U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

OCT 1 8 2013

Mr. James Moulds
Sr. Environmental Services Manager
WTS, Inc.
2119 East Franklin St.
Lower Level
Richmond, VA 23223

Ref. No.: 13-0114

Dear Mr. Moulds:

This responds to your May 14, 2013 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to shipping flammable solids in bulk packages. In your letter, you state that a manufacturer produces a fluoropolymer based "tape" that consists of a non-hazardous polymer (polytetrafluoroethylene) impregnated with an isoparaffinic petroleum distillate (Isopar K©). You state that the Isopar K is completely absorbed into the polymer matrix and will not separate from it nor become a free liquid under normal conditions, including those encountered during transportation (compression, heat, and vibration). You state that you classified the material as "UN1325, Flammable solids, organic, n.o.s., (contains mineral spirits), 4.1, PG III," and transport it in bulk packages authorized in column 8C of the Hazardous Materials Table (HMT). Your questions are paraphrased and answered below.

Q1: You state the "tape" has been classified as a Division 4.1 (PG III) hazardous material in accordance with § 173.124(a)(3)(ii) as the test data shows it exhibits a burning rate greater than 2.2mm per second when tested in accordance with the United Nations "Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fourth Revised Edition" (Section 33 – Classification Procedures, Test Methods and Criteria relating to Class 4). You ask whether a shipping description of "UN1325, Flammable solids, organic, n.o.s., (contains mineral spirits), 4.1, PG III" or "UN3175, Solids containing flammable liquid, n.o.s., (contains mineral spirits), 4.1, PG II" is accurate?

A1: In accordance with § 173.22, it is the shipper's responsibility to properly classify and describe a hazardous material. This Office does not perform that function. In order to be classified as a Division 4.1 (flammable solid), the material must meet the

conditions listed in § 173.124(a)(1), (2), or (3). If you have test data that indicates the item meets these conditions, the shipping descriptions for UN1325 or UN3175 could be correct. However, as stated above, it is the shipper's responsibility to properly classify and describe a hazardous material.

Q2: You state that it has been suggested to you that for the "tape," the more appropriate shipping description is "UN3175, Solids containing flammable liquid, n.o.s., (contains mineral spirits), 4.1, PG II." You ask which shipping description is more correct?

A2: Please see A1. It is the shipper's responsibility to properly classify and describe a hazardous material. However, based on our review of the data you provided, "UN3175, Solids containing flammable liquid, n.o.s., (contains mineral spirits), 4.1, PG II" is the more accurate shipping description.

Q3: You ask what type of bulk packagings are authorized under § 173.240(b) and (c) for this "tape" (i.e., UN3175, Solids containing flammable liquid, n.o.s., (contains mineral spirits), 4.1, PG II)?

A3: For certain low hazard solid materials, select motor vehicles, portable tanks, and closed bulk bins are authorized under § 173.240(b) and (c). In the scenario you described in your letter, you may choose any of the following bulk packages:

Motor vehicles: Specification MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, MC 312, MC 330, MC 331, DOT 406, DOT 407, and DOT 412 cargo tank motor vehicles; non-DOT specification, sift-proof cargo tank motor vehicles; and sift-proof closed vehicles.

Portable tanks and closed bulk bins: DOT 51, 56, 57 and 60 portable tanks; IMO type 1, 2 and 5, and IM 101 and IM 102 portable tanks; UN portable tanks; marine portable tanks conforming to 46 CFR part 64; and sift-proof non-DOT Specification portable tanks and closed bulk bins are authorized.

Q4: You ask whether a closed box van trailer meets the criteria of a sift-proof closed bulk bin?

A4: The answer is yes. Section 173.240 authorizes the transportation of certain low hazard solid materials in non-DOT specification sift-proof closed bulk bins. In order to be considered sift-proof, the completed package may not permit the escape of any of the hazardous material contained therein. A "closed bulk bin" is a type of bulk packaging other than a portable tank, cargo tank, tank car and multi-unit tank car. It is the shipper's responsibility to ensure that the packaging provides sift-proof containment at the time of shipment and will continue to provide that containment until the package reaches its final destination. It is the opinion of this Office that a box van trailer is a "closed bulk bin" if the provisions of § 173.240 requiring sift-proof containment are met.

In addition to being sift-proof and closed, the package must also meet general packaging provisions of §§ 173.24 and 173.24b. Further, the bins are also subject to the requirements of the special provisions contained in Column 7 of the HMT, as applicable to the material being transported.

I hope this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Nickels
§173.124
§173.101
§173.24
§173.24.b
Proper Shipping Name
13-0114

May 14, 2013

WTS, Inc.
2119 East Franklin St.
Lower Level
Richmond, VA 23223

USDOT
PHMSA Office of Hazardous Material Standards
Attention: PHH-10
East Building
1200 New Jersey Ave., SE
Washington, DC 20590-0001

RE: Request for a Formal Interpretation of the Regulations concerning the shipment of Hazardous Materials in Bulk Packagings

I am requesting a formal interpretation from the agency in regards to the transportation of certain "low hazard" materials of Division 4.1 in non-DOT specification bulk packagings. The specifics of the situation are detailed below along with references to the DOT regulations concerning the transportation of Hazardous Materials as well references to past interpretations by the agency in regards to relevant, similar situations.

A manufacturer produces a fluoropolymer based "tape" (a long thick ribbon). The tape consists of a non-hazardous polymer (polytetrafluoroethylene) impregnated with an isoparaffinic petroleum distillate (Isopar K©). The Isopar K is completely absorbed into the polymer matrix and will not separate from it nor become a free liquid under normal conditions, including those encountered during transportation (compression, heat and vibration).

The tape is stored, before further use in various other manufacturing processes, as large rolls on heavy cores. The rolls are approximately 36 inches in diameter, 6 to 8 inches wide and weigh approximately 300lb. each. These rolls, in turn, are stored on large metal racks consisting of a heavy steel frames fitted with horizontal spindles to hold the rolls. A specially designed "T" bar is used to secure the rolls on the spindles to prevent from slipping off during movement. Each rack is designed to hold 4 or more rolls. The rolls must be held in a horizontal position (horizontal to axis of rotation) to prevent the tape from sliding off of or shifting (telescoping) during movement.

The tape has been classified as a Hazardous Material of Division 4.1 of Pacakging Group III in accordance with 49CFR173.124(a)(3)(ii); test data shows it exhibits a burning rate greater than 2.2mm per second when tested in accordance with the United Nations *"Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fourth Revised Edition"* (Section 33 –

Classification Procedures, Test Methods and Criteria Relating to Class 4). It has been assigned the USDOT Proper Shipping Name and Description of:

UN1325, Flammable solid, organic, n.o.s. (Contains Mineral Spirits)
4.1, PGIII

It has been suggested that a more appropriate PSN might be:

UN3175, Solids containing flammable liquid, n.o.s (Contains Mineral Spirits)
4.1, PGII

However, this alternate name was not chosen for three reasons. First, the test results show that the material meets the criteria for Packaging Group III. The PSN associated with the UN3175 description only applies to materials meeting the criteria for Packaging Group II. Secondly, the UN3175 description connotes or implies that the liquid portion of the material may separate and become liquid during transport which is known not to be the case. Finally, the flash point of the Isopar K is known to be >73^{0}F (~130^{0}F) meaning it meets the definition of a Packaging Group III flammable liquid of Hazard Class 3.

Though the tape is currently manufactured and used at the same site, the manufacturer is planning to start using the tape in manufacturing processes at other sites meaning it will need to be transported over the road by motor vehicle.

According to Column 8C of the Hazardous Materials Table listed in 172.101, acceptable bulk packages for this material are listed in 49CFR172 Subpart F under 173.240, *Bulk packaging for certain low hazard solid materials*. This section identifies both "non-DOT Specification sift-proof closed vehicles" (172.240(b)) and "sift-proof non-DOT Specification portable tanks and closed bulk bins" (172.240(c)). Guidance documents issued by the USDOT (Reference Numbers 02-0068 and 05-0114) confirm that non-DOT specification closed bulk bins may be used for the transportation of Hazardous Materials if they are authorized under Columns 7 and 8C of the Hazardous Materials Table and meet the general packaging provisions of sections 173.24 and 173.24b. Additionally, guidance document 05-0114 states that a closed box van trailer would meet the criteria of a "closed bulk bin".

Based on these past interpretations and their understanding of the regulations, the manufacturer's current plan is to load the racks holding the rolls of tape onto box trailers. The racks would be secured inside the trailer, through the use of cargo straps and/or chains to prevent movement during transportation. The trailers that would be used are the heavy duty intermodal ("sea container") type that are of heavy construction and are fitted with strong doors possessing heavy duty seals that render them sift-proof to the contents.

The trailers once loaded, will be marked with placards bearing "1325" in accordance with 49CFR172.332(c), 172.504, 172.506 and 172.514. Additionally each load will be accompanied by a shipping document (Bill of Lading) as required under 49CFR172 Subpart C.

Based on the information provided, is it the agency's opinion that the proposed method of shipment would meet the requirements of the regulations and thus be an acceptable means of transporting the material by highway?

Please send any correspondence regarding this matter to the address listed on the header of this letter. I may also be contacted via e-mail at jmoulds@wtsonline.com or by cell phone at 804-357-8563.

Sincerely,

James D Moulds

James Moulds
Sr. Environmental Services Manager
WTS, Inc.

WTS