

Packing dangerous goods

To ensure safe transportation of dangerous goods by air, they must be packed according to stringent requirements and in prescribed quantity limits. Proper packing protects against leakage, damage, and hazardous reactions during transport.

Key Packing Requirements:

Approved Packaging and Instructions: Only UN specification packaging that has passed performance tests may be used, identifiable by UN markings such as "UN 4G/Y145/S/01/GB/1234" on boxes, drums, jerricans, and composite packaging. Each dangerous goods item must follow its specific packing instruction found in the [ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air](#), which specify inner packaging, outer packaging, and quantity limits based on different packing groups (I, II, III). Never use damaged or previously used dangerous goods packaging.

Quantity Limits and Aircraft Types: Dangerous goods have different quantity limits depending on aircraft type - passenger aircraft have stricter limits (Column G in regulations) while cargo aircraft allow higher limits (Column H). Excepted quantities allow very small amounts with simplified requirements, while limited quantities offer reduced packaging requirements for smaller amounts.

Packing Process and Safety: The packing process involves inner packaging (primary container), outer packaging (protective container), appropriate cushioning material to absorb shocks, and proper segregation of incompatible dangerous goods. Common mistakes include using non-approved packaging, exceeding quantity limits, mixing incompatible substances, insufficient protection, and using unsuitable packaging for specific dangerous goods classes.

Personnel Requirements: Only trained personnel who understand the specific requirements for each substance should pack dangerous goods, though the shipper remains responsible even when packing is outsourced.

Incorrect packing is a major cause of dangerous goods incidents, so consultation with ICAO Technical Instructions or expert advice is recommended when uncertain.