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DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA-2017-0142; Notice No. 2017-11]

Hazardous Materials: Notice of Updated Rail Tank Car Thermal Protection Systems List

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), Department of Transportation (DOT).

ACTION: Notice and request for comments.

SUMMARY: The Pipeline and Hazardous Materials Safety Administration (PHMSA) issues this notice in coordination with the Federal Railroad Administration (FRA) to notify the public of four systems that have been added to the thermal protection systems list since its most recent publication, as well as to solicit comments or updates to information on the current list. The thermal protection systems included on the list are compliant and are acceptable for use, without further test verification, on U.S. Department of Transportation (DOT) specification tank cars. DOT manages the list through the PHMSA Records Center and periodically publishes an updated list in the *Federal Register* for public awareness.

DATES: Interested persons are invited to submit comments on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments identified by Docket No. PHMSA-2017-0142 via any of the following methods:

- *Federal eRulemaking Portal:* Go to http://www.regulations.gov. Follow the online instructions for submitting comments.

- *Fax:* 1-202-493-2251.

- *Mail:* Docket Operations, U.S. Department of Transportation, West Building, Ground Floor, Room W12-140, Routing Symbol M-30, 1200 New Jersey Avenue SE, Washington, DC 20590.

- *Hand Delivery:* Docket Operations, Room W12-140 on the ground floor of the West Building, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the agency name and docket number for this notice. Internet users may access comments received by DOT at: http://www.regulations.gov. Please note that comments received will be posted without change to http://www.regulations.gov including any personal information provided.

Privacy Act: In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public. DOT posts these comments, without edit, including any personal information the commenter provides, to http://www.regulations.gov, as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at http://www.dot.gov/privacy.

FOR FURTHER INFORMATION CONTACT:

Pipeline and Hazardous Materials Safety Administration: Leonard Majors, Sciences, Engineering and Research Division (PHH-22), U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue, SE, East Building, 2nd Floor, Washington, DC 20590-0001, Telephone (202) 366-4545, leonard.majors@dot.gov.

Federal Railroad Administration: Dr. Phani Raj, Hazardous Materials Division, Office of Railroad Safety (FRA-RRS-12), U.S. Department of Transportation, Federal Railroad Administration, 1200 New Jersey Avenue, SE, West Building, 3rd Floor, Washington, DC 20590-0001, Telephone (202) 493-6306, phani.raj@dot.gov.

SUPPLEMENTARY INFORMATION:

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I. Executive Summary

The Pipeline and Hazardous Materials Safety Administration (PHMSA) issues this notice in coordination with the Federal Railroad Administration (FRA) to notify the public of four systems that have been added to the thermal protection systems list since its most recent publication, as well as to solicit comments or updates to information on the current list. The thermal protection systems included on the list have passed the pool fire and torch fire tests specified in appendix B to 49 CFR part 179 and are acceptable for use, without further test

verification, on certain U.S. Department of Transportation (DOT) specification tank cars. The list is maintained and updated in the PHMSA Records Center in accordance with § 179.18.

The thermal protection systems list was last published in the *Federal Register* on May 13, 1993 (Notice No. 93-12; 58 FR 28436). PHMSA is issuing this notice to inform the public of four thermal protection systems that have been added to the list since the previous notice was published in the *Federal Register* and to solicit comments or updates to the information on the current list. Information updates may include, but are not limited to, the following: company name and location changes; material or tradename updates; and information on the use of these systems.

PHMSA is providing a 90-day comment period for responses and will publish a future *Federal Register* notice to address the information received and update the list with revisions, if necessary. This notice is not a rulemaking action, as it simply provides the rail industry with the information necessary to equip DOT specification rail tank cars. PHMSA will continue to maintain the list of thermal protection systems in the PHMSA Records Center and will also post a copy of the list to our website at http://www.phmsa.dot.gov, where future additions and revisions will be published.

II. Background

Thermal protection systems, when required by regulation for DOT specification tank cars, must meet the requirements of the Hazardous Materials Regulations (HMR). To qualify, the thermal protection system must conform to the performance standard and demonstrate such compliance through analysis of pool fire and torch fire tests required by § 179.18. Thermal protection systems that no longer require testing must demonstrate successful testing as specified

in appendix B to 49 CFR part 179—Procedures for Simulated Pool and Torch-Fire Testing. Specifically, the procedures are designed to measure the thermal effects of new or untried thermal protection systems and to test for system survivability when exposed to pool fire and torch fire environments.

- *Pool Fire Simulation Test*: Must be run for a minimum of 100 minutes. The thermal protection system covers a specified steel plate that meets the requirements of paragraph 2a(2) in appendix B to 49 CFR part 179. The thermal protection system is exposed to a simulated pool fire as specified in appendix B to 49 CFR part 179, and it must retard the heat flow to the plate so that none of the thermocouples on the non-protected side of the plate indicate a plate temperature in excess of 427 °C (800 °F).

- *Torch Fire Simulation Test:* Must be run for a minimum of 30 minutes. The thermal protection system covers a specified steel plate that meets the requirements of paragraph 3a(2) in appendix B to 49 CFR part 179. The thermal protection system is exposed to a simulated torch fire as specified in appendix B to 49 CFR part 179, and it must retard the heat flow to the plate so that none of the thermocouples on the backside of the bare plate indicate a plate temperature in excess of 427 °C (800 °F).

When the HMR require a thermal protection system on a tank car, the tank car must have sufficient thermal resistance so that there will be no release of any lading within the tank car, except release through the pressure release device (§ 179.18(a)). Compliance with these requirements is verified by analyzing the fire effects on the entire surface of the tank car (§ 179.18(b)). The analysis must consider the fire effects on and heat flux through tank discontinuities, protective housings, underframes, metal jackets, insulation, and thermal

protection. A complete record of each analysis shall be made, retained, and—upon request—made available for inspection and replication by an authorized representative of DOT.

DOT maintains a list of thermal protection systems that comply with the requirements of appendix B to 49 CFR part 179 and no longer require test verification (§ 179.18(c)). FRA receives test data from manufacturers to validate that the thermal protection systems meet the HMR requirements. PHMSA and FRA evaluate the test data to determine whether the system is appropriate for inclusion on the list. Once accepted, the material characteristics and the information necessary to apply any of the systems on this list to DOT specification rail tank cars is communicated to the public. This information is available in the PHMSA Records Center, Pipeline and Hazardous Materials Safety Administration, East Building, 1200 New Jersey Avenue, SE, Washington, DC 20590-0001.

The current thermal protection systems list was most recently published in the *Federal Register* on May 13, 1993, in Notice No. 93-12 (58 FR 28436). To add a thermal protection system to the list, persons must provide test data and technical specifications showing that the system successfully passes the pool and torch fire tests required by appendix B to 49 CFR part 179. This information may be submitted to FRA's Hazardous Materials Division, Office of Railroad Safety. See **FOR FURTHER INFORMATION CONTACT**.

III. A List of Thermal Protection Systems Excepted from Test Verification

The two previous lists of thermal protection systems excepted from test verification were published in the *Federal Register* on May 13, 1993 (58 FR 28436) and January 31, 1986 (51 FR 4063). The current list identifies thermal protection systems by their 1993 system application number, with the 1986 system application number shown in parentheses, if applicable.

Furthermore, the four new systems that have been approved by DOT since 1993 are: Nutec Fibratec SA de CV of Mexico's ½-Inch Thick Ceramic Fire Blanket; Jotun Paints, Inc.'s Jotachar JF750 Intumescent Paint; Premier Refractories' Cer-Wool FP Blanket; and Thermal Ceramics' Superwool Plus Insulation Tank Car Blanket. The current list of thermal protection systems is as follows:

1. Carborundum Company, Niagara Falls, New York

Fiberfrax

- *System Application 01 (6):* Apply 1.651 cm (0.65 inches) minimum thickness Fiberfrax thermal protection (density ≥72.1 kg/m^3 (4.5 lbs/ft^3), then an 11-gauge steel jacket.

- *System Application 02 (22):* (<288 °C) Apply 1.27 cm (0.5 inch) minimum thickness Fiberfrax thermal protection (density ≥72.1 kg/m^3 (4.5 lbs/ft^3)), compressed no less than 0.635 cm (0.25 inch) with froth-in-place rigid urethane foam, then an 11-gauge steel jacket. The total thickness of the Fiberfrax thermal protection and the urethane foam combination must be at least 5.08 cm (2.0 inches).

- *System Application 03 (23):* (<288 °C) Apply 2.54 cm (1.0 inch) minimum thickness Fiberfrax thermal protection (density ≥72.1 kg/m^3 (4.5 lbs/ft^3)), compressed no less than 1.372 cm (0.54 inches) with froth-in-place rigid urethane foam, then an 11-gauge steel jacket. The total thickness of the Fiberfrax thermal protection and the urethane foam combination must be at least 5.08 cm (2.0 inches).

- *System Application 04 (24):* (<288 °C) Apply 1.27 cm (0.5 inch) minimum thickness Fiberfrax thermal protection (density ≥68.9 kg/m^3 (4.3 lbs/ft^3)), then apply 10.16 cm (4.0 inches)

minimum thickness glass fiber insulation compressed to 8.89 cm (3.5 inches), and then an 11-gauge steel jacket.

- *System Application 05 (29):* Apply 1.27 cm (0.50 inch) minimum thickness Fiberfrax thermal protection (density ≥72.1 kg/m^3 (4.5 lbs/ft^3)), then an 11-gauge steel jacket.

- *System Application 06:* Persons may use this system provided the tank car is constructed from at least 1.905 cm (0.75 inch) carbon steel plate. Apply 1.27 cm (0.50 inch) minimum thickness Fiberfrax thermal protection and the glass fiber insulation combination must be at least 8.89 cm (3.5 inches).

2. Courtaulds Aerospace, Incorporated, Des Plaines, Illinois

Thermal Shield Coating

System Application 01 (4): Apply 0.002 cm (7/10-mil) primer (a 2:1 ratio by volume of 513-003 base component and 9110x350 activator component). Next, apply 0.597 cm (235 mils) of Thermal Shield Coating (a nominal 5:1 ratio by volume of 821x359 base component and 9110x407 activator component) to the primed surface, then 0.005 cm (2 mils) of topcoat (a 2:1 ratio by volume of 821x317 base component and 9110x376 activator component).

3. Fibrex, Incorporated, Aurora, Illinois

A. Tank Wrap Insulation

System Application 01 (8): Apply 3.81 cm (1.5 inches) minimum thickness Tank Wrap Insulation (density ≥96.1 kg/m^3 (6 lbs/ft^3)), compressed to 2.54 cm (1.0 inch), then an 11-gauge steel jacket.

B. Tank Car Insulation

System Application 01 (25): (<288 °C) Apply 3.81 cm (1.5 inches) minimum thickness Tank Car Insulation (density ≥96.1 kg/m^3 (6 lbs/ft^3)), and 7.62 cm (3.0 inches) minimum thickness glass fiber insulation compressed to 6.35 cm (2.5 inches), then an 11-gauge steel jacket.

4. Holmes, Insulation Limited, Ontario, Canada

HILBLOK 1212

System Application 01 (7): Apply 2.54 cm (1.0 inch) minimum thickness of HILBLOK 1212 (density ≥200.2 kg/m^3 (12.5 lbs/ft^3)), then an 11-gauge steel jacket.

5. Nutec Fibratec SA de CV of Mexico

½-Inch Thick Ceramic Fire Blanket

System Application 01: Apply 12.7 mm (0.50 inches) minimum thickness ½-inch thick Ceramic Fire Blanket manufactured by Nutec Fibratec SA de CV of Mexico with an average mass density equal to or greater than 99.0 kg/m^3 (6.18 lb/ft^3), and then apply a 3.18 mm thick (11-gauge) steel jacket.

6. Jotun Paints, Inc., Belle Chasse, Louisiana

Jotachar JF750 Intumescent Paint

System Application 01: Apply 5.0 mm (0.20 inches) minimum thickness Jotachar JF750 Intumescent Paint manufactured by Jotun Paints, Inc. The coating is a proprietary mixture of two

products, Jotachar JF750 Comp A and Jotachar JF750 Comp B that is applied in two coats for a nominal thickness of 5.0 mm (0.20 inches).

7. Premier Refractories, Erwin, Tennessee

Cer-Wool FP Blanket

System Application 01: (<288°C) Apply 1.17 cm (0.46 inches) minimum thickness Cer-Wool FP Blanket (weight per unit area ≥1.04 kg/m² (0.21 lbs/ft²)), then apply 10.16 cm (4.0 inches) minimum thickness fiber insulation (density ≥11.1 kg/m³) compressed to 8.89 cm (3.5 inches), and then an 11-gauge steel jacket.

8. Rock Wool Manufacturing, Leeds, Alabama

Delta Board

System Application 01 (1): Apply 2.54 cm (1.0 inch) minimum thickness of Delta Board (density ≥192.2 kg/m^3 (12 lbs/ft^3)), then an 11-gauge steel jacket.

9. Textron Specialty Materials, Lowell, Massachusetts

Chartek 59

- *System Application 01 (3):* Apply 0.008 cm (3 mils) of primer (Military Standard MIL-P-5219B), then apply a 2.54 cm (1.0 inch) hexagonal, 22-gauge, wire mesh to the primed surface. Next, apply 0.457 cm (180 mils) Chartek 59 thermal protection, then 0.008 cm (3 mils) of AMERCOAT 383 (Brea, California) to the cured surface.

- *System Application 02 (18):* (<288 °C) Apply 5.08 cm (2.0 inches) minimum thickness polyurethane foam then an 11-gauge steel jacket, then apply 0.005 cm (2 mils) minimum of

primer (Military Standard MIL-P-52192B, Mobile 13-R-56, or equivalent) to the clean surface. Next, apply 0.53 cm (210 mils) minimum thickness of Chartek 59 thermal protection to the cured surface.

- *System Application 03 (19):* (<288 °C) Apply 5.08 cm (2.0 inches) minimum thickness glass fiber then an 11-gauge steel jacket, then apply 0.005 cm (2 mils) minimum of primer (Military Standard MIL-P-52192B, Mobile 13-R-56, or equivalent) to the clean surface. Next, apply 0.46 cm (180 mils) minimum thickness of Chartek 59 thermal protection to the cured surface.

- *System Application 04 (21):* (<288 °C) Apply 5.08 cm (2.0 inches) minimum thickness polyurethane foam then an 11-gauge steel jacket, then apply 0.005 cm (2 mils) minimum of primer (Military Standard MIL-P-52192B, Mobile 13-R-56, or equivalent) to the clean surface. Next, apply 0.46 cm (180 mils) minimum thickness of Chartek 59 thermal protection to the cured surface.

- *System Application 05 (30):* (<288 °C) Apply 0.008 cm (3 mils) of primer (Military Standard MIL-P-52192B) to the clean surface. The use of a primer is optional when facilities complete the surface preparation and coating operations within six hours and the atmosphere has a dew point above 3 °C (37.4 °F). When desired, applicators may place a 2.54 cm (1.0 inch) hexagonal 22-gauge wire mesh to the primed surface. Next, apply 0.457 cm (180 mils) of Chartek 59 thermal protection to the cured surface, then apply 0.008 cm (3 mils) of an AMERCOAT 383 topcoat (Brea, California) to the Chartek 59 thermal protection to the cured surface.

- *System Application 06 (31):* (<288 °C) Apply 5.08 cm (2.0 inches) minimum thickness polyurethane foam then an 11-gauge steel jacket, then apply 0.005 cm (2 mils) minimum of primer (Military Standard MIL-P-52192B, Mobile 13-R-56, or equivalent) to the clean surface.

When desired, applicators may place a 2.54 cm (1.0 inch) hexagonal 22-gauge wire mesh to the primed surface. Next, apply 0.46 cm (180 mils) minimum thickness of Chartek 59 thermal protection to the cured surface.

- *System Application 07 (34):* (<288 °C) Apply 5.08 cm (2.0 inches) minimum thickness glass fiber insulation then an 11-gauge steel jacket, then apply 0.005 cm (2 mils) minimum of a polyamide epoxy primer (Military Standard MIL-P-52192B, Mobile 13-R-56, or equivalent) to the clean surface. When desired, applicators may place a 2.54 cm (1.0 inch) hexagonal 22-gauge wire mesh to the primed surface. Next, apply 0.46 cm (180 mils) minimum thickness of Chartek 59 thermal protection to the cured surface.

- *System Application 08:* Apply 0.008 cm (3 mils) of primary (Military Standard MIL-P-5219B), then apply a 2.54 cm (1.0 inch) hexagonal, 22-gauge, wire mesh to the primed surface. Next, apply 0.46 cm (180 mils) Chartek 59 thermal protection, then apply 0.008 cm (3 mils) of AMERCOAT (Brea, California) to the Chartek 59 thermal protection to the cured surface.

10. Thermal Ceramics, Augusta, Georgia

A. Kaowool Tank Car Blanket

- *System Application 01 (5):* Apply 2.54 cm (1.0 inch) minimum thickness of Kaowool Tank Car Blanket (density ≥32.7 kg/m^3 (2.04 lbs/ft^3)), then an 11-gauge steel jacket.

- *System Application 02 (10):* Apply 1.32 cm (0.52 inches) minimum thickness of Kaowool Tank Car Blanket (density ≥76.9 kg/m^3 (4.8 lbs/ft^3)), then an 11-gauge steel jacket.

- *System Application 03 (32):* (<288 °C) Apply 2.54 cm (1.0 inch) minimum thickness of Kaowool Tank Car Blanket (density ≥72.1 kg/m^3 (4.5 lbs/ft^3)), then apply 10.16 cm (4.0 inches) of glass fiber insulation compressed to 7.62 cm (3.0 inches), then an 11-gauge steel jacket.

- *System Application 04 (33):* (<288 °C) Apply 1.321 cm (0.52 inches) minimum thickness of Kaowool Tank Car Blanket (density ≥76.9 kg/m^3 (4.8 lbs/ft^3)), then apply 10.16 cm (4.0 inches) of glass fiber insulation compressed to 8.89 cm (3.5 inches), then an 11-gauge steel jacket.

- *System Application 05 (35):* (<288 °C) Apply 2.54 cm (1.0 inch) minimum thickness of Kaowool Tank Car Blanket (density ≥72.1 kg/m^3 (4.5 lbs/ft^3)), then apply 10.16 cm (4.0 inches) of glass fiber insulation compressed to 7.62 cm (3.0 inches), then an 11-gauge steel jacket.

- *System Application 06 (36):* (<288 °C) Apply 1.321 cm (0.52 inches) minimum thickness of Kaowool Tank Car Blanket (density ≥76.9 kg/m^3 (4.8 lbs/ft^3)), then apply 10.16 cm (4.0 inches) of glass fiber insulation compressed to 8.89 cm (3.5 inches), and then an 11-gauge steel jacket.

- *System Application 07:* Apply 2.54 cm (1.0 inch) minimum thickness of Kaowool Tank Car Blanket (density ≥64.1 kg/m^3 (4 lbs/ft^3)), then an 11-gauge steel jacket having an annular space of 1.016 cm (0.4 inches) between the thermal protection and the steel jacket.

B. Cerawool Tank Car Blanket

- *System Application 01 (9):* Apply 1.524 cm (0.6 inch) minimum thickness of Cerawool Tank Car Blanket (density ≥64.1 kg/m^3 (4 lbs/ft^3)), then an 11-gauge steel jacket having an annular space of 1.016 cm (0.4 inches) between the thermal protection and the jacket.

- *System Application 02:* Apply 2.54 cm (1.0 inch) minimum thickness of Cerawool Tank Car Blanket (density ≥54.9 kg/m^3 (3.43 lbs/ft^3)), and 5.08 cm (2.0 inches) minimum thickness polyurethane foam, then an 11-gauge steel jacket.

C. Superwool Plus Insulation Tank Car Blanket

- *System Application 01:* Apply 12.7 mm (0.50 inches) minimum thickness Superwool Plus Insulation Tank Car Blanket with an average mass density ≥60.2 kg/m^3 (3.76 lbs/ft^3), then apply 101.6 mm (4.0 inches) minimum thickness of glass fiber insulation with density ≥12.0 kg/m^3 (0.75 lbs/ft^3). The insulation components are compressed to 101.6 mm (4.0 inches), and then apply a 3.18 mm thick (11-gauge) steel jacket.

- *System Application 02* Apply 12.7 mm (0.50 inches) minimum thickness Superwool Plus Insulation Tank Car Blanket with an average mass density equal to or greater than of 60.2 kg/m^3 (3.76 lbs/ft^3), and then apply a 3.18 mm thick (11-gauge) steel jacket over the insulation.

11. Thermal Sciences, Incorporated, St. Louis, Missouri

A. Thermo-lag 330-1 Subliming Material System

- *System Application 01 (2):* Apply 0.005 cm (2 mils) of Thermo-lag Primer 351, 0.127 cm (5 mils) Thermo-lag 351-EX176 Primer, or 0.02 cm (8 mils) of PLASITE 7156 Primer, then apply 0.419 cm (165 mils) of Thermo-lag 330-1 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350. Thermo-lag 330-CA cure accelerator may be added to the above components.

- *System Application 02:* Apply 0.020 cm (8 mils) of Wisconsin Protective Coatings' Plasite 7156 (Green Bay, Wisconsin), then apply 0.419 cm (165 mils) of Thermo-lag 330-1 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermolag Topcoat 350.

B. Thermo-lag 330-3 Subliming Material System

- *System Application 01 (12):* Apply 5.08 cm (2.0 inches) minimum thickness of glass fiber then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum thickness of Thermo-lag Primer 351-3 primer to the tank jacket. Next, apply 0.32 cm (125 mils) minimum thickness of Thermo-lag 330-3 Subliming Compound, and then apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

- *System Application 02 (13):* Apply 5.08 cm (2.0 inches) minimum thickness of polyurethane, then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum thickness of Thermo-lag Primer 351-3 primer to the tank jacket, and then apply 0.32 cm (125 mils) minimum thickness of Thermo-lag 330-3 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

- *System Application 03 (14):* Apply 5.08 cm (2.0 inches) minimum thickness of glass fiber then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum thickness of Thermo-lag Primer 351-3 primer to the exterior tank jacket, and then apply 0.34 cm (135 mils) minimum thickness of Thermo-lag 330-3 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

- *System Application 04 (16):* (<288 °C) Apply 5.08 cm (2.0 inches) minimum thickness of glass fiber then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum film thickness of Thermo-lag Primer 351-3 primer to the tank jacket, and then apply 0.48 cm (188 mils) minimum

thickness of Thermo-lag 330-3 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

- *System Application 05 (17):* (<288 °C) Apply 5.08 cm (2.0 inches) minimum thickness of polyurethane then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum thickness of Thermo-lag Primer 351-3 primer to the tank jacket. Next, apply 0.48 cm (188 mils) minimum thickness of Thermo-lag 330-3 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

C. Thermo-lag 330-3 Subliming Material System

- *System Application 01 (15):* Apply 5.08 cm (2.0 inches) minimum thickness of polyurethane foam then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum thickness of Thermo-lag Primer 351-3 to the tank jacket, and then apply 0.343 cm (135 mils) minimum thickness of Thermo-lag 330-30 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

- *System Application 02 (27):* Apply 5.08 cm (2.0 inches) minimum thickness of glass fiber then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum thickness of Thermo-lag Primer 351-3 primer to the tank jacket, and then apply 0.46 cm (180 mils) minimum thickness of Thermo-lag 330-30 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

- *System Application 03 (28):* Apply 2.54 cm (1.0 inch) minimum thickness of polyurethane foam then an 11-gauge steel jacket, then apply 0.010 cm (4 mils) minimum thickness of Thermo-lag Primer 351-3 to the tank jacket, and then apply 0.457 cm (180 mils) minimum thickness of

Thermo-lag 330-30 Subliming Compound. Next, apply 0.013 cm (5 mils) of Thermo-lag Topcoat 350-3.

D. Thermo-Lag 440 Subliming Material System

System Application 01: Apply 0.013 cm (5 mils) of Thermo-lag 351-176 Primer to the tank surface, then apply 0.419 cm (165 mils) of Thermo-lag 440 Subliming Material to the surface. Next, apply 0.005 cm (2 mils) of Thermo-lag 350-31 Topcoat.

12. United States Gypsum Company, Chicago, Illinois

A. Thermafiber Tank Car Fire Proofing

- *System Application 01 (11):* Apply 2.54 cm (1.0 inch) minimum thickness of Thermafiber Tank Car Fire proofing (density ≥112.1 kg/m^3 (7 lbs/ft^3)), then an 11-gauge steel jacket.

- *System Application 02 (20)*: (<288 °C) Apply 2.54 cm (1.0 inch) minimum thickness of Thermafiber Tank Car Fire proofing (density >112.1 kg/m^3 (7 lbs/ft^3)), with a foil scrim polyethylene facing, then apply 10.16 cm (4.0 inches) of glass fiber compressed to 7.62 cm (3.0 inches), and then an 11-gauge steel jacket.

- *System Application 03 (26):* (<288 °C) Apply 2.54 cm (1.0 inch) minimum thickness of Thermafiber Tank Car Fire proofing (density >112.1 kg/m^3 (7 lbs/ft^3)), with a foil scrim polyethylene facing, then apply 2.54 cm (1.0 inch) minimum thickness polyurethane facing followed by 2.54 cm (1.0 inch) minimum thickness polyurethane foam, and then an 11-gauge steel jacket.

- *System Application 04:* (<288 °C) Apply 2.54 cm (1.0 inch) minimum thickness of Thermafiber Tank Car Fire proofing (density ≥112.1 kg/m^3 (7 lbs/ft^3)), then apply 8.89 cm (3.5 inches) glass fiber insulation compressed to 7.62 cm (3.0 inches) and then an 11-gauge steel jacket.

B. Inswool HP

System Application 01: (<288 °C) Apply 3.81 cm (1.5 inch) minimum thickness of INSWOOL HP ceramic fiber blanket (density <80.1 kg/m^3 (5 lbs/ft^3)), then an 11-gauge steel jacket.

IV. Revisions to the List of Thermal Protection Systems Excepted from Test Verification

Given that this list was last published in the *Federal Register* on May 13, 1993, (Notice No. 93-12; 58 FR 28436), PHMSA and FRA anticipate that changes have inevitably occurred since its most recent publication—including the potential that companies on the list have moved, changed tradenames, closed, merged with other companies, or have been purchased by other companies. Therefore, PHMSA is providing stakeholders with the opportunity to comment on and request revisions to the current list of thermal protection systems excepted from test verification. This notice is not a solicitation for systems not identified on the list. Any proposed revisions submitted in response to this notice must meet the criteria for revision in this section.

For revisions to entries on the list:

- Persons requesting only a tradename change must submit information that the revision or change is not a new thermal protection system. Persons requesting further changes must

submit a certification statement or test data and technical specifications demonstrating that the physical properties of the system have not changed. (See **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**.)

PHMSA and FRA will evaluate the revisions and comments received in response to this notice, including review of certification statements, test data, and technical specifications demonstrating the system is compliance with appendix B to 49 CFR part 179. Once all comments have been evaluated, PHMSA will publish a follow-up notice in the *Federal Register* to provide the most up-to-date list of thermal protection systems excepted from test verification, including any revised entries. PHMSA will continue to maintain the list of thermal protection systems in the PHMSA Records Center and will also post a copy of the list to our website at http://www.phmsa.dot.gov, where future additions and revisions will be published.

Signed in Washington, DC, on May 24, 2018.

William S. Schoonover,
Associate Administrator for Hazardous Materials Safety,
Pipeline and Hazardous Materials Safety Administration.
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