



DOT Regulates 10 - 24.9% Formaldehyde Solutions

FACT SHEET 37-030-1010

1. **BACKGROUND.** Title 49 CFR provides two entries for formaldehyde solutions in the Hazardous Materials Table Part 172.101: Formaldehyde solutions, flammable, UN1198; and Formaldehyde solutions, with not less than 25% Formaldehyde, UN2209. Both materials are regulated by highway, water, and air. These entries imply that formaldehyde solutions, which are not flammable or have less than 25% formaldehyde, are not regulated, but 10-24.9% require regulation as a Hazard Class 9 material when shipped by air. Formaldehyde solutions in these concentrations are noxious and can cause extreme annoyance or discomfort to crew members in the event of a spill or leak on an aircraft.

2. **BASIC SHIPPING DESCRIPTION.** The basic shipping description for 10-24.9% Formaldehyde solutions shipped by air is "UN3334, Aviation regulated liquid, n.o.s. (Formaldehyde), 9," This basic description is required for all multi-modal shipments which have the potential to be transported by air also.

3. **FORMALIN SOLUTIONS.** Refer to the Material Safety Data Sheet (MSDS) to determine the percentage of formaldehyde when shipping Formalin solutions.

- Full strength Formalin is 37% Formaldehyde and will be shipped as "UN1198, Formaldehyde solutions, flammable, 3, (8), PG III."

- 25% Formalin solutions have approximately 10% Formaldehyde and are classified as "UN3334, Aviation regulated liquid, n.o.s. (formaldehyde), 9" for transportation by air. (Shipments of 10-24.9% formaldehyde solutions shipped by highway only do not require classification as a hazardous material.) Guidance for shipping these solutions are provided in Paragraphs 2 and 4 of this Fact Sheet.

- 10% Formalin solutions contain 3-4% Formaldehyde and are **not** regulated for transport by air or highway.

NOTE: Ensure that the flashpoint and percentage for formaldehyde are taken into consideration when you are shipping Formalin.

4. **SHIPPING SPECIFICATIONS:** Formalin solutions classified as Aviation regulated liquid, n.o.s may be shipped by commercial air as a non-bulk package. Aviation regulated liquid, n.o.s. is not permitted in excepted or limited quantity packagings. **Tissues and specimens being shipped in formalin solutions are not considered to be Diagnostic Specimens or infectious substances unless there is a high probability that an infectious substance is present.** For non-bulk packages of Aviation regulated liquid, n.o.s., please refer to IATA's Packing Instruction 906.

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