Transportation/Hazardous Materials: Pipeline and Hazardous Materials Safety Administration Interpretive Letter Addressing Surfactants



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The United States Pipeline and Hazardous Materials Safety Administration ("PHMSA") addressed in a January 7th Interpretive Letter the application of the federal Hazardous Materials Regulations ("HMR") to the term "surfactant" with respect to the use of "UN2927, Toxic liquid, corrosive, organic, n.o.s." for solutions containing tetramethylammonium hydroxide ("TMAH").

PHMSA was responding to a June 23, 2025, email from EMD Electronics ("EMD").

EMD asked whether a surfactant includes all substances that can potentially accelerate dermal uptake, or if the term refers only to substances that have hydrophobic-hydrophilic capability.

PHMSA states that for the purposes of classifying a non-aqueous solution of TMAH, the HMR does not define the term "surfactant." Nevertheless, the term is stated to generally refer to amphiphilic substances (containing both hydrophobic and hydrophilic parts), which reduce surface tension in liquids, and not the substances' potential to accelerate dermal uptake.

EMD is reminded that in accordance with § 173.22 of the HMR, it is the shipper's responsibility to properly classify a hazardous material. It does note that if a mixture contains a substance that can potentially accelerate dermal uptake, the shipper must use the classification criteria of the HMR to classify the mixture and then select a proper shipping name (e.g., UN2927, Toxic liquid, corrosive, organic, n.o.s.) in accordance with § 172.101(c)(10).

A copy of the Interpretive Letter can be found here.