

MAGG

MANAGEMENT
& CONSULTANCY



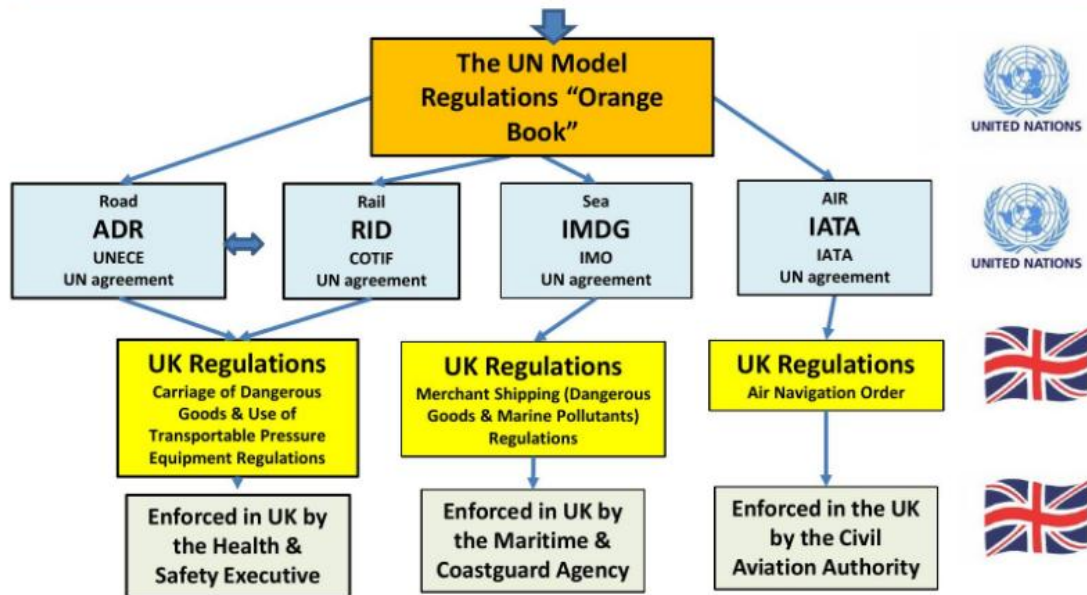
DANGEROUS GOODS AWARENESS TRACKSIDE

MAGG DGAW_v1



Transportation of Dangerous Goods

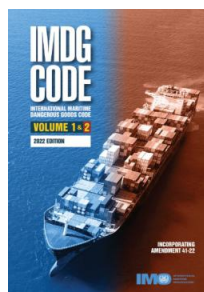
The multi-modal enforcement of the UN Regulations through international agreements



Road - ADR

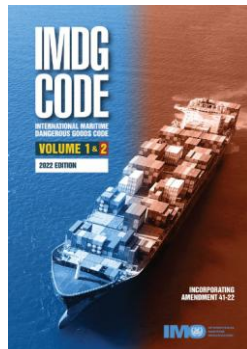
Sea - IMDG

Air – DGR, IATA

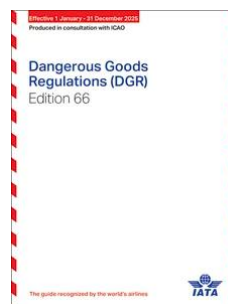




COUNTRIES WITH
ADR REGULATIONS



DANGEROUS GOODS, ON ANY BOAT, ANY WATER



The principle activities are the same across all 3 modes

Obligations
Identification
Marking & Labelling
Documentation
Packaging Rules
Exemptions

***Substances once classified and confirmed as being dangerous goods
are allocated the following:***

UN NUMBER
(cannot be amended)

PROPER SHIPPING NAME
(cannot be amended and trade names not allowed)

CLASS

(SUBSIDIARY CLASS)
if applicable

PACKING GROUP
if applicable

PROPER SHIPPING NAME (PSN)

All the same PSN across each mode of transport consisting of UN followed by 4 numbers.

4 categories

SINGLE ENTRIES – INDIVIDUAL SUBSTANCES.

UN1437 ZIRCONIUM HYDRIDE

UN1090 ACETONE

GENERIC ENTRIES – TYPE OF SUBSTANCE.

UN1210 PRINTING INK, flammable

UN1263 PAINT

Specific N.O.S. entries for same chemical ‘family’

UN2733 AMINES FLAMMABLE, CORROSIVE, N.O.S.

N.O.S. entries for products described by their hazard.

UN2923 CORROSIVE SOLID TOXIC, N.O.S.

UN NUMBER, PROPER SHIPPING NAME, CLASS, (SUBSIDIARY CLASS), PACKING GROUP

Then additional detail as required, WASTE, TUNNEL CODE (road), flashpoint (sea) LTD QTY (air/sea) etc.

EXAMPLE: UN2708 BUTYLBENZENES CLASS 3 PG III

PACKING GROUPS

PG I – HIGH DANGER

PG II – MEDIUM DANGER

PG III – LOW DANGER

- NOT ALL CLASSES HAVE PACKING GROUPS
- NOT ALL UN NUMBERS HAVE PACKING GROUPS
- INFLUENCES CERTAINS ASPECTS

HAZARD MARKINGS

GLOBAL HARMONISED SYSTEM (GHS)



- More informative for the end user
- **Check with MSDS for UN/Dangerous Goods information**

MSDS sheets

This is where all the necessary information from a Dangerous Goods perspective can be located provided by the manufacturer/supplier.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1993
UN No. (IMDG)	1993
UN No. (ICAO)	1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	FLAMMABLE LIQUID, N.O.S. (PETROLEUM DISTILLATES, PETROLEUM DISTILLATES)
Proper shipping name (IMDG)	FLAMMABLE LIQUID, N.O.S. (PETROLEUM DISTILLATES, PETROLEUM DISTILLATES)
Proper shipping name (ICAO)	FLAMMABLE LIQUID, N.O.S. (PETROLEUM DISTILLATES, PETROLEUM DISTILLATES)
Proper shipping name (ADN)	FLAMMABLE LIQUID, N.O.S. (PETROLEUM DISTILLATES, PETROLEUM DISTILLATES)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID label	3
IMDG class	3
ICAO class/division	3

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-E
Emergency Action Code	3Y
Hazard Identification Number (ADR/RID)	30

HAZARD IDENTIFICATION – CLASSES 1 – 9

Class 1 (divisions 1.1 – 1.6)



Class 2

Division 2.1 – flammable gases

Division 2.2 – non-toxic, non-flammable gases

Division 2.3 – toxic gases



Class 3



Class 4

Division 4.1 Flammable Solids

Division 4.2 Substances Liable to Spontaneous Combustion

Division 4.3 Substances which, in Contact with Water, Emit Flammable Gases



Class 5

Division 5.1 Oxidising Substances

Division 5.2 Organic Peroxides



Class 6

Division 6.1 Toxic Substances

Division 6.2 Infectious Substances



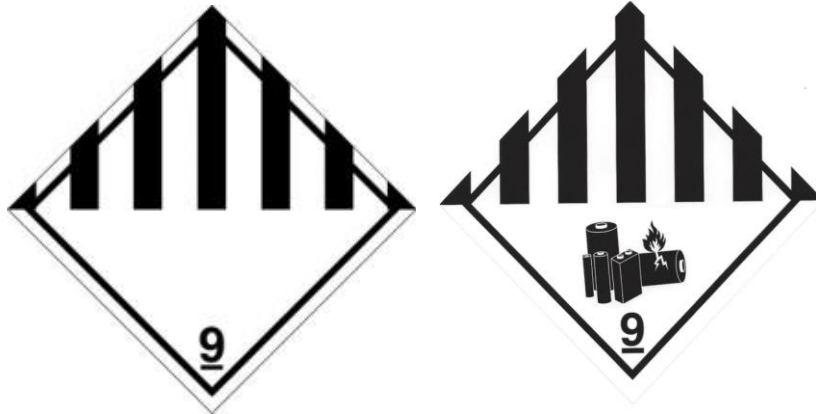
Class 7



Class 8



Class 9



Marine pollutant



EXAMPLES

CLASS 2



CLASS 3



CLASS 8



CLASS 9

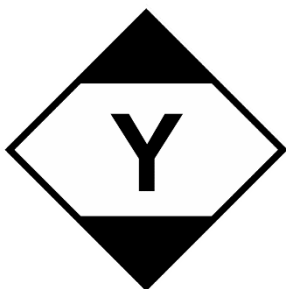


OTHER HAZARD LABELS

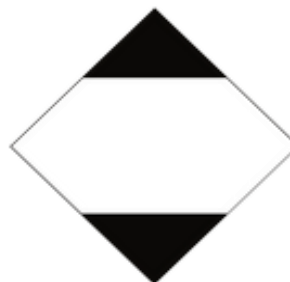
Lithium Ion under certain conditions



Limited Quantities

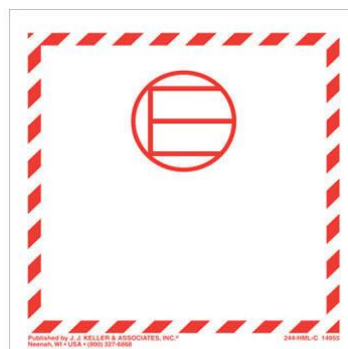


IATA



ADR/IMDG

Excepted Quantities



Cargo Aircraft Only (CAO)



IT IS RECOMMENDED TO KEEP THE FOLLOWING CLASSES APART

(This is a guide - specific detail in respective legislation)

Corrosive and gas cylinders



Cyanides, sulphides or chlorites with acids



Flammables and oxidisers



Toxic and flammables



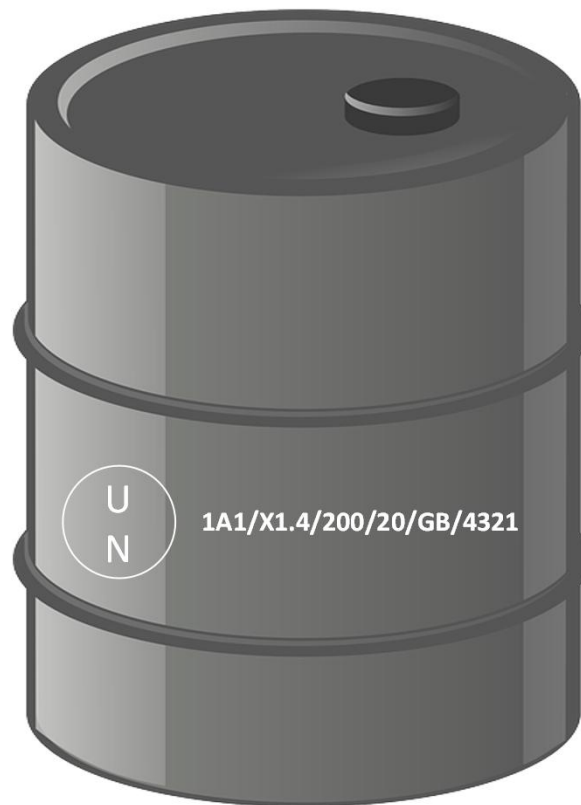
Packaging



Example of UN approved packaging will have a mark as shown:

④ 4G/X25/S/20/USA/UB143

4G	Fibreboard box
X	Packing Group 1
25	Max permissible weight
S	Solid
20	Year of manufacture
USA	Country
UB143	Certification code



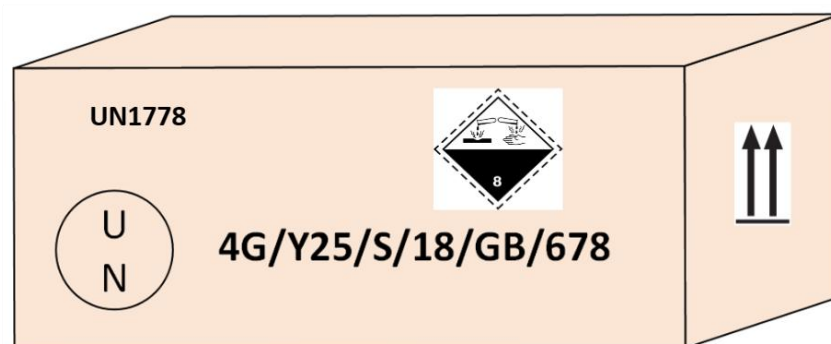
OFFICIAL SYMBOL

- 1A1** - STEEL DRUM (non-removable head)
- X** - PACKING GROUPS I, II or III
- 1.4** - RELATIVE DENSITY (6.1.3.1 (c) (ii))
- 200** - HYDRAULIC TEST PRESSURE
- 20** - MANUFACTURED IN 2020
- GB** - MANUFACTURED IN GREAT BRITAIN4321
- CERTIFICATE NUMBER

PACKING GROUP I	HIGH DANGER	PACKING GROUP X	PACKING GROUPS I, II & III
PACKING GROUP II	MEDIUM DANGER	PACKING GROUP Y	PACKING GROUPS II & III
PACKING GROUP III	LOW DANGER	PACKING GROUP Z	PACKING GROUP III ONLY

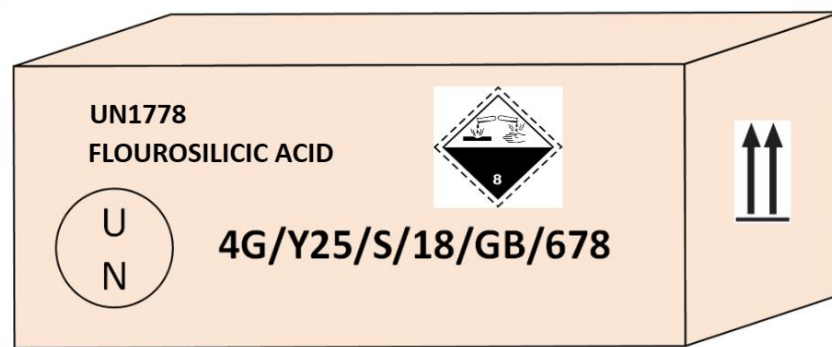
LABELLING ADR

- UN NUMBER (MARKS MIN. 12mm HIGH)
- PROPER SHIPPING NAME (**only for Class 1 and Class 2 products**) (MARKS MIN. 12mm HIGH)
- HAZARD LABELS 100 X 100mm
 - Including environmentally hazard mark (*if applicable*)
- ORIENTATION LABELS (*if applicable*)



LABELLING IMDG

- UN NUMBER (MARKS MIN. 12mm HIGH)
- PROPER SHIPPING NAME (MARKS MIN. 12mm HIGH)
- HAZARD LABELS 100 X 100mm
 - Including environmentally hazard mark *(if applicable)*
- ORIENTATION LABELS *(if applicable)*



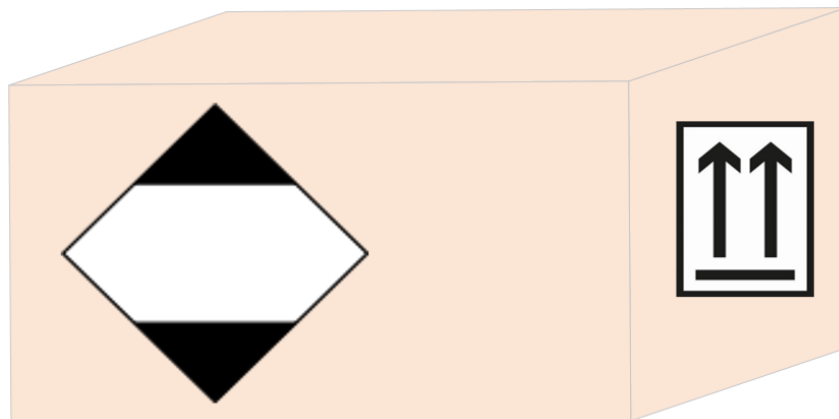
Limited Quantities

The size of the inner package varies from substance to substance

Regardless of the size of the inner package a combination package may weigh up to a maximum of 30kg

Shrink wrapped tray may weigh up to 20kg

No – limit: this determined by the safe working load of the vehicle.





Dangerous Goods Note

Accompany all consignments

Gives details of the dangerous goods.

Operator

Emergency Services

Different formats and different information required depending on the mode

Roles And Responsibilities

Function specific:

- ***CONSIGNOR/CONSIGNEE***

- In motorsport - normally the same Company

- ***CARRIER***

- Legal responsibilities

- ***PACKER***

- Correct box/drum/package
- Correct location
 - Consumables cabinet
 - Lista

- ***LOADER***

- At the factory
- At the event
 - Vehicles
 - Air freight - ULD
 - Sea freight - stillages and dolavs
 - Marketing
 - Hospitality

Summary

Knowledge of the different classes

Common ones

Class 2 – Gases

Aerosols – paint, glue

Fire extinguishers

Be aware of different hazardous properties

Class 3 – Flammable liquids

Fuel

Reed diffusers

Paint

Glues

Generators

Class 8 – Corrosives

Cleaners

Glue

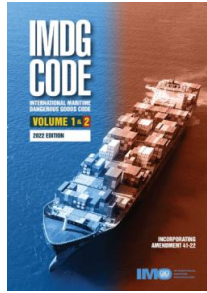
Be aware of the variety of products

Class 9 – Miscellaneous

Lithium ion

ERS modules

Battery packs – marketing items



DIFFERENT MODES – DIFFERENT LEGISLATION

TRAINING

Training is the most crucial part for all people involved in the transport chain of moving dangerous goods.

Awareness – General Handling

Trackside personnel - composites, marketing, garage operatives

Drivers – van and truck

Forklift operators

Role Specific

Packaging, DGN, consignment preparation etc.

2 year refresher training cycle for as a minimum

Legal requirement – exam must be completed and passed for shipping DG by air.

Safety

Products that are classified dangerous fall within the parameters of the UN and mean they are capable of posing a hazard to health, safety, property or the environment.

PPE and equipment

*Common sense
prevails.....*

