide	Flammable liquid UN1204 UN1789	NA1204 UN1789	Flammable liquid Flammable liquid	None 173.118	173.103 173.133	Forbidden 1 quart	8 quarts 8 quarts	1,2 1,2	5 1	Segregation same as for explosives
		UN1263 UN1438		Flammable solid	None	173.104	Forbidden	25 pounds	1	5	Segregation same as for flammable solid labeled Dangerous When Wet
A	Stannous chloride, solid Starter cartridge	ORM-B Class B explosive Class C explosive	NA1769 NA0276	Non Explosive B Explosive C	None None	173.505 173.102	No limit No limit Forbidden	200 pounds 150 pounds	1,3 1,3	5 1,8	
	Starter cartridge										
	Storage battery wet. See Battery, electric storage, wet Straw. See Hay										
	Strontium arsenite, solid Strontium chlorate	Poison B Oxidizer	UN1492 UN1491 UN1506	Poison B Oxidizer	173.864 173.103	173.865 173.103	50 pounds 25 pounds	200 pounds 100 pounds	1,2 1,2	1,2 1,2	Keep separate from ammonium compounds. Slow away from powdered metals
	Strontium chlorate, wet	Oxidizer	UN1506	Oxidizer	173.103	173.103	25 pounds	200 pounds	1,2	1,2	Slow separate from ammonium compounds. Slow away from powdered metals
E	Strontium chromate (RQ-1000/454) Strontium nitrate Strontium peroxide	ORM-E Oxidizer Oxidizer	NA0149 UN1507 UN1509	None Oxidizer Oxidizer	None 173.153 178.163	173.510 175.182 173.154	No limit 25 pounds 25 pounds	No limit 100 pounds 100 pounds	2 1,2 1,2	2 1,2 1,2	Keep dry
E	Stychnine salt, solid (RQ-10/4,549)	Poison B	UN1692	Poison B	173.304	173.305	50 pounds	200 pounds	1,2	1,2	
E	Stychnine, solid (RQ-10/4,549)	Poison B	UN1692	Poison	None	173.377	Forbidden	200 pounds	1,2	1,2	
E	Styphnate of lead. See Initiating explosive										
E	Sylex monomer, inhibited (RQ-1000/454)										
	Succinic acid peroxide										
E	Sulfur chloride (mono and di) (RQ-1000/454) Sulfur dioxide										
	Sulfur flower. See Sulfur										
	Sulfur hexafluoride										
W	Sulfur, solid	Nonflammable gas ORM-C	UN1080 UN1850	Nonflammable gas	173.306 179.505	173.304 178.1080	150 pounds	300 pounds	1,2	1,2	Protect from sparks and open flame. Slow separate from oxidizing materials. Segregation same as for flammable solids Keep dry. Glass bottles not permitted under deck
	Sulfur trioxide, stabilized										
E	Sulfuric acid (For furnishing sulfuric acid, see Oleum) (RQ-1000/454)	Corrosive material	UN1620	Corrosive	173.244	173.273	Forbidden	1 gallon	1,2	1,2	
E	Sulfuric acid, spent (RQ-1000/454)	Corrosive material	UN1630	Corrosive	173.244	173.272	1 quart	1 gallon	1	1	Keep dry. Under deck stowage is permitted on cargo vessels only in metal drums Under deck stowage is permitted on cargo vessels only in metal drums
	Sulfuric anhydride. See Sulfur trioxide, stabilized										
	Sulfurous acid										
	Sulfuryl chloride										
	Sulfuryl fluoride										
	Sulphur. See Sulfur										
	Supplementary charge (explosive)										
EA	2,4,5-T amines, esters, or salts. See 2,4,5-Trichlorophenoxyacetic acid, amines, esters, or salts	Class A explosive	NA2765								
EA	2,4,5-T. See 2,4,5-Trichlorophenoxyacetic acid.		NA2765								
	Tank car, containing residual phosphorus and filled with water or inert gas. See 173.190										
	Tank car, empty (previously used for a hazardous material). See 173.29										
	Tank car, empty (previously used for a poison A material). See 172.510 and 173.29										
	Tank, portable, empty (previously used for a hazardous material). See 172.510, 173.29 and 172.514										
	Tank truck, empty. See 172.510, 172.514 and 173.29										
	Tankage fertilizer	Flammable solid	NA1825	Flammable solid	None	173.300	Forbidden	Forbidden	1	5	Keep dry. Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Tankage, rough ammoniate	Flammable solid	NA1825	Flammable solid	None	173.210	Forbidden	Forbidden	1	5	Keep dry. Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Tankage. See Garbage tankage										
	Tar, liquid	Combustible liquid	UN1999	None	173.118a	None	No limit	No limit	1,2	1,2	

§172.101 Hazardous Materials Table (cont'd)

(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(3A) ID Number	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific require- ments	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(e) Other requirements	
	Tar, liquid	Flammable liquid ORM-A	UN1899 NA2761	Flammable liquid None	173.118 None	173.131 173.510	1 quart 50 pounds	10 gallons No limit	1,2 2	1 2		
E	TDE (<i>1,1-dichloro-2,2-bis(para-chlorophenyl)ethane</i>) (RQ-1/0.454) Tear gas ammoniation. See Chemical ammoniation (containing an irritant material) Tear gas candle	Irritating material	UN1700	Irritant	None	173.355	Forbidden	75 pounds	1	5	Slow away from living quarters	
	Tear gas cartridge. See Small arms ammunition irritating (near gas) cartridge Tear gas grenade. See Grenade, tear gas											
	Tertiary alcohol. See Alcohol, n.o.s.											
	Tertiary butyl isopropyl benzene hydroperoxide	Organic peroxide ORM-A ORM-A	UN2081 UN1702 UN1697	Organic peroxide None None	173.158 173.505 173.505	173.224 173.620 173.510	1 quart 1 quart 10 gallons	1 quart 10 gallons	1,2 1,2	4 1,2		
AW	Tetrachloroethane											
A	Tetrachloroethylene or Perchloroethylene											
	Tetraethyl dithiopyrophosphate and compressed gas mixture	Poison A	UN1708	Poison gas	None	173.334	Forbidden	Forbidden	1	5	Shade from radiant heat. Slow away from living quarters. Segregation same as for non-flammable gases	
	Tetraethyl dithiopyrophosphate, liquid	Poison B	UN1704	Poison	None	173.358	Forbidden	1 quart	1	5		
	Tetraethyl dithiopyrophosphate mixture, dry	Poison B	UN1704	Poison	None	173.377	Forbidden	200 pounds	1	5		
	Tetraethyl dithiopyrophosphate mixture, liquid	Poison B	UN1704	Poison	None	173.359	Forbidden	1 quart	1	5		
E	Tetraethyl lead, liquid (including flash point for export shipment by water) (RQ-100/43.4)	Poison B	NA1649	Poison	None	173.354	Forbidden	55 gallons	1	5	If flash point is 141 deg F. or less, segregation must be the same as for flammable liquids	
B	Tetraethyl pyrophosphate and compressed gas mixture (RQ-100/45.4)	Poison A	UN1706	Poison gas	None	173.354	Forbidden	Forbidden	1	5	Shade from radiant heat. Slow away from living quarters. Segregation same as for non-flammable gases	
B	Tetraethyl pyrophosphate, liquid (RQ-100/45.4)	Poison B	NA2782	Poison	None	173.353	Forbidden	1 quart	1,2	5		
E	Tetraethyl pyrophosphate mixture, dry (RQ-100/45.4)	Poison B	NA2783	Poison	None	173.377	Forbidden	200 pounds	1,2	5		
E	Tetraethyl pyrophosphate mixture, liquid (RQ-100/45.4)	Poison B	NA2783	Poison	None	173.359	Forbidden	1 quart	1,2	5		
	Tetrafluoroethylene, inhibited	Flammable gas Corrosive material	UN1081	Flammable gas Corrosive	173.306	173.304	Forbidden	300 pounds	1,2	1,2	Slow away from living quarters	
	1,2,3,6-Tetrahydrobenzaldehyde	UN2498	UN2498	Flammable gas Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2		
	Tetrahydrofuran	Flammable liquid	UN2006	Flammable liquid	None	173.319	Forbidden	10 gallons	1,2	5		
	Tetramethylammonium hydroxide, liquid	Corrosive material	UN1895	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2		
A	Tetramethylmethylenediamine	ORM-A	NA9069	None	173.605	173.510	No limit	No limit				
	Tetranitromethane	Oxidizer	UN1510	Oxidizer	None	173.203	Forbidden	1	5	Shade from radiant heat. Slow away from food-stuffs		
	Tetrazene (guanyl nitrosoamine, guanyl tetrazene). See Initiating explosive Tetryl. See High explosive											
	Textile treating compound mixture, liquid	Corrosive material	NA1760	Corrosive	173.244	173.245 173.249a	1 quart	10 gallons	1,2	1,2		
	Textile waste. See Cotton waste											
	Textile waste, wet											
E	Thallium salt, solid, n.o.s.	Flammable solid Poison B	UN1857	Flammable solid Poison	None	173.211	Forbidden	1,2	1,2			
	Thallium sulfate, solid (RQ-100/454)	UN1857	NA1707 NA1707 NA1742	Flammable solid Poison	173.304 173.304	173.305 173.365	50 pounds 50 pounds	200 pounds 200 pounds	1,2 1,2	1,2 1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Thinner for rust preventive coating. See Rust preventive coating											
	Thinning compound, paint, varnish, lacquer, etc. See Paint, enamel, lacquer, stain, shellac, varnish, etc.											
	Thiocarboxyl-chloride. See Thiophosgene											
	Thioglycolic acid	Corrosive material	UN1940	Corrosive	173.244	173.245	1 quart	1 gallon	1,2	1,2	Glass carboys in hampers not permitted under deck	
	Thionyl chloride	Corrosive material	UN1888	Corrosive	None	173.247	Forbidden	1 gallon	1	1	Keep dry. Glass carboys not permitted on passenger vessels	
	Thiophosgene	Poison B	UN2474	Poison	173.306	173.306	Forbidden	1 gallon	1	1	Shade from radiant heat	
	Thiophosphoryl chloride	Corrosive material	UN1697	Corrosive	None	173.271	Forbidden	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels	
A	Thiram	ORM-A	NA2771	None	173.505	173.510	No limit	No limit				
	Thorium metal, pyrophoric	Radioactive material	NA9170	Radioactive and Flammable solid Oxidizer	173.226	173.226			1,2	1,2		
	Thorium nitrate	Radioactive material	NA8171	Radioactive and Oxidizer	173.502	173.505			1,2	1,2	Separate longitudinally by a complete hold or compartment from explosives	
	Time fuze. See Fuze, time, non-detonating											
	Tin chloride, fuming. See Tin tetrachloride, anhydrous											
	Tin perchloride. See Tin tetrachloride, anhydrous											
	Tin tetrachloride, anhydrous	Corrosive material	UN1827	Corrosive	173.244	173.247	1 quart	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels	
	Tinning flux. See Zinc chloride solution											
	Titanium metal powder, dry or wet with less than 20% water	Flammable solid ORM-A	NA2540 NA2546	Flammable solid Poison	None	173.208	Forbidden	75 pounds	1,2	5		
	Titanium metal powder, wet with 20% or more water	Flammable solid ORM-A	NA1852	Flammable solid Poison	None	173.208	Forbidden	150 pounds	1,2	5		
	Titanium sulfate solution containing not more than 45% sulfuric acid	Corrosive material	UN1760	Corrosive	173.244	173.257	1 quart	1 gallon	1	4	Shade from radiant heat. Keep dry	

§172.101 Hazardous Materials Table (cont'd)

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(1) E/ A/ W	(2) Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments			
					(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Pas- senger vessel	(c)	
											Other requirements	
	Titanium tetrachloride	Corrosive material	UN1888	Corrosivo	178.244	178.247	1 quart	10 gallons	1	1	Keep dry. Glass carboys not permitted on pas- senger vessels.	
	Toluene diisocyanate	Poison B	UN2078	Poison	178.346	178.346	Forbidden	55 gallons	1,2	1,2		
	Toluene sulfonic acid, liquid	Corrosive material	NA2384	Corrosive	178.244	178.245	1 quart	10 gallons	1,2	1,2		
E	Toluene (toluol) (RQ-1000/45-4)	Flammable liquid	UN1294	Flammable liquid	178.118	178.119	1 quart	10 gallons	1,2	1		
A	Toluenediamine	ORM-A	NA1708	None	178.505	178.510	No limit	No limit				
	Torch. See Fireworks, common											
	Torpedo, railway											
E	Toxaphene (RQ-I/0.45-4)	Class B explosive	NA2761	None	178.510	25 pounds	100 pounds	2	2			
	Toy caps	Class C explosive	NA0387	Explosive C	178.100	50 pounds	150 pounds	1,3	1,3			
	Toy propellant device	Class C explosive	NA0386	Explosive C	178.111	50 pounds	150 pounds	1,3	1,3			
	Toy smoke device	Class C explosive	NA0387	Explosive C	178.111	50 pounds	150 pounds	1,3	1,3			
	Toy torpedo. See Fireworks, special		NA2785									
E	2,4,5-TP esters. See 2,4,5-		NA2785									
	Trichlorophenoxypropionic acid esters											
E	2,4,5-TP. See 2,4,5-											
	Trichlorophenoxypropionic acid											
	Tracer											
	Tracer fuze											
	Tractor. See Motor vehicle											
	Trailer or truck body with refrigeration or											
	heating equipment. See Motor vehicle											
	Treated paper (manufactured article properly dried to prevent spontaneous heating). See Oiled material											
	Treated textile (manufactured article properly dried to prevent spontaneous heating). See Oiled material											
E	Trichloro (RQ-1000/45-4)	ORM-A	NA2788	None	178.510	25 pounds	100 pounds	2	2			
	Trichloro-4-triazinecone, dry, containing over 30% available chlorine	Oxidizer	UN2408	Oxidizer	178.150	178.217	50 pounds	100 pounds	1,3	1,3	Keep dry	
	(mono- (Trichloro) tetra-(monopotassium dichloro)-penta-4-triazinecone, dry (containing over 30% available chlorine))	Oxidizer	NA2988	Oxidizer	178.150	178.217	50 pounds	100 pounds	1,3	1,3	Keep dry	
	Trichloroacetic acid, solid											
	Trichloroacetic acid solution											
EA	Trichloroethylene (RQ-1000/45-4)	Corrosive material	NA2789	Corrosivo	178.244	178.245	25 pounds	100 pounds	1,2	1		
	Trichlorophenol (RQ-100/45-4)	ORM-A	NA2789	None	178.510	10 gallons	55 gallons					
EA	2,4,5-Trichlorophenoxyacetic acid (RQ- 100/45-4)	ORM-A	NA2789	None	178.510	100 pounds	No limit	2	2			
EA	2,4,5-Trichlorophenoxyacetic acid amines, esters, or salts (RQ-100/45-4)	ORM-A	NA2785	None	178.510	50 pounds	No limit	2	2			
EA	2,4,5-Trichlorophenoxypropionic acid (RQ- 100/45-4)	ORM-A	NA2785	None	178.510	50 pounds	No limit	2	2			
EA	2,4,5-Trichlorophenoxypropionic acid esters (RQ-100/45-4)	ORM-A	NA2785	None	178.510	50 pounds	No limit	2	2			
	Trichlorosilane											
	Trick matches											
	Trick noise maker, explosive											
E	Triethanolamine dodecylbenzenesulfonate (RQ-1000/45-4)	ORM-E	NA9151	None	178.510	No limit	2	2				
E	Triethylamine (RQ-1000/22-7)	Flammable liquid	UN1296	Flammable liquid	178.118	178.119	1 quart	10 gallons	1,2	1		
	Trifluorochloroethylene	Flammable gas	UN1082	Flammable gas	178.306	178.304	Forbidden	10 gallons	1,2	1		
	Trimethyl acetyl chloride	Corrosive material	UN3062	Corrosive	178.344	178.347	1 quart	2 quarts	1,2	1,2		
E	Trimethylamine, anhydrous (RQ-1000/45-4)	Flammable gas	UN1063	Flammable gas	178.306	178.304	Forbidden	300 pounds	1	4		
	Trimethylaluminum, aqueous solution (RQ- 1000/45-4)	Flammable liquid	NA1287	Flammable liquid	178.138	178.139	1 quart	10 gallons	1,2	1	Stow away from mercury and mercury com- pounds	
	Trimethylchlorosilane	Flammable liquid	UN1293	Flammable liquid	None	178.135	Forbidden	10 gallons	1,2	1		
	Trinitrobenzene, dry. See High explosive											
	Trinitrobenzene, wet, containing at least 10% water											
	Trinitrobenzoic acid, dry. See High explosive											
	Trinitrobenzoic acid, wet, containing at least 10% water											
	Trinitrobenzoic acid, wet, containing at least 10% water, over 23 pounds in one outside packaging. See High explosives											
	Trinitrotoluene, dry. See High explosive											
	Trinitrotoluene, wet containing at least 10% water											
	Tris-(1-aziridinyl) phosphine oxide	Flammable solid	NA1356	Flammable solid	178.212	1 pound	1 pound	1	4			
		Corrosive material	UN2601	Corrosive	178.244	178.290a	1 quart	1 gallon	1	1	Stow away from heavy metals and their com- pounds	
											Keep dry. Glass carboys not permitted on pas- senger vessels	

§172.101 Hazardous Materials Table (cont'd)

(1)	(2)	(3)	(3A)	(4)	(5)		(6)		(7)			
					Packaging		Maximum net quantity in one package		Water shipments			
*	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required if not excepted	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
E/ A/ W												
	Tungsten hexafluoride	Corrosive material	UN2198	Corrosive	None	173.264	Forbidden	110 pounds	1	5	Segregation same as for nonflammable gases.	
	Turpentine	Combustible liquid	UN1269	None	173.118a	None	No limit	No limit	1,2	1,2		
	Turpentine	Flammable liquid	UN1269	Flammable liquid	173.118	173.118	1 quart	10 gallons	1,2	1,2		
	Turpentine substitute	Combustible liquid	UN1300	None	173.118a	None	No limit	No limit	1,2	1,2		
	Turpentine substitute	Flammable liquid	UN1300	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
W	Twisted jute packing (rope) (treated or untreated). See Oakum	Radioactive material	NA9173	Radioactive and Corrosive	173.393	173.396			1,2	1,2		
	Uranium hexafluoride, fissile (containing more than 0.7% U-235)	Radioactive material	NA9174	Radioactive and Corrosive	173.392	173.393			1,2	1,2		
	Uranium hexafluoride, low specific activity (containing 0.7% or less U-235)	Radioactive material	NA9175	Radioactive and Flammable solid	173.392	173.393 173.396			1,2	1,2		
B	Uranyl acetate (RQ-5000/2270)	Radioactive material	NA9180	Radioactive material	173.391	173.395	Not applicable	Not applicable	2	2		
	Uranyl nitrate hexahydrate solution	Radioactive material	NA9178	Radioactive and Corrosive	173.392	173.393 173.395 173.396			1,2	1,2		
E	Uranyl nitrate, solid (RQ-5000/2270)	Radioactive material	NA9177	Radioactive and Oxidizer	173.392	173.393 173.396			1,2	1,2	Separate longitudinally by an intervening hold or compartment from explosives	
	Urea nitrate, dry. See High explosive	Flammable solid	NA1557	Flammable solid	None	173.192 173.193	1 pound	25 pounds	1,2	1,2		
	Urea nitrate, wet with 10% or more water, over 25 pounds in one outside packaging. See High explosive											
	Urea peroxide	Organic peroxide material	NA1511	Organic peroxide	173.103	173.227	2 pounds	25 pounds	1	4	Keep dry. Shade from radiant heat	
	Valeric acid	Corrosive material	NA1780	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2		
	Valeryl chloride	Corrosive material	UN2502	Corrosive	173.244	173.245	1 quart	1 gallon	1,2	1,2		
	Vanadium oxytrichloride	Corrosive material	UN2448	Corrosive	173.244	173.247a	Forbidden	1 quart	1	4	Shade from radiant heat	
B	Vanadium oxytrichloride and titanium tetrachloride mixture	Corrosive material	NA2444	Corrosive	None	173.245 173.246a	Forbidden	1 quart	1	4	Shade from radiant heat	
	Vanadium pentoxide (RQ-5000/454)	Poison B	NA2862	Poison	173.364	173.365	50 pounds	200 pounds	2	2		
	Vanadium tetrachloride	Corrosive material	UN2444	Corrosive	173.244	173.247a	Forbidden	1 quart	1	4	Shade from radiant heat	
E	Vanadyl sulfate (RQ-5000/454)	ORM-E	NA9182 NA1183 NA1142	None	None	173.310	No limit	No limit	2	2		
	Varnish drier. See Paint drier, liquid											
	Varnish remover or reducer. See Compound, lacquer, paint or varnish removing, reducing, or thinning liquid											
	Varnish. See Paint, enamel, lacquer, stain, shellac, varnish, etc.		NA1268									
	Varnish thinning compound. See Compound, lacquer, paint, or varnish removing, reducing, or thinning liquid		NA1268									
	Very small cartridge	Class C explosive	NA0312	Explosive C	None	173.108	50 pounds	200 pounds	1,3	1,3		
E	Vinyl acetate (RQ-5000/454)	Flammable liquid	UN1801	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Vinyl chloride	Flammable gas	UN1086	Flammable gas	173.306	173.304 173.314 173.316	Forbidden	200 pounds	1,2	4	Stow away from living quarters	
	Vinyl ethyl ether, inhibited	Flammable liquid	UN1802	Flammable liquid	None	173.119	Forbidden	1 gallon	1,3	6		
	Vinyl fluoride, inhibited	Flammable gas	UN1860	Flammable gas	173.306	173.304 173.314 173.316	Forbidden	200 pounds	1	4		
	Vinyl isobutyl ether	Flammable liquid	UN1304	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1		
	Vinyl methyl ether	Flammable gas	UN1057	Flammable gas	173.306	173.304 173.314	Forbidden	20 pounds	1,2	1	Stow away from living quarters	
	Vinyl trichlorosilane	Flammable liquid	UN1205	Flammable liquid	None	173.126	Forbidden	10 gallons	1,2	1		
E	Vinylidene chloride, inhibited (RQ-5000/2270)	Flammable liquid	UN1303	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4		
	Vitriol, oil of. See Sulfuric acid		NA1880									
	Wat' head. See Explosive projectile											
	Waste paper, wet	Flammable solid	NA1285	Flammable solid	None	173.186	Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Waste textile, wet	Flammable solid	UN1857	Flammable solid	None	173.211	Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Waste wool, wet	Flammable solid	UN1287	Flammable solid	None	173.213	Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Water pump system tank charged with compressed air or nitrogen	Nonflammable gas	NA1956	None	173.306		Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides	
	Water reactive solid, n.o.s.	Flammable solid	UN2813	Flammable solid and Dangerous when wet	173.150	173.154	Forbidden	25 pounds	1,2	4	Segregation same as for flammable solids labeled Dangerous When Wet	

S172.101 Hazardous Materials Table (cont'd)

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(1)	(2)	(3)	(8A)	(4)	(5)		(6)		(7)		
					Packaging		Maximum net quantity in one package		Water shipments		
*/ E/ A/ W	Hazardous materials descriptions and proper shipping names	Hazard class	ID Number	Label(s) required if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or aircraft	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
*	Water treatment compounds, liquid	Corrosive material	NA1760	Corrosive	173.244	173.149	1 quart	10 gallons	1	1	
*	Wax, liquid	Combustible liquid	NA1598	None	173.118a	None	No limit	No limit	1,2	1,2	
	Wet hair. See Hair, wet		NA1525								
	Wet textile waste. See Waste textile, wet		UN1650								
	White acid (ammonium bifluoride and hydrochloric acid mixture)	Corrosive material	NA1780	Corrosive	173.244	173.264	1 quart	1 gallon	1	1	
	Wood filler, liquid. See Paint, varnish, lacquer stain, shellac, enamel, etc.		NA1285								
	Wood shavings (when dry, clean and free from oil). See Sawdust.										
	Wool waste. See Cotton waste.										
	Wool waste, wet. See Waste wool, wet										
	X-ray film. See Film										
E	Xylene (xylol) (RQ-1000/454)	Nonflammable gas	UN2086	Nonflammable gas	173.308	173.302	150 pounds	300 pounds	1,2	1,2	
E	Xylene (xylol) (RQ-1000/454)	Flammable liquid	UN1907	Flammable liquid	173.118	173.119	1 quart	1 quart	1,2	1,2	
E	Xylyl bromide	ORM-E Irritating material	UN2081	Irritant	None	173.610	No limit	2	2	2	
A	Yeast, active, in liquid or pressed form	ORM-C	UN1701	None	None	173.382	Forbidden	75 pounds	1	5	
E	Zinc acetate (RQ-1000/454)	ORM-E	NA9153	None	None	173.610	No limit	2	2	2	
E	Zinc ammonium chloride (RQ-5000/2270)	ORM-E	NA9154	None	None	173.610	No limit	2	2	2	
	Zinc ammonium nitrite	Oxidizer	UN1612	Oxidizer	None	173.223	25 pounds	100 pounds	1,3	5	This material may be forbidden in water transportation by certain countries
	Zinc arsenate	Poison B	UN1712	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Zinc arsenite, solid	Poison B	UN1712	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
E	Zinc borate (RQ-1000/454)	ORM-E	NA0155	None	None	173.610	No limit	2	2	2	
E	Zinc bromide (RQ-5000/2270)	ORM-E	NA9166	None	None	173.610	No limit	2	2	2	
E	Zinc carbonate (RQ-1000/454)	ORM-E	NA8167	None	None	173.610	No limit	2	2	2	
	Zinc chloride	Oxidizer	UN1612	Oxidizer	173.153	173.169	25 pounds	100 pounds	1,2	1,2	
E	Zinc chloride, solid (RQ-5000/2270)	ORM-E Corrosive material	NA2281	None	None	173.510	No limit	1 quart	1,2	1,2	
E	Zinc chloride solution (RQ-5000/2270)	UN1840	Corrosive	173.244	173.243	1 quart	No limit	1 quart	1,2	1,2	
E	Zinc cyanide (RQ-10/4,54)	Poison D	UN1713	Poison	173.370		25 pounds	200 pounds	1,2	1,2	
	Zinc ethyl. See Pyrophoric liquids, n.o.s.		NA1966								
E	Zinc fluoride (RQ-1000/454)	ORM-K	NA9158	None	None	173.610	No limit	2	2	2	
E	Zinc formate (RQ-1000/454)	ORM-E	NA9159	None	None	173.610	No limit	2	2	2	
E	Zinc hydroxylate (RQ-1000/454)	Flammable solid	NA1901	Flammable solid	173.153	173.154	25 pounds	100 pounds	2	3	
*	Zinc muriate solution. See Zinc chloride solution		NA1840								
E	Zinc nitrate (RQ-5000/2270)	Oxidizer	UN1614	Oxidizer	173.135	173.182	25 pounds	100 pounds	2	2	
	Zinc permanganate	Oxidizer	UN1615	Oxidizer	173.135	173.184	25 pounds	100 pounds	1,2	1,2	
E	Zinc peroxide	Oxidizer	UN1516	Oxidizer	173.159	173.154	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds and hydrogen peroxide
E	Zinc phenolsulfonate (RQ-5000/2270)	ORM-E	NA9160	None	None	173.610	No limit	2	2	2	Keep dry
E	Zinc phosphide (RQ-1000/454)	Flammable solid	UN1714	Flammable solid	173.158	173.154	25 pounds	100 pounds	2	2	Keep away from oxidizing agents.
E	Zinc silicofluoride (RQ-5000/2270)	ORM-E	UN2285	None	None	173.510	No limit	2	2	2	
E	Zinc sulfate (RQ-1000/454)	ORM-E	NA9161	None	None	173.510	No limit	2	2	2	
	Zirconium hydride	UN1457	Flammable solid	None	None	173.206	Forbidden	150 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet
*	Zirconium metal, dry, chemically produced, finer than 20 mesh particle size	Flammable solid	NA2006	Flammable solid	None	173.214	Forbidden	75 pounds	1	5	Separate from flammable gases or liquids, oxidizing materials or organic peroxides
*	Zirconium metal, dry, mechanically produced, finer than 20 mesh particle size	Flammable solid	NA2008	Flammable solid	None	173.214	Forbidden	75 pounds	1	5	Separate from flammable gases or liquids, oxidizing materials or organic peroxides
*	Zirconium, metal, liquid, suspensions	Flammable liquid	NA1308	Flammable liquid	None	173.214	Forbidden	5 gallons	1	5	
	Zirconium metal, wet, chemically produced, finer than 20 mesh particle size	Flammable solid	NA1336	Flammable solid	None	173.214	Forbidden	150 pounds	1,2	5	
	Zirconium metal, wet, mechanically produced, finer than 20 mesh particle size	Flammable solid	NA1358	Flammable solid	None	173.214	Forbidden	150 pounds	1,2	5	
E	Zirconium nitrate (RQ-5000/2270)	Oxidizer	UN2728	Oxidizer	173.153	173.164	25 pounds	100 pounds	2	2	
	Zirconium nitrate, wet with at least 20% water	Oxidizer	UN1617	Oxidizer	173.216	173.216	25 pounds	1	1		Stow away from heavy metals and their salts
K	Zirconium potassium fluoride (RQ-5000/2270)	ORM-E	NA9162	None	None	173.510	No limit	No limit	2	2	
E	Zirconium sponge (borings, clippings, shavings, sheets, or turns)	Flammable solid	UN1832	Flammable solid	173.159	173.220	Forbidden	Forbidden	1	4	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
E	Zirconium sulfate (RQ-5000/2270)	ORM-B	NA9163	None	173.510	100 pounds	No limit	2	2	2	
E	Zirconium tetrachloride, solid (RQ-5000/2270)	Corrosive material	UN2505	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	

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3. In § 172.202 paragraph (a)(3) would be added and paragraph (b) would be revised to read as follows:

§ 172.202 Description of hazardous material on shipping papers.

(a) * * *

(3) The identification number assigned to the material in § 172.101.
* * * * *

(b) The basic description specified in paragraphs (a)(1), (2) and (3) of this section must be shown in sequence except that the technical name of the material may be entered between the proper shipping name and the class. For example: "Gasoline, Flammable liquid UN 1203;" "Flammable solid n.o.s. UN 1325;" or "Corrosive liquid n.o.s. (Caprylic chloride) Corrosive material UN 1760."

4. Section 172.300 would be revised to read as follows:

§ 172.300 General marking requirements.

Except as provided by this subchapter, each person who offers a package containing a hazardous material for transportation shall mark the package with the proper shipping name and identification number assigned to the material in § 172.101. However, when it has been determined by the shipper that a package has been previously marked as required for the material it contains, it need not be remarked. This section does not apply to portable tanks, cargo tanks and tank cars.

5. In § 172.326 paragraphs (a) and (b) would be revised to read as follows:

§ 172.326 Portable tanks.

(a) No person may offer for transportation or transport a portable tank containing a hazardous material unless it is marked legibly—

(1) On each side and each end with the identification number specified for the material in § 172.101 on a panel as specified by § 172.332, and

(2) On each side with the proper shipping name of the material in lettering no less than two inches (50.8mm.) in height.

(b) A portable tank marked with the identification number or name of a specific hazardous material may not be used to transport any other material unless the marking is removed, or changed to identify the hazardous material in the portable tank, whichever is appropriate.

6. In § 172.328 paragraphs (a), and (b) and (e) would be revised to read as follows:

§ 172.328 Cargo tanks.

(a) No person may offer for transportation or transport a hazardous material in a cargo tank unless the cargo tank is marked on each side and each end with the identification number specified for the material in § 172.101 on a panel as specified in § 172.332.

(1) A person who offers a motor carrier a hazardous material for transportation in a cargo tank shall provide to the motor carrier the required identification numbers on panels prior to or at the time the material is offered for transportation unless the cargo tank is already marked with identification numbers as required by this subpart.

(2) A person who offers a cargo tank containing a hazardous material for transportation, shall affix the required identification numbers on panels prior to or at the time the material is offered for transportation unless the cargo tank is already marked with identification numbers as required by this subpart.

(3) As an alternative, the marking required by paragraph (a) of this section on the front of a cargo tank may be on the front of a truck-tractor instead of or in addition to the marking on the front of the cargo tank to which the truck-tractor is attached.

(4) Identification numbers are not required on nurse tanks meeting the provisions of § 173.315(m) of this subchapter.

(b) Except as specified in paragraph (a) of this section, when the name of a material or other marking is required by this subchapter to be marked on a cargo tank, it must be legibly displayed in lettering or numbers no less than two inches (50.8mm.) in height.
* * * * *

(e) A cargo tank marked with the identification number or name of a specific hazardous material may not be used to transport any other material unless the marking is removed, or changed to identify the hazardous material the cargo tank contains, whichever is appropriate.

7. Section 172.330 would be revised to read as follows:

§ 172.330 Tank cars.

(a) No person may offer for transportation or transport a hazardous material in a tank car unless the tank car is marked on each side and each end with the identification number specified for the material in § 172.101 on a panel as specified in § 172.332. Also, when required to be marked by Part 173 or 179 of this subchapter, each tank car and tank car tank (DOT 106 or 110) used to transport a hazardous material must be

marked as specified in this subpart with the—

(1) Proper shipping name, or

(2) Common name authorized in this subchapter for the material such as "Refrigerant Gas."

(b) The letters in the marking of a proper shipping or common name must be 4 inches (101.6mm.) or more in height with at least a $\frac{1}{8}$ inch (15.9mm.) stroke. The separation between each letter must be at least $\frac{3}{4}$ inch (19.0mm.).

(c) The marked proper shipping or common name must be—

(1) Affixed to both sides of the tank car, and

(2) Except for tank cars transporting DOT 106 and 110 multi-unit tank car tanks, readily visible when viewed from each side of the tank car.

(d) A tank car and a tank car marked with the identification number or name of a specific hazardous material may not be used to transport any other material unless the marking is removed, or changed to identify the hazardous material the tank car or tank car tank contains, whichever is appropriate.

(e) For a hazardous material in a DOT 106 or 110 tank car tank,

(1) The identification number specified for the material in § 172.101 must be marked on one panel as specified in § 172.332 that is affixed to the side of the tank,

(2) A motor vehicle or rail car used to transport the tank car tank must be marked on each side and each end with the identification number specified for the material in § 172.101 on a panel as specified in § 172.332, and

(3) If the tank car tank contains chlorine, marking of the name "Chlorine" is not required when the CHLORINE label is used as provided in § 172.405(b).

8. Section 172.332 would be added to read as follows:

§ 172.332 Identification number markings and orange panel specifications.

(a) The orange panel for portable tanks, cargo tanks and tank cars shall be $6\frac{1}{4}$ inches (16 cm.) high by $18\frac{1}{4}$ inches (41.5 cm.) wide with a $\frac{1}{16}$ of an inch (12 mm.) black outer border. An identification number shall be displayed in 4-inch (100 mm.) black Helvetica Medium numerals. Measurements may vary from those specified plus or minus 0.1 of an inch (3 mm.).

(b) The orange display panel may be made of any durable material prescribed for placards in § 172.519, and shall be of the orange color specified for labels or placards in Appendix A to this Part.

(c) The name of a material represented by an identification

number may be shown in the upper left border of the orange panel in letters not more than 18 points ($\frac{1}{4}$ -inch) high.

(d) Except for size and color, the orange panel and identification numbers are illustrated as follows:



(e) The identification number on an orange panel shall be displayed in proximity to any placard required by §172.504.

(49 U.S.C. 1803, 1804; 1808; 49 CFR 1.53, App. A to Part 1, and paragraph (a)(4) of App. A, Part 106.)

Note. The Materials Transportation Bureau has determined that this document does not contain a major proposal requiring preparation of an economic statement under Executive Order 12044 and DOT implementing procedures (43 FR 9582) nor an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et seq.).

A regulatory evaluation is available in the public docket.

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