Letter of indemnity

Letters of indemnity form no part of the IMDG Code, but the shipping line may request one from you as a condition of acceptance for controlled temperature dangerous goods. These generally state that while the line will carry out due diligence to care for the machinery in the shipping container controlling the temperature, the line bears no responsibility for consequences of failure or malfunction of that machinery.

Competent authority approval

There are occasional circumstances when a shipment has to be made under conditions that are prohibited by the IMDG Code, but are nevertheless safe, because of special circumstances. In such a case the competent authority of the country of shipment is requested (in advance) to issue a certificate of approval for the shipment to go ahead. There may be conditions attached, and a time limit. The competent authority will consider the request and only if convinced that there is no increased risk, will issue a certificate of approval for the transport to go ahead. This must be sent to the shipping line and a copy must travel with the goods. See IMDG 7.9.3 for list of national competent authorities.

10 Importance of UN-approved packaging for dangerous goods

The ability of packaging to contain dangerous goods during transit is obviously critical to the safety of the transport. Only packages that are certified to have passed UN packaging standards tests may be used for dangerous goods. (IMDG 4.1.1.3).

10.1 Responsibility for selection of UN-approved packaging

It is the shipper’s legal duty to select suitable packaging and fill packages correctly. Included in the shipper’s declaration is the certification that he has packaged the dangerous goods correctly (which means in UN–approved packages). (IMDG 5.4.5.1).

Shipping container packers should check that packages display the UN test certification mark (see below), and if aware that packages do not bear the test mark, the packages are not fit for shipment by sea and must not be offered for marine transport.

10.2 UN-approved packaging and UN packaging codes

Package manufacturers produce packages for dangerous goods whose construction and performance are tested to UN standards. Packages are drop, stack, leak and pressure tested. Package manufacturers register approved package designs with the competent authority of the country where the package is manufactured, and shippers of dangerous goods are able to select a UN-approved package of a type suitable for their product.

All packages manufactured under the UN certification scheme for the carriage of dangerous goods are marked with a code that indicates the physical nature of the product for which
they are suitable, and whether the packages are suitable for dangerous goods of packing group I, II or III. (See IMDG 6.1.2). The code always starts with the letters “UN” in a circle.

Packages for packing group I will be built to a higher standard and therefore will be more expensive than packages of the same type built for a lower packing group. The codes are usually stamped into metal or plastic drums and IBCs, and are printed on boxes and bags.

Packages that do not display the UN certification mark must not be used for dangerous goods.

Below is an example of a typical code for a steel drum suitable for dangerous goods liquids of packaging group II or III with a relative density (specific gravity) of up to 1.3:

11 Marking and labelling of packages

Dangerous goods “marks” on packages mean Proper Shipping Name, UN Number and marine pollutant mark. Dangerous goods “labels” mean the hazard class and sub-risk diamond labels.

11.1 Duty to mark and label packages

The shipper has the binding duty to ensure that packages of dangerous goods presented for packing in a shipping container for shipment by sea are marked and labelled in accordance
with IMDG 5.2. as below. Equally, the cargo consolidator/shipping container packer has a duty to ensure that every package of dangerous goods he loads into a shipping container has been correctly marked and labelled as in the examples below:

**MARKS:** Proper Shipping Name and UN Number and Marine pollutant mark (if applicable to the substance)

**LABELS:** Hazard class label for each class and sub-risk (diamond-shaped at least 100mm x 100mm) Labels may be stencilled, printed or stuck on the package.

### 11.2 Special labelling requirements

There are extra labelling requirements for particular substances. These are specified in IMDG 5.2. The main extra labelling requirements are listed below:

- Intermediate bulk containers require marks and labels on two opposing sides (IMDG 5.2.2.1.7)
- Radioactive materials should be labelled as in IMDG 5.2.1.12
- Gases with sub-risks should be labelled as in IMDG 5.2.2.1.4
- Self-reacting substances should be labelled as in IMDG 5.2.2.1.9
- Organic peroxide should be labelled as in IMDG 5.2.2.1.10
- Infectious substances should be labelled as in IMDG 5.2.2.1.11.
11.3 Marking and labelling requirements for a typical combination package

Marking and labelling requirements for a typical combination package for dangerous goods: Separate inner packages packed into an outer package.

Marks and labels
- Photo of 25 kg bag shows: Proper Shipping Name, UN Number, hazard class label and UN-certified packaging approval code.

No marks are required on inner packages as these are not intended to be unpacked during transport.

UN Number, class and Proper Shipping Name must be marked on the outside of each outer package.

11.4 Marks and labels on palletised unit loads (overpacks)

If dangerous goods packages are made up into unit loads by the shipper, ensure the marks and labels are clearly visible on at least one side of the unit load, but preferably on all four sides.
Every individual package in the unit load must also be correctly marked and labelled with Proper Shipping Name, UN Number and class(es) and marine pollutant label if applicable. This is because unit loads may legitimately be broken down for convenience of fitting into a shipping container.

Dangerous goods packages must not be broken down for convenience to the extent that unmarked inner packages are exposed or removed from outer packages.

If your personnel make up unit loads from loose packages, either shrink-wrapped on pallets, semi-crated on pallets using solid sheet panels to protect the packages, or in crates or boxes, it is important that the marks and labels are visible on at least one face of the unit load after it has been assembled. It is good practice to ensure that when unit loads are made up, packages are arranged so that the hazard warning label(s), UN Number and Proper Shipping Name are visible on all four sides, and if practicable, the top.

If transparent shrink-wrapping is used to bind the packages together, ensure that the marks and labels are clearly visible through the shrink-wrap. If not, apply new marks and labels to the outside of the shrink-wrapping.

If non-transparent shrink-wrapping is used for dangerous goods the packer must apply new hazard warning labels and new Proper Shipping Name and UN Number marks to the outside of the unit load.

**Package marks and labels**

Every package must be marked and labelled. If you make the goods up into palletised unit loads at your factory, ensure the packages are stacked so that the labels are visible all round.

**Plastic shrink and cold wrap**

If pallets are shrink or cold wrapped with plastic film, ensure the marks and labels are visible through the film. If not, fix new marks and labels on top of the plastic film.
Overpack label: In addition, if packages are placed inside an overpack (e.g. a wooden box), then the overpack must display a label with the word “OVERPACK” on at least one side. (IMDG 5.1.2.1).

11.5 Labelling requirements for intermediate bulk containers (IBCs)
IBCs must display the same types of marks and labels as normal packages, but on two opposing sides as against just one side for normal packages.
12 Segregation – Prohibited mixed loading of dangerous goods (IMDG 7.2)

12.1 What is segregation?
Segregation means the process of physically keeping dangerous goods separate from other dangerous goods that react dangerously together during transportation. These are called “incompatible” dangerous goods.

As far as shipping container packers are concerned, this means not loading “incompatible” dangerous goods in the same shipping container.

Some types of dangerous goods react violently with some other types of dangerous goods. Sometimes even dangerous goods in the same hazard class (particularly those in Class 8) may react dangerously together. It is prohibited to pack incompatible dangerous goods in the same shipping container. There are strict rules in IMDG 7.2 for determining which dangerous goods are prohibited in the same shipping container.

12.2 When to carry out a segregation check for a shipping container
A segregation check must be carried out before loading commences if it is proposed to load more than one UN Number into a shipping container. The IMDG Code must first be checked to ensure that the IMDG segregation rules do not prohibit the particular combination of dangerous goods in the same shipping container.

Ships will reject shipping containers that breach the IMDG Code.

12.3 Who should carry out the segregation check?
It is always the party who is in charge of loading the shipping container who must carry out the segregation check. A shipper who has sent his dangerous goods to a consolidator has no control over what is loaded into the shipping container. It is always the packer’s duty to check segregation, and by signing the packing certificate the packer confirms among other things that no incompatible dangerous goods are in the shipping container.

12.4 Methods for checking the segregation
The only method of checking segregation is to follow the segregation rules of the IMDG Code. There are options for doing this correctly:

- **IMDG Code books:** Train your staff to consult IMDG 7.2 and follow the rules manually. Only follow this route if your staff have been trained to do it as it does require a basic level of knowledge of classification as well as the segregation process. The basic process is outlined below in section 12.5.

- **CD ROMs:** CD ROMs are available for purchase and installation on in-house computers.
These can contain the whole of the IMDG Code and incorporate various tools such as container packing segregation checking systems. IMDG training is still required to use electronic tools.

- **Internet-accessed segregation checking tools:** Internet-accessed IMDG tools can be ideal for planning and checking mixed hazard loads before packing shipping containers. UN Numbers are fed into the program and an IMDG Code compliance / non-compliance report can be generated. The Hazcheck System produced by EXIS Technologies produces a number of tools, including a segregation check, in their suite of programs based upon the official IMDG dangerous goods database. Full details can be found on www.hazcheck.com. All computerised systems require users to be trained to understand the IMDG Code, and training to use the tools, but can produce reliable results more quickly than working directly from the books. It can be argued that tools such as these do make the process more straightforward.

- **Shipping line:** Packers may request a segregation check from the shipping line by supplying full dangerous goods details of a proposed load. The shipping line’s ability to respond will depend upon their internal organisation and available access to dangerous goods experts. This will depend upon location and communications. If requests are relayed to a different time zone there may be a long delay before a reply is obtained.

- **Dangerous goods safety adviser:** Packers that do not have in-house technical knowledge of the IMDG Code, perhaps because dangerous goods is only a small part of their business, should appoint an external qualified dangerous goods adviser who can provide professional IMDG advice on a contractual basis.

Dangerous goods of different UN Numbers may only be loaded into the same shipping container if the IMDG Code confirms they are compatible.

When you are loading dangerous goods of two or more different UN Numbers into one shipping container, the segregation rules for those UN Numbers must be checked to make sure it is not prohibited to put them in the same container.