

## **The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - 2017**

### **Background**

The European Agreement concerning the International Carriage of Dangerous Goods by Road is intended to increase the safety of international transport of dangerous goods by road. It contains the conditions under which dangerous goods may be carried internationally and specifies the correct way to package and label dangerous goods for road transport (be it in a box, drum, or other individual container, or when carried in road tankers or other systems of bulk containment). Packaging provides a safeguard for people and the environment during loading, transport and unloading of dangerous goods, whilst labelling conveys the dangers that result from any spillage, mishandling etc.

Substances (including sole chemicals and mixtures) are assigned to one of nine classes. Some of these classes are subdivided into divisions to further define their natures whilst others are not e.g., Class 3. The nine classes may be simply defined as:

- Class 1 Explosives
- Class 2 Gases - Flammable Gases / Non-toxic and non-flammable gases / Toxic gases
- Class 3 Flammable Liquids
- Class 4 Flammable solids / Spontaneous combustible substances / Dangerous when wet substances.
- Class 5 Oxidizing substances / Organic peroxides
- Class 6 Toxic substances / Infectious substances
- Class 7 Radioactive material
- Class 8 Corrosive substances
- Class 9 Miscellaneous dangerous substances not included in any of the above classes.

The ADR also includes a dangerous goods list of containing official classifications (UN number, proper shipping name, hazard class[es]) of a large number of the most commonly transported substances (and some which are prohibited for transport). This list defines the packaging and labelling requirements for each of the included substances.

The ADR is revised and amended every two years (coming into force odd numbered years). The next revision, ADR 2017, comes into force on 1st January 2017, although there then is a six month overlap period during which ADR 2015 provisions remain valid (ie. during this time goods may be transported according to either regulation).

The purpose of the HibSoft ADR update is to update the information on the Hibsoft labelling databases in line with the latest revised ADR.

### **Major Labelling Implications of ADR**

#### **UN No:**

Must be preceded by letters "UN". Number itself and letters "UN" must be of a minimum height according to the size of the package, eg:

- a) Packages less than 5 litres capacity / 5 Kg mass - must be of an 'appropriate' height.
- b) Packages less than 30 litres capacity / 30 Kg mass or 60 litres water capacity - must be a minimum of 6mm in height.
- c) Larger than above - must be a minimum of 12mm in height.

#### **Proper Shipping Name (PSN) \*F1**

Mandatory for all Class 1 Goods. PSN must be legible and in an Official Language of the country of origin. If that language is not English, French or German, then the PSN must be provided in one of those three languages also.

### Transport Diamond

In most cases, a diamond shaped pictogram depicting the primary dangers of the goods being transported is required for ADR classified substances (with exceptions for limited or excepted quantities).

The backgrounds of transport diamonds may be white or coloured (in some cases striped or halved) and may be overlaid with a representative danger symbol in black (usually in the top half), a class number, and (optionally) a descriptive word or short phrase (eg. Flammable Gas).

The dimensions of the Transport Diamond on packaging must be 100mm x 100mm, except in the case of packages of such dimensions that they can only bear smaller marks. The border delimiting the shape of the diamond must be a minimum of 2mm in width.

Simpler generic Diamonds may be used for packages which meet the requirements for Excepted or Limited Quantity packages.

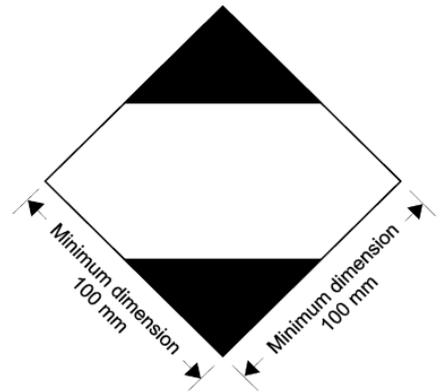
### Salvage <sup>\*F1 \*F2</sup>

Salvage packagings and receptacles must be additionally marked with the word "SALVAGE".

### Limited Quantities

See Chapter 3.4 of ECE/TRANS/257 (Vol.I) [ADR 2017] for rules regarding limited quantities

The symbol for limited quantities remains as previously - a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm x 100 mm and the minimum width of the line forming the diamond shall be 2 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

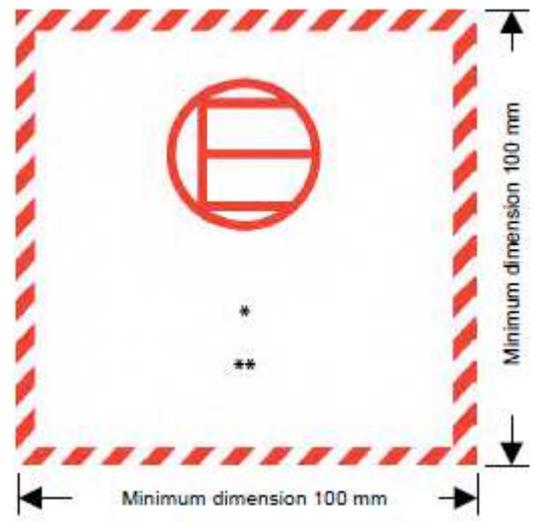


### Excepted Quantities

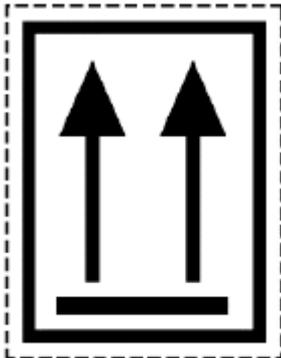
See Chapter 3.5 of ECE/TRANS/257 (Vol.I) [ADR 2017] for rules regarding excepted quantities.

Packages containing excepted quantities of dangerous goods should be durably and legibly labelled with the mark shown in below. The label number indicated in column (5) of Table A of Chapter 3.2 of ECE/TRANS/257 (Vol.I) [ADR 2017] for the first or only item of dangerous goods contained in the package shall be shown in the mark (\*). Where the name of the consignor or consignee is not shown elsewhere on the package this information shall be also included within the mark (\*\*).

The mark shall be in the form of a square. The hatching and symbol shall be of the same colour, black or red, on white or suitable contrasting background. The minimum dimensions shall be 100 mm x 100mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown.



**Overpacks** \*F1 \*F2



Where dangerous goods packed in limited quantities are contained together within an overpack and the marks representative of all the dangerous goods in the overpack are not clearly visible then the overpack shall be marked with the word "OVERPACK".

An orientation symbol is required:

- a) on combination packagings having inner packagings containing liquids.
- b) on single packagings fitted with vents.
- c) on cryogenic receptacles intended for the carriage of refrigerated liquefied gases.

The orientation symbol shall be legibly marked with package orientation arrows which are similar to the illustration shown here (two black or red arrows on a white or other suitably contrasting coloured background - outer border optional) or with those meeting the specifications of ISO 780:1997. The orientation arrows shall appear on two opposite vertical

sides of the package with the arrows pointing in the correct upright direction. They shall be rectangular and of a size that is clearly visible commensurate with the size of the package.

**Lithium Battery Mark**

A new mark has been introduced for labelling of packages of lithium cells or batteries prepared in accordance with special provision 188. This mark shall consist of a rectangular both with a white background and hatched border in red. Within the hatched border should be contained the battery symbol (a group of batteries, one damaged and emitting flame) in black with space beneath to add the appropriate UN number and a contact telephone number.



Minimum Dimensions: 120 mm wide x 110 mm high  
Minimum Width of Hatching: 5mm

\*If the size of the package so requires, the dimensions may be reduced to not less than 105 mm wide x 74 mm high. Regardless of size, all elements shall remain in proportion.

In addition a new transport diamond class (class 9a) has been added for which must be included on the transport label (subject to the standard rules).



\*F1 Must be legible and in an Official Language of the country of origin PLUS either English, French or German (where language of origin is NOT English, French or German).

\*F2 Lettering must be at least 12mm high.