



COATINGS TECH NOTE 7

ROOF COATINGS TRANSPORTATION

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The U.S. Department of Transportation (USDOT), motivated by a need for international harmony in hazardous materials transportation rules, promulgated new rules on its docket HM-181 (55 FR 52402), which was published on December 21, 1990. HM-181 comprehensively revised the Hazardous Materials Regulations (HMR), with respect to hazard communication, classification, and packaging requirements, based on United Nations recommendations. One intended effect of the rule was to facilitate the international transportation of hazardous materials by ensuring a basic consistency between the HMR and international regulations. As a part of HM-181, the USDOT established nine (9) hazard classes for materials to address relevant packaging, communication and shipping requirements.

While it is possible that some roof coatings may be regulated by other hazard classes, depending upon their specific compositions, the class most likely to impact the transportation of roof coatings is Class 3, Flammable and Combustible Liquid.

In general, most water-based roof coatings are not subject to the hazardous materials shipping requirements of HM-181, since they do not fall within the scope of the definition for flammable liquid and normally, do not meet any of the other hazardous criteria established by USDOT. Typically, the same is true of most solvent based coatings that exhibit a flash point at or above 100 ° F.

While the USDOT does classify liquids with a flashpoint below 141 ° F as a Class 3 Flammable Liquid, they have provided an exemption for non-bulk packages (defined as containers with less than 119 gallons of product capacity) in an effort to ease the burden on domestic shipments of materials that do not meet the definition of any other hazard class. This exemption allows most solvent based roof coatings to be shipped domestically, by ground, without being subject to the hazardous packaging and shipping requirements of the USDOT.

Specifically, from CFR 49, Section 173.120 Class 3 - Definitions:

<https://ecfr.io/Title-49/Section-173.120>

- a) “*Flammable liquid*. For the purpose of this subchapter, a *flammable liquid* (Class 3) means a liquid having a flash point of not more than 60 °C (140 °F), or any material in a liquid phase with a flash point at or above 37.8 °C (100 °F) that is intentionally heated and offered for transportation or transported at or above its flash point in a bulk packaging, with the following exceptions:”
- b) “... (2) A flammable liquid with a flash point at or above 38 °C (100 °F) that does not meet the definition of any other hazard class may be reclassified as a combustible liquid. This provision does not apply to transportation by vessel or aircraft, except where other means of transportation is impracticable. An elevated temperature material that meets the definition of a Class 3 material because it is intentionally heated and offered for transportation or transported at or above its flash point may not be reclassified as a combustible liquid.”

However, solvent based coatings that have a flash point less than 38 °C (100 °F) or have a flash point greater 38 °C (100 °F) but not more than 60.5 °C (141 °F) and meet the definition of another hazard class, are subject to all the requirements for shipping hazardous materials, including hazardous packaging, training, communication and documentation, and placards.

Due to the complexity of the USDOT shipping requirements and the variety of roof coating formulations available, it is important to consult the manufacturer for more information regarding transporting these products.

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