

Dangerous Goods Declarations, Shipping SDS and UN38.3 for Batteries

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A surprising share of what buyers source from India ships as dangerous goods: essential oils, attars, perfumes, paints, adhesives, aerosols, some chemicals and anything with a lithium battery. Dangerous goods need a classification, a declaration signed by a trained shipper, compliant packing and labels, and for batteries a UN38.3 test summary. Get it wrong and the carrier refuses the cargo, or worse. This guide shows the buyer what to ask for and the Indian exporter how to prepare it.

The Short Version

- Whether goods are dangerous is set by the UN classification, not by the supplier. Flash point, toxicity and battery chemistry decide it.
- Sea uses the IMDG Code and a Dangerous Goods Declaration plus a container packing certificate. Air uses the IATA rules and a Shipper's Declaration signed by a trained person.
- An SDS supports the declaration, section 14 gives the transport data, but it is not the declaration.
- Every lithium cell or battery needs a UN38.3 test summary from its manufacturer, available on request, and since 1 Jan 2026 tighter state-of-charge rules apply by air.
- Non-dangerous goods that look dangerous (oils, powders, gadgets) often need a non-DG letter from the shipper before an Indian airline will accept them.

Most buyers think of dangerous goods as chemicals in drums. Then they order a mixed pallet from Kannauj or a container of home fragrance, and the forwarder comes back to say the essential oils are UN1169 or UN1197, flammable, Class 3, and the whole consolidation needs paperwork nobody has started.



India sells a lot of quietly hazardous goods. Essential oils and attars, perfumes, incense oils, paints and lacquers, adhesives, solvent-based inks, aerosols, matches, some agrochemicals and pharmaceutical intermediates, and anything with a lithium battery (e-bikes, power tools, toys, gadgets). This guide, part of our [certification guides](#), covers the transport side only. Chemical rules for the market itself are in [REACH](#) and [safety data sheets](#).

1. What Makes a Shipment Dangerous Goods

Dangerous goods are anything listed or classifiable in one of the nine UN hazard classes: explosives, gases, flammable liquids, flammable solids, oxidisers, toxic and infectious substances, radioactive material, corrosives, and Class 9 miscellaneous (which is where lithium batteries and many environmentally hazardous substances sit).

Each dangerous good gets a UN number, a proper shipping name, a class and, for most, a packing group (I high danger, II medium, III low). The rules come from the UN Model Regulations, and each mode turns them into its own code:

Mode	Rulebook	Main documents
Sea	IMDG Code (IMO, mandatory under SOLAS since 2004, amended every two years)	Dangerous Goods Declaration, container packing certificate, SDS, emergency contact
Air	ICAO Technical Instructions, applied through the IATA Dangerous Goods Regulations (67th edition in force from 1 Jan 2026)	Shipper's Declaration for Dangerous Goods, air waybill handling notes, SDS
Courier	IATA rules plus each courier's own, usually stricter, acceptance list	As for air, often with a pre-approval

The classification is a fact about the product, not a choice. An oil with a flash point at or below 60°C is a Class 3 flammable liquid by definition, whatever the supplier's paperwork calls it.

2. What Each Document Proves

Dangerous Goods Declaration (sea) or Shipper's Declaration (air). The legal statement by the shipper that the goods are correctly classified, packed, marked, labelled and fit for transport. It has to be signed by someone trained for the role. It is the document the carrier relies on, and the one that carries liability.

Container packing certificate (sea). Signed by whoever packed the container, saying it was packed and secured to the IMDG rules, with the right placards and segregation.

Safety Data Sheet. The product's chemical data sheet. For transport, section 14 gives the UN number, shipping name, class and packing group. An SDS supports the declaration but doesn't replace it. An SDS that says "not regulated for transport" in section 14 is a claim by its author, and carriers do check it against the flash point in section 9.

UN38.3 test summary. For lithium cells and batteries. It shows the cell or battery type passed the UN Manual of Tests and Criteria section 38.3 (altitude, thermal, vibration, shock, external short circuit, impact or crush, overcharge, forced discharge). Since 1 January 2020 every manufacturer and later distributor must make the test summary available. It belongs to the battery design, so a battery supplier's summary covers your product only if your product uses exactly that battery.

Non-DG letter. Not a UN document. A letter from the shipper stating the goods are not dangerous for transport, with reasons (flash point, no battery, not classified). Indian airlines and ground handlers routinely ask for one on cargo that looks risky: oils, powders, cosmetics, electronics. It shifts responsibility to the shipper, so it has to be true.

3. What an Importer Should Check

1. **Ask the classification question before you order.** For any liquid, aerosol, powder chemical or battery-powered product, ask the supplier for the SDS and, for batteries, the UN38.3 summary. Send both to your forwarder before you book. They'll tell you if it's DG and what it costs to move.
2. **Check section 9 against section 14 of the SDS.** If the flash point in section 9 is below 60°C and section 14 says "not dangerous", someone has a problem. It's often a generic SDS copied from a different product.
3. **Check the UN38.3 summary matches the battery.** Same manufacturer, same model, same watt-hour rating as the battery in your product. A summary for "a 18650 cell" with no model number proves nothing.

4. **Air or sea.** Many DG items that ship normally by sea are restricted or forbidden on passenger aircraft and limited on cargo aircraft. Lithium batteries shipped on their own (UN3480) go cargo aircraft only.
5. **Your own market's rules after landing.** The transport documents end at the warehouse. Labels and storage rules for the market (CLP in the EU, OSHA HazCom in the US, WHS in Australia) are a separate question.



Red Flags

- A "non-DG certificate" from a lab with no test data behind it.
- An SDS with no date, no supplier name in section 1, or a different product name from the invoice.
- A battery product where the supplier can't name the battery maker.
- A supplier who suggests describing the goods as something else to "avoid DG charges". Misdeclared DG is the classic cause of container fires, and liability follows the paper.

4. Lithium Batteries Need Extra Care

Lithium batteries are the DG item buyers meet most, through e-bikes, power banks, tools, toys, lights and speakers. The UN numbers are:

- UN3480, lithium ion batteries on their own.
- UN3481, lithium ion batteries packed with or contained in equipment.
- UN3090 and UN3091, the same for lithium metal batteries.

By air, lithium ion batteries on their own have had to ship at no more than 30% state of charge since 2016. From 1 January 2026, under the 67th edition of the IATA rules, batteries above 2.7 Wh packed with equipment must also ship at no more than 30% state of charge (or 25% indicated capacity), per Lion Technology's reading. Japan Airlines reads the change more cautiously. Ask your airline or forwarder for the exact rule in force when you book. The 68th edition is due on 1 January 2027.

Damaged, defective or recalled batteries are a separate, much stricter category, and are forbidden on aircraft. If you're returning faulty units from a market to India, plan that with your forwarder first.

5. How an Indian Exporter Prepares DG Shipments

This half is for the Indian manufacturer or exporter. Nobody issues a "DG certificate" in India. The shipper classifies, packs and declares, and the carrier accepts or refuses. What you need is the people, the packaging and the data.

Step 1 – Classify each product. Use the SDS data, flash point test (a NABL-accredited lab can run one in a few days) and the UN dangerous goods list. Record UN number, proper shipping name, class and packing group. For mixtures like attar blends or fragrance oils, the flash point of the blend decides it, not the main ingredient.

Step 2 – Write or update the SDS. Sixteen sections, GHS format, with section 14 completed for IMDG and IATA. Write it for the product you ship, not a generic one. Most buyers' markets also want it in their language (see [REACH and safety data sheets](#)).

Step 3 – Get trained staff. By air, the person who signs the Shipper's Declaration must have current dangerous goods training, under India's Aircraft (Carriage of Dangerous Goods) Rules, with DGCA-approved training providers. Training is recurrent, usually every 24 months. For sea, the IMDG Code also requires training for shore-side staff. Check the current DGCA requirement with your airline or a DGCA-approved institute.

Step 4 – Use UN-specification packaging. UN-marked drums, jerrycans and boxes tested for the packing group, with the UN mark printed on them. Buy from a manufacturer that can show the test certificate for the design. Inner packaging, absorbent and closures have to match what was tested.

Step 5 – Mark and label. UN number and shipping name on every package, hazard labels, orientation arrows for liquids, the lithium battery mark where it applies. For limited and excepted quantities, the smaller marks.

Step 6 – Prepare the declaration. The IMDG Dangerous Goods Declaration or the IATA Shipper's Declaration, plus the container packing certificate for sea. Give your forwarder the SDS and declaration at booking. Shipping lines need DG bookings approved before the box is stuffed, and Indian ports have their own hazardous cargo procedures. Allow several working days for DG approval on the line, more for Class 1, 2 and 6 goods.

Step 7 – For batteries, get the UN38.3 summary. If you buy cells or packs, ask your battery supplier for the test summary for that exact model. If you assemble your own packs, the pack needs its own UN38.3 test at a lab that runs the full series. Test time is typically a few weeks. Check current fees with the lab.



Step 8 – For non-DG goods that look risky, prepare the non-DG letter. Oils with a high flash point, herbal powders, cosmetics, gadgets with no battery. Base it on test data, sign it, and attach the SDS.

Common refusal reasons forwarders report: an SDS that doesn't match the product, a missing or out-of-date training certificate for the signatory, non-UN packaging, a battery with no UN38.3 summary, and state of charge not stated for air.

If you're a buyer and coordinating classification, packaging and approval with an Indian supplier is more than you want to run, [SourcingSync](#) handles DG shipments from India on the ground.

6. A Worked Example With Essential Oils and an E-Bike

This example is an illustration built from the rules above, not a real firm.

An Australian wellness brand buys 400 litres of essential oil blends from a Kannauj distiller and a pallet of e-bikes from a Ludhiana assembler, and wants both on one sea consolidation.

The oils. The distiller's SDS shows a flash point of 48°C for the eucalyptus blend and 92°C for the sandalwood blend. The first is UN1169 extracts, aromatic, liquid, Class 3, packing group III. The second isn't dangerous for transport. The eucalyptus goes in UN-marked jerrycans with Class 3 labels and a DG declaration. The sandalwood goes as general cargo with a non-DG letter backed by the flash point test.

The e-bikes. Each has a 500 Wh lithium ion battery fitted. By sea, that's UN3171 battery-powered vehicle (or UN3481 if shipped as equipment, depending on how the forwarder classifies it). The assembler gets the UN38.3 test summary from its battery pack supplier, checks the model number matches the pack fitted, and the forwarder books the DG space. The consolidator agrees to take DG cargo, which not every LCL service does from Indian ports. That decides the route.

FAQ

Is an MSDS the same as an SDS? 

Yes. MSDS is the older name. The current GHS format is the 16-section SDS.

Do essential oils count as dangerous goods? 

Can I ship lithium batteries by air from India? 

Who signs the dangerous goods declaration?



What is a non-DG certificate?



7. Next Steps

- Chemical rules for the market: [REACH and safety data sheets](#).
- Electrical goods: [CE and UKCA marking](#), [RoHS and WEEE](#), [FCC and US electrical safety](#), [RCM in Australia and New Zealand](#).
- Choosing who moves it: [choosing a freight forwarder](#) and [sea freight routes](#).
- Sourcing the products: [essential oils](#) and [bicycles](#) from India.
- All certificates: [certifications hub](#).