



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

FEB 8 2008

Mr. John K. Kinast  
Environment Engineer  
Henry Company  
330 Cold Stream Road  
Kimberton, PA 19442

Ref. No.: 07-0165

Dear Mr. Kinast:

This is in response to your letter requesting clarification of the Hazardous Materials Regulations (49 CFR; HMR Parts 171-180) pertaining to the transportation of a Class 3 (flammable liquid) material overcharged with a Division 2.2 (non-flammable) gas in a DOT 39 cylinder. You state that the Class 3 material (hexane) has a flashpoint of -18° F and a boiling point of 113° F and is overcharged with nitrogen at a pressure ranging from 100-135 psi. Specifically, you ask whether the filled cylinder may be transported under the proper shipping description "Compressed gas, n.o.s. 2.2, UN1956," and whether the package that is marked and labeled for a Division 2.2 primary hazard class may also be marked and labeled for the Class 3 subsidiary hazard.

Under the HMR, you must analyze the cylinder contents based on the form in which the material will be transported. It is our determination that the contents of your cylinder meet the defining criteria for a Division 2.1 (flammable gas) material and would most appropriately be assigned "Compressed gas, flammable, n.o.s. (contains hexane), 2.1, UN1954" for the basic description. We base this determination on the fact that the cylinder is filled with hexane and then pressurized with nitrogen to 100-135 psi, causing a portion of the hexane to stay in the gas phase. Based on our calculations, the compressed gas mixture will produce flammable vapors in the range of 3 - 6% depending on the temperature and pressure. This is within the range of the flammability limits of hexane, which is 1.2 - 7.7%. Therefore, the gas phase of the vaporized hexane in the cylinder makes it a Division 2.1 material.

Although not applicable to the above scenario, in response to your question concerning subsidiary hazards, a material that is additionally determined to have a flammable liquid subsidiary hazard, regardless of whether the subsidiary hazard is shown in Column (6) of the Hazardous Materials Table (HMT), must be identified on the shipping paper in accordance with § 172.202(a)(3) and shown in the basic description with the numerical subsidiary

hazard in parentheses following the primary hazard class or division number. With respect to the marking and labeling for subsidiary hazards, if the subsidiary hazard is not assigned in Column (6) of the HMT, the package may, nevertheless, be marked for the subsidiary hazard and must be labeled for the subsidiary hazard.

I hope this information is helpful. Please contact this office if you have additional questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Hattie Mitchell", with a long horizontal flourish extending to the right.

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Materials Standards



McIntyre  
§173.2a  
Classification  
07-0165

August 20, 2007

Office of Hazardous Materials Standards  
Pipeline and Hazardous Materials Safety Administration  
Attn: PHH-10,  
U.S. Department of Transportation,  
400 7th Street SW.,  
Washington, DC 20590-0001.

Re: Dual Hazard for Non-Flammable Gas and Flammable Liquid under 49 CFR 173.2a

Dear To whom it may concern:

Henry Company is seeking clarification on the classification, proper shipping name, and appropriate labeling for an existing product in a new container.

Henry Company is the largest North American manufacturer of roof coatings and cements and is a world leader in Energy Star & Green Buildings products. Henry Company is the leading innovator of Building Envelope Systems and understands the principals of integrating Air/Vapor Barrier Systems to ensure superior building performance.

Henry Company produces a product, Blueskin Spray Prep which is sold in 5 gallon pails and is designed to prepare and prime a building foundation in preparation for the application of an Air/Vapor Membrane.

We intend to also package this product in DOT 39 containers with a specific gravity of 0.80 and psi of 100-135. It will be sold under the name of Blueskin Spray Prep Ultra. The container will be charged with nitrogen gas, which is the mechanism that pushes the product out of the container through a stand pipe for application; the product is a flammable liquid. The product as shipped should flow out of the container much like water out of a garden hose. It would not be atomized or dispersed in a defined spray pattern like an aerosol product. Consequently, if a leak occurred during shipping or storage, the container should emit a stream rather than a mist or spray. The stream of liquid should travel a relatively short distance compared to a gas and as such, it should pose a risk like a flammable liquid.<sup>1</sup>

Blueskin Spray Prep Ultra has a flashpoint of -18 degrees Fahrenheit and a boiling point of 113 degrees Fahrenheit. Consequently, under the 49 CFR 173.2a, we believe the classification and PSN should be the following:

Compressed gas, n.o.s., 2.2, UN1956

However, we also believe that the hazard for flammable liquid should also be indicated in the classification, marking and labeling for these products. The HMR, however, does not provide an obvious authorization for a dual hazard of non-flammable gas (Class 2.2) and flammable liquid (Class 3) since this is out of the range of the Precedence of Hazard Table.

Henry Company wants to mark and label this product to reflect both the non-flammable gas and the flammable liquid hazards in the following manner:

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<sup>1</sup> The storage recommendations for these products contain a reference to NFPA 30 Storage of Flammable and Combustible Liquids.

Compressed gas, n.o.s., (contains nitrogen and a flammable liquid), 2.2, UN1956. Can you provide the appropriate authorization under the HMR to create a subsidiary hazard Class 3 for Class 2.2?

Henry Company has requested a special emergency permit to allow us to use the following classification – Compressed gas, n.o.s., (contains nitrogen and a flammable liquid), 2.2, UN1956 – in addition to the marking and labeling for both the Class 2.2 and Class 3 hazards. Please see attached letter.

If you have any questions at all, please do not hesitate to contact me @ 484.923.2269.

Best regards,

A handwritten signature in black ink that reads "John K. Kinast". The signature is written in a cursive style with a long, sweeping underline.

John K. Kinast  
Environmental Engineer

# Henry<sup>®</sup>

COMPANY

August 20, 2007

Associate Administrator for Hazardous Materials Safety  
Attention: Special Permits, PHH-31  
Pipeline and Hazardous Materials Safety Administration  
U.S. Department of Transportation,  
400 7th Street SW.,  
Washington, DC 20590-0001.

Dear to whom it may concern:

Attached please find the application for special permit, in accordance with 49 CFR 107.105.

Henry Company hereby requests emergency processing of an application for a special permit under 49 CFR 107.105 and 117 until such time as a letter of interpretation is issued by the Department of Transportation that specifically clarifies the classification of our product: Blueskin Spray Prep Ultra. Please see attached letter.

Emergency processing is requested for the following reasons:

- 1) Increase safety for 1<sup>st</sup> responders during transportation emergencies by providing additional information about a previously unknown hazard. Creating a subsidiary class for 2.2 for class 3.
- 2) Providing the product in this new container would improve the safety to the contractor during product application. The product is currently applied with a brush and roller. Spills and incidents are more possible using 5 gallon pails. Blueskin Spray Prep Ultra new package will be a pressurized DOT 39 container and there is a significantly less likelihood of spills or direct exposure.
- 3) To avoid severe economic financial loss. The Henry Company could incur significant economic losses up to \$100,000.
- 4) To avoid the damage to important business relationships this could be damaged if Henry Company is unable to launch this product in a new container soon. Our customers of these products would suffer delays in construction activities.

If there are any questions or any additional information that I can provide to expedite consideration of this application, please do not hesitate to contact me @ 484.923.2269.

Best regards,



John K. Kinast  
Environmental Engineer

## Application for Special Permit

1. Applicant: Henry Company  
336 Cold Stream Road  
Kimberton, PA 19442  
  
Contact: John Kinast, Environmental Engineer  
[jkinast@henry.com](mailto:jkinast@henry.com)  
484-923-2269
2. Citation from which the applicant seeks relief: 49 CFR 173.2a(a)
3. Proposed Mode of Transport: Highway/Motor Carrier
4. Description of the proposed special permit: classification of the product in the following manner:
  - Blueskin Spray Prep Ultra should be classed as follows: Compressed gas, n.o.s., (contains nitrogen and a flammable liquid), 2.2, UN1956
  - All marking, labeling and placarding should reference both hazards, Class 2.2 and Class 3.
5. Proposed duration of special permit: until such time as a letter of interpretation is received clarifying the classification of this product.
6. Statement of basis for seeking such relief and description of how compliance will be achieved: See attached letter requesting interpretation. Compliance will be achieved by adopting the classification and appropriate marking, labeling and packaging as directed by DOT.
7. Identification of hazardous material planned for transportation under the special permit: See attached letter of interpretation.
8. Description of packaging to be used with special permit: DOT 39 container.
9. Alternative packaging: no alternative packaging is anticipated.
10. Justification of special permit proposal: This special permit achieves a level of safety that exceeds that required by the regulation. Classification of this product under the strict confines of the HMR requires a finding that the product is a UN 1954, compressed gas, n.o.s., 2.2. However, this classification fails to indicate the fact that the product expelled by the nitrogen gas is a flammable liquid. There is no authorization under the HMR to have a product that is a compressed gas with a flammable liquid hazard. Therefore, to ensure that first responders are aware of the flammable nature of this product, we believe that it is necessary to classify, mark, and label the product as a Class 2.2 with a subsidiary hazard of Class 3.

If a leak occurred during shipping or storage, the container would emit a stream rather than a mist or spray. The stream of liquid should travel a relatively short distance compared to a gas and, as such, it should pose a risk much like a flammable liquid.<sup>1</sup>

We are not aware of any previous incidences or other problematic shipping experiences with this product. There is no increased risk to safety or property that may result if the special permit is granted. Indeed, we believe that a higher level of safety is achieved in allowing the proposed classification.

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<sup>1</sup> The storage recommendations for these products contain a reference to NFPA 30 Storage of Flammable and Combustible Liquids.