



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

FEB 04 2019

Nicholas Scarpa, Ph.D.
Scarpa Consultants
8 Troon Drive
Fredon, NJ 07860

Reference No. 18-0087

Dear Mr. Scarpa:

This letter is in response to your June 7, July 6, July 17, and August 30, 2018, emails and attachments on behalf of your client, INEOS Paraform GmbH and Company KG (INEOS Paraform, also described in the documents as “Company B”) of Mainz, Germany. Your client requests clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the classification of Granuform® 91 and Granuform® 96, materials that contain 91 and 96 percent “UN2213, Paraformaldehyde, Division 4.1 (flammable solid), Packing Group (PG) III,” respectively. Specifically, you ask if materials that contain less than 18 parts per million (ppm) of sodium and less than 100 ppm of alkali metal ions and/or other metal ions as impurities do not meet the definition of a Division 4.1 (flammable solid) material as defined in § 173.124(a) of the HMR.

You enclosed several documents and test reports listed in the attachment to this letter but ask that we limit our response to two INEOS Paraform products: Paraformaldehyde B-1 (91%) and B-2 (96%). We have paraphrased the information on these materials that you and your client provided in the table below.

Ref. No.	Substance Name ¹ (Trade Name: Granuform®)	Preliminary screening test ²	Wetting solution delay time (min)	Alkali Metal Ion & Other Content	Sample Test Performance	Result
6.d	Paraformaldehyde B-1 (91%) (< 2 ppm Na+) Performed by Laus	Negative (flame died)	N/A	Sodium content < 2 ppm, < 5 ppm other alkali metal ions, 2 other metal ions found in concentrations of 7 and 9 ppm,	Sample when heated with a gas burner melted forming a liquid, the liquid started to boil and boiling spot burned with a flame. The flame died on its own	NOT to be classified as Division 4.1

¹ Paraformaldehyde Assay expressed in available % formaldehyde in brackets.

² UN Test N.1, section 33.2.1.4.3.1: ignition or propagation of combustion within 2 minutes.

				respectively, in a screening test on 36 different metal elements by ICP, < 300 ppm Formic acid	when no boiling test item was present.	
6.e	Paraformaldehyde B-2 (96%) (5 ppm Na+) (Granuform® 96)	Negative (combustion took > 29 minutes)	N/A	Sodium content 5 ppm, < 5 ppm other alkali metal ions, 2 other metal ions found in concentrations of 10 and 13 ppm, respectively, in a screening test on 36 different metal elements by ICP, < 300 ppm Formic acid	Sample was ignited with a flame of a Teclu burner. First melting was observed, then the test item started to burn with 2 seats of fire after 12 seconds. Melting and no formation of smoke were observed. Combustion along 200 mm took 29 minutes and 37 seconds.	NOT to be classified as Division 4.1

In accordance with § 173.22, it is the shipper's responsibility to properly classify a hazardous material. This Office does not generally perform that function. However, based on the information you provided, it is the opinion of this Office that the tested materials in Reference Nos. 6.d and 6.e do not exhibit criteria exceeding the limit specified in § 173.124(a)(3)(ii) and, therefore, do not meet the definition of a Division 4.1 readily combustible solid.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,



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

Attachment

Clarification Letter Reference No. 18-0087
Attachments

You state you provided all data related to INEOS Paraform products, including the LAUS and ICP reports. The following is the list of materials you provided with your correspondence.

- Analyses and flammability final test reports dated June 9, 2010, and June 17, 2011, Study Numbers 10042301G934UN and 11051101G934, respectively, performed by the LAUS GmbH test facility in conformance with the United Nations (UN) Manual of Tests and Criteria UN Test N.1, Section 33.2.1.4.3.1.
- A document titled “Expert opinion on transport classification of paraformaldehyde,” prepared by GBK Gefahrgut Büro BmbH and signed on December 8, 2010.
- A diagnostic analysis of Paraformaldehyd (Granuform® 91 Charge G120228) dated March 2, 2012.
- A diagnostic analysis of Bestimmung von NA im Paraformaldehyd (Granuform®) dated March 26, 2012.
- A report prepared for the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals titled “Classification under UN 2213 (Paraformaldehyde),” dated July 31, 2013, that concluded fine and/or granulated “Paraformaldehyde should not be classified as a readily combustible solid of Division 4.1, if the test material contains less than 100 pps of alkali metal ion.” This report states six of the nine products tested do not meet the definition of a flammable solid.
- INEOS Paraform Product Information Granuform® Paraformaldehyde, For Granuform_12E, May 2012.

Edmondson
Testing
18-0087

January, Ikeya CTR (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Friday, June 08, 2018 3:28 PM
To: Hazmat Interps
Subject: FW: INEOS Paraformaldehyde Classification.
Attachments: ATT_1 Paraformaldehyde_UN Proposal_2013.pdf; ATT_2 Paraformaldehyde_Flammability Test_2010.pdf; ATT_3 Paraformaldehyde_Flammability Test_2011.pdf; ATT_4 Paraformaldehyde_Granuform 91_Sodium content.pdf; ATT_5 Paraformaldehyde_Granuform M_Sodium content.pdf; ATT_6 Paraformaldehyde_GBK expert statement transport classification paraformaldehyde 2010.pdf

Hello Ikeya and Alice,

I searched the Database, and there wasn't anything that spoke of this situation directly. I have also spoken with Mr. Scarpa and he said that he would like a Letter of Interpretation. I also advised him that he may also need to apply for an approval to be able to move this material within the United States and an unregulated material.

Regards,

-Breanna

From: Nick Scarpa [mailto:n.scarpa@gbk-fredon.us]
Sent: Thursday, June 07, 2018 12:18 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: INEOS Paraformaldehyde Classification.

Dear Info Center Staff,

I am writing on behalf of my client;

INEOS PARAFORM GmbH
Hauptstrasse 30
55120 Mainz
Germany

The company produces two products that are paraformaldehyde solid.

Paraformaldehyde solid is currently classified under UN 2213, class 4, packing group III.

INEOS has conducted relevant flammability studies on their product and have concluded that they are not flammable solids as defined.

This conclusion has been confirmed in a proposal by the UN Committee of Experts on the Transport of Dangerous Goods. (see ATT_1), as well as GBK Gefahrgut Buro (see ATT_6).

Also attached are the analyses and flammability testing reports that were done. (see ATT_2 through ATT_5)

Therefore, we are requesting that the US DOT PHMSA also provide a formal letter of interpretation that the INEOS paraformaldehyde products are not flammable solid materials under the US Hazardous Materials Transportation regulations.

Please feel free to contact me with any questions or require further information.

Sincerely,

Nicholas Scarpa

Scarpa Consultants

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