



### **USG-13(d) – Explained, Dangerous Goods in the Cargo Hold**

In dangerous goods training classes, I sometimes like to ask the class why they think some dangerous goods are restricted to “cargo aircraft only” and not permitted on passenger aircraft, and the usual reply is “because there are PEOPLE on the plane!” After I remind them that pilots are people, there are typically not any more answers quickly forthcoming. In reality, many aircraft that transport passengers are also transporting cargo, and dangerous goods may very well be present in that cargo.

While any accident involving a passenger aircraft certainly prompts more media coverage and consequently more public attention than one involving a cargo aircraft, **all** air safety regulations are designed and intended to protect the life of every person on board, the public at large, and the aircraft itself. The dangerous goods regulations have evolved over many years into what they are now; developed by not only experts in dangerous goods safety, but also experts from the modal industries which transport dangerous goods, whose valuable input and contributions are essential in establishing the mode-specific limitations.

The restrictions for carriage of dangerous goods by air are the most restrictive of the modal regulations, and the restrictions for dangerous goods carried by passenger aircraft are especially conservative. In the event of an inflight dangerous goods incident or emergency, resources for emergency response are limited – the first actions of the crew will be to try to contain the emergency as much as is possible, and to get the aircraft safely on the ground where it can be quickly evacuated and many more emergency resources are available.

On a passenger aircraft, cargo is typically loaded in a cargo compartment that cannot be accessed during the flight, unlike on a cargo aircraft where the cargo loading can be configured in numerous ways to allow accessibility – i.e., where a crewmember can get to it, handle it, and relocate it away from other cargo if size and weight permit. It is this *accessibility* factor that results in the much more limited types and amounts of dangerous goods being permitted for transport on passenger aircraft.

The United States takes this philosophy a bit further in the limitations of 49 CFR §175.75, fondly known in the airline industry as the “25/75 kg” rule, which are also outlined in U.S. Variation USG-13(d) of the IATA Dangerous Goods Regulations. This rule limits the overall amount of dangerous goods permitted to be carried on passenger aircraft to **25 kg net weight of dangerous goods, and an additional 75 kg net weight of Division 2.2 non-flammable gas loaded in any inaccessible cargo compartment on a passenger aircraft.** (A typical configuration of a passenger-carrying aircraft will have 2 baggage/cargo compartments – both inaccessible inflight.)

These restrictions do not apply to:

- Division 1.4S UN 0012, UN 0014, and UN 0055 prepared as Limited Quantity/ORM-D in accordance with 49 CFR §173.63(b). (*This specific provision is irrelevant to IATA shipments as LTD QTY provisions are forbidden for these UN numbers in the IATA DGR*);
- Dangerous goods in Class 9;



- Articles of UN 3528 (Engine, internal combustion, flammable liquid powered OR Engine, fuel cell, flammable liquid powered OR Machinery, internal combustion, flammable liquid powered) or UN 3529 (Engine, internal combustion, flammable gas powered OR Engine, fuel cell, flammable gas powered OR Machinery, fuel cell, flammable gas powered);
- Dangerous goods in Limited Quantities or Excepted Quantities; and
- Aircraft batteries (belonging to the operator) carried as items of replacement.

This section of 49 CFR also establishes quantity limits for certain dangerous goods that are loaded inaccessibly on cargo-only aircraft; however, cargo aircraft can accommodate many more loading configurations, and airline personnel are able to plan the cargo load in accordance with these restrictions.

This is U.S. law – and it applies to the transport of dangerous goods by air to, from or through all territory of the United States, and on all U.S. certified aircraft regardless of where they are operating in the world.

**Why does this rule matter to shippers?** Because some quantities of dangerous goods may be shown in the IATA DGR as permitted on passenger aircraft, but in reality will not be permitted to be transported on passenger aircraft in the U.S. due to this restriction. Take for example:

- UN 1263, Paint, Class 3, Packing Group III, one package containing 50 L

According to the IATA DGR, up to 60 L net quantity per package is permitted to be transported by passenger aircraft. However, as Class 3 is not one of the exceptions to the “25/75 kg” rule as it applies on passenger aircraft, and 50 L of paint will have a net weight of greater than 25 kg, there is not a place on a typical *passenger aircraft* where this package can be loaded and transported in compliance with § 175.75. Remember – this is a **U.S. Variation** that is more restrictive than the IATA Dangerous Goods Regulations, and in this case the requirements of U.S. 49 CFR supersede the international standards. (And the U.S. 25/75 kg limits are TOTAL cargo compartment quantity limits – not package quantity limits.)

So to summarize – shippers, be aware of this rule and how it might affect the way you prepare your passenger aircraft shipments. Forwarders – be aware of these restrictions when you book your cargo. And to passengers - yes, there may be dangerous goods cargo being transported on the passenger aircraft you are traveling on, but you can rest assured that your safety is always the priority!

- Written by Sandra Harding

Regulatory Specialist at BDG