MAY 21 1993

U.S. Department of Transportation

**Research and Special Programs Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 10799

1. ESM II Incorporated, Niagra Falls, New York, is hereby granted an exemption from certain provisions of this Department's Hazardous Materials Regulations specified in paragraph 5 below to offer packages perscribed herein of hazardous materials described in paragraph 3 below for transportation in commerce subject to the limitations and special requirements specified herein. This exemption authorizes the use of large, collapsible polypropylene-lined woven polypropylene bulk bags with top lifting straps having a capacity of 2200 pounds each, and top and bottom outlets, for shipment of certain hazardous materials listed in paragraph 3. below, and provides no relief from any regulation other than as specifically stated. **Note:** Reference to 49 CFR sections in this exemption are to regulations in effect on September 30, 1991.

2. BASIS. This exemption is based on the ESM II Inc. application dated May 27, 1992, submitted in accordance with 49 CFR 107.103 and the public proceeding thereon.

3. HAZARDOUS MATERIALS (Descriptor and class). Those materials classed as Oxidizers, Corrosive materials, Poison B and Flammable solids listed in Appendix A of this exemption and other Oxidizers, Corrosive solids, Poison B solids and Flammable solids which are compatible with polyethylene and are specifically identified to and acknowledged in writing by the Office of Hazardous Materials Exemptions and Approvals (OHMEA) prior to first shipment. For shipments by vessel, hazardous materials that are authorized by Appendix 2 to Section 26 of the General Introduction to the International Maritime Dangerous Goods (IMDG) Code to be transported in flexible intermediate bulk containers (FIBCs) may be transported in the bulk bags under this exemption. Such materials, which are part of an import or export shipment may also be transported in bulk bags under this exemption by motor vehicle and rail freight, provided a portion of the shipment is by vessel. **NOTE:** Effective October 1, 1993, the appropriate numeric hazard class or division descriptions must be used in place of the written hazard class descriptions.

4. PROPER SHIPPING NAME (49 CFR 172.101). The specific chemical name or generic commodity description, as appropriate.

5. REGULATION AFFECTED. 49 CFR 172.331; 173.366; Part 173 Subparts E and F.

Expired - Not Active

6. MODES OF TRANSPORTATION AUTHORIZED. Motor vehicle, rail freight, and cargo vessel. Shipments by vessel must be made in conformance with Section 26 of the General Introduction to the IMDG Code.

7. SAFETY CONTROL MEASURES. Packaging prescribed is a non-DOT specification collapsible flexible, non-reusable intermediate bulk bag container. The bag is fabricated of woven polypropylene, incorporating lifting straps of woven polyester webbing, with an interior coating of polypropylene film, and has discharge and/or inlet openings, and a capacity of not over 2200 pounds. Actual test results for one bag of each design type must be on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA); Each bag, prepared as for shipment, must be capable of satisfactorily withstanding one of the following series of design type tests:

a. Free-fall drop tests (three from a height of four feet); Jerk test; Topple test; Topple and Drag test; Righting test, Abrasion test; as described in "Procedures for Performance Testing of Flexible Intermediate Bulk Containers," Packaging Institute, U.S.A., procedure T-4102-85, dated February, 1985; or;

b. Top lift test; Tear test; Stacking test; Drop test; Topple test; and Righting test; all at the packing group II performance level as described in Chapter 16 of the United Nations "Recommendations on the Transport of Dangerous Goods Seventh Revised Edition". If the UN series of tests is used to qualify a bag's design type, then the tested bag and each bag produced under this exemption must also be capable of passing the vibration standard described in Section 178.608 as found in 49 CFR dated October 31, 1992.

8. SPECIAL PROVISIONS.

a. Persons who receive packages covered by this exemption may reoffer them for transportation provided no modifications or changes are made to the packages, all terms of this exemption are complied with and a current copy of this exemption is maintained at each facility from which such reoffering occurs.

b. Shipment by highway must be in closed vehicles or freight containers, in full truckloads only, except that bags containing ammonium nitrate fertilizer may be transported on flatbed trailers provided the bags are restricted from movement and completely covered by waterproof tarpaulins.

c. Shipment by rail must be in DF box cars except that COFC or TOFC service is authorized in accordance with 49 CFR 174.61.

d. For transportation by cargo vessel, the following additional special provisions apply:

i. Bulk bags must be enclosed in a secondary containment system in accordance with Appendix A of this exemption. "Secondary containment system" means a closed or open freight container or transport vehicle.

ii. Materials in Classes 4.2 (Flammable solids) (Dangerous when wet) and 5.1 (Oxidizers) that are permitted by the IMDG Code to be transported without secondary protection may be carried as break-bulk cargo, provided -

(1) The hold or compartment is dry and thoroughly cleaned of all residue to previous cargo, and all loose debris and dunnage are removed.

(2) The hatches are inspected for watertightness before loading.

(3) The hold is free of sharp projections that could tear or puncture the bags.

(4) After the bags are unloaded, the hold or compartment is inspected for spillage and any residue removed.

iii. When any Class 5.1 materials (Oxidizer) that is carried as break-bulk cargo is loaded or unloaded -

(1) Firehoses must be laid out in the loading or unloading area and must be operable at all times.

(2) Smoking, carrying matches or lighting devices, or performing hot work is prohibited in the loading or unloading area; and the area must be posted with appropriate warning signs.

iv. The provisions of 49 CFR 176.410(d), except subparagraphs (d)(1) and (d)(2), do not apply to shipment of ammonium nitrate fertilizer (UN 2067) by vessel under this exemption.

e. Each bag must be permanently and durably marked in accordance with the requirements of Section 172.331 in letters at least two inches high on a contrasting background. In addition, for shipments by vessel, the marking requirements of subsection 26.1.5 of the General Introduction to the IMDG Code are required. The use of labels, tags or signs for marking purposes is prohibited.

f. A copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.

g. Shippers using the packaging covered by this exemption must comply with 49 CFR Part 172; all provisions of this exemption, and all other applicable requirements contained in 49 CFR Parts 100-180.

9. REPORTING REQUIREMENTS: Any incident involving loss of packaging contents or packaging failure must be reported to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

10. EXPIRATION DATE. March 31, 1995.

Issued at Washington, D.C.

MAY 21 1993

Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. 20590. Attention: Exemptions.

Dist: FHWA, FRA, USCG.

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APPENDIX A

| Hazardous Material | UN Number | FOR Shipment By Cargo Vessel Secondary Containment (Freight Container or Transport Vehicle) |
|---|---|---|
| Aluminum bromide, anhydrous | UN 1725 | open or closed |
| Aluminum nitrate | UN 1438 | not required |
| Ammonium hydrogen fluoride, solid | UN 1727 | open or closed |
| Ammonium nitrate | UN 1942 | not required |
| Ammonium nitrate-carbonate mixture | UN 2068 | not required |
| Ammonium nitrate fertilizer | UN 2067 | not required |
| Ammonium persulfate | UN 1444 | not required |
| Antimony tribromide | UN 1549 | open or closed |
| Arsenic trioxide | UN 1561 | open or closed |
| Bromoacetic acid | UN 1938 | open or closed |
| Calcium cyanide, solid | UN 1575 | Bulk bags not authorized |
| Calcium Hypochlorite, hydrated | UN 2880 | Bulk Bags not authorized |
| Carbamate pesticide, solid N.O.S. (contains 15% or less aldicarb by weight | UN 2757 | open or closed |
| Chloroacetic acid, solid | UN 1751 | open or closed |
| Chromic acid, solid | UN 1463 | Bulk bags not authorized |
| Magnesium granules, coated | UN 2950 | closed only |

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|---|---|---|
| Poisonous solid, N.O.S. or Poison B, solid, N.O.S. (Amyl Phenol) (Butyl Phenol) (Octyl Phenol) | UN 2811 | open or closed |
| Potassium dichloro-s-triazinetrione | UN 1479 | open or closed |
| Potassium hydroxide, flake | UN 1813 | open or closed |
| Potassium hydroxide, solid | UN 1813 | open or closed |
| Potassium persulfate | UN 1492 | not required |
| Sodium azide | UN 1687 | open or closed |
| Sodium bifluoride | UN 2439 | |
| Sodium chlorate | UN 1495 | open or closed |
| Sodium dichloro-s-triazinetrione | UN 1479 | open or closed |
| Sodium hydrosulfite | UN 1384 | open or closed |
| Sodium hydroxide | UN 1823 | open or closed |
| Sodium nitrate | UN 1498 | not required |
| Sodium nitrite | UN 1500 | not required |
| Sodium perborate monohydrate | UN 1479 | open or closed |
| Sodium persulfate | UN 1505 | not required |
| Sodium sulfide, anhydrous | UN 1385 | Bulk bags not authorized |
| TEMIK (Aldicarb pesticide) | UN 2588 | open or closed |
| Trichloroisocyanuric acid, dry | UN 2468 | open or closed |
| Trichloro-s-triazinetrione, dry | UN 2468 | open or closed |
| Waste arsenical mixture | UN 1557 | open or closed |
| Zinc dust | UN 1436 | closed only |

APPENDIX

| | |
|---|---|
| Trichloroisocyanuric acid, dry | UN 2468 |
| Trichloro-s-triazinetrione, dry * * | UN 2468 |
| Waste arsenical mixture, n.o.s. * * * | UN 1557 |
| Zinc dust | UN 1436 |

* Transport by vessel not authorized.

* * This shipping description may be used only when all or part of the transport is by vessel. For transport by motor vehicle or rail freight, use "trichloroisocyanuric acid, dry."

* * For mixtures of arsenic compounds, the name(s) of the hazardous components of the mixture must appear in the parenthesis.

* * * * Packaging for calcium silicide must be hermetically sealed.

APPENDIX A

| Hazardous Material | UN Number |
|---|---|
| Aluminum bromide, anhydrous | UN 1725 |
| Aluminum chloride, anhydrous | UN 1726 |
| Aluminum nitrate | UN 1438 |
| Ammonium hydrogen fluoride, solid | UN 1727 |
| Ammonium nitrate | UN 1942 |
| Ammonium nitrate-carbonate mixture | UN 2068 |
| Ammonium nitrate fertilizer | UN 2067 |
| Ammonium nitrate fuel oil mixture * | NA 0331 |
| Ammonium persulfate | UN 1444 |
| Antimony compound, inorganic, n.o.s. | UN 1549 |
| Antimony tribromide | UN 1549 |
| Arsenic trioxide | UN 1561 |
| Arsenical compound, solid, n.o.s. | UN 1557 |
| Antimony tribromide | UN 1549 |
| Arsenic trioxide | UN 1561 |
| Arsenical compound, solid, n.o.s. | UN 1557 |
| Bromoacetic acid | UN 1938 |
| Calcium carbide * | UN 1402 |
| Calcium cyanide, solid * | UN 1575 |