

## Are You Shipping Flammable Liquids?

**Did you know flammable liquids are dangerous goods and are regulated for air transportation?** When shipping or handling flammable liquids, such as **paints, perfumery products, and adhesives**, you must comply with the **Hazardous Materials Regulations (HMR; [49 CFR Parts 171-180](#))**. Choosing express or expedited shipping increases the likelihood of your shipment being transported by air. Even shipments offered to ground shipping services may be transported by air. As a shipper or freight forwarder, you must ensure that flammable liquids are correctly prepared and declared for air transport when applicable. The safety of the aircraft, passengers, and crew depends on it.

### What is the hazard?

- Flammable liquids can ignite and may contribute to thermal incidents on an aircraft. During air transportation, vibrations, static electricity, temperature, and pressure variations can cause items to leak, start a fire, or even explode if these products are not appropriately handled. The consequences of such events can potentially be catastrophic, posing significant threats to the aircraft, passengers, crew, transportation workers, emergency responders, the public, and the environment.
- Many flammable liquids can be safely transported by aircraft when properly packaged, labeled, and stowed. However, when a shipment of dangerous goods is improperly offered or undeclared, the threats to our National Airspace System (NAS) increase.
- Note that some flammable liquids are **forbidden** from transport aboard aircraft. See the [Hazardous Materials Table \(HMT; § 172.101\)](#) to identify these forbidden flammable liquids.

### What is considered a flammable liquid?

- Classification for a flammable liquid in the HMR is based on its flash point. A **flammable liquid** has a **flash point of not more than 60 °C (140 °F)**. See [§ 173.120](#) for full classification criteria.
- *Flash point* is the minimum temperature at which a liquid gives off vapor in sufficient concentration within a test vessel to form an ignitable mixture with air near the liquid's surface.
- Common examples of flammable liquids are liquid fuels, paints, paint-related materials (e.g., paint thinners, stains, sealants, coatings), extracts/flavoring liquids, perfumes/fragrances, adhesives, and hand sanitizers.

### How do I know whether a product is a flammable liquid?

- This information may be obtained from various sources, including, but not limited to, the product manufacturer, laboratory testing, and the Safety Data Sheet (SDS).
- **Please note that an SDS might contain inaccurate, incomplete, or misleading information.** Reviewing the product's technical details is essential rather than relying solely on the SDS's transportation information section (Section 14).

### Why would an SDS contain inaccurate information about flammable liquids?

- The SDS may be outdated, or the manufacturer may have prepared an SDS with other modes of transportation (e.g., ground transport) in mind. Under certain circumstances, flammable liquids can be excepted from the HMR for ground transport.



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- A manufacturer may have prepared their SDS to reflect ground transport only. In that case, Section 14 of the SDS may indicate that the product is not a dangerous good when it is, in fact, regulated for air transport. Pay particular attention to the specific information about shipments by air.

### What do I need to do to comply?

- As a shipper or freight forwarder, you must comply with the HMR ([49 CFR Parts 171-180](#)). This includes adhering to the [packaging](#) and [hazard communication](#) requirements specified for your product based on its classification. A person who violates the HMR may be subject to [civil or criminal penalties](#).
- Remember that [training](#) is required for any [hazmat employee](#) (see [Part 172 Subpart H – Training](#)).
- Refer to the FAA [SafeCargo](#) webpages for more [overview of requirements](#).

### What are some exceptions from the HMR for flammable liquids being transported by air?

- There are some [exceptions from specific requirements of the HMR](#) for flammable liquids being transported by air. Examples include limited quantity (see §§ [173.150](#) and [173.27](#)), [excepted quantity](#) (see § [173.4a](#)), [consumer commodity](#) (ID8000; see § [173.167](#)), and certain [alcoholic beverages](#) (see § [173.150\(d\)](#)).
- The exceptions provided are contingent on factors like quantities and the commodity type. For example, [limited quantities of retail products containing ethyl alcohol](#) (see § [173.150\(g\)](#)) can be excepted from the HMR subject to specific conditions and limitations. Remember that those conditions and restrictions are more stringent for air transport than ground transport.
- Never assume that a ground transport exception applies to air transport.

### As a freight forwarder, how do I know if a package contains flammable liquids if a shipper has not declared that to me?

- Look for product keywords that could indicate the presence of flammable liquids, such as ‘fragrances,’ ‘paints,’ ‘coatings,’ ‘sealants,’ ‘solvents,’ ‘extracts,’ ‘fuels,’ ‘oils,’ ‘alcohols,’ ‘lubricants,’ or ‘adhesives.’
- Consider processes and controls in your operations to recognize, identify, and refuse or accept flammable liquids. If you handle and ship flammable liquids, you must comply with the HMR shipping requirements, including hazmat employee training.
- Some flammable liquids might not be classified as dangerous goods for ground transport. Therefore, when transferring shipments between ground and air modes, be aware that a package initially shipped by ground may lack the correct packaging or hazard markings and labels. Any package provided to an air carrier must fully comply with air shipping requirements, including required packaging and hazard markings and labels.
- If you discover undeclared flammable liquids in transportation, you must [report](#) the incident to the Department of Transportation ([Hazardous Materials Incident Report](#) [DOT Form F 5800.1], see § [171.16](#)).

### Questions?

- You may contact the FAA Office of Hazardous Materials Safety via e-mail at [hazmatinfo@faa.gov](mailto:hazmatinfo@faa.gov) or via voice message at **405-954-0088**.