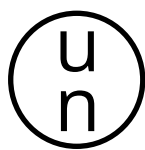


UN Package Markings Explained

It's not difficult to identify United Nations (UN) Specification packaging. Packages for dangerous goods that have been designed, tested, and manufactured to international UN specifications must bear UN specification markings. A decoding of the markings can be found below:



4G / Y 24.7 / S / 2024
AUS / AAG88888

UN Symbol

The markings start with the UN symbol - "u" over an "n" in a circle. For embossed metal packagings, the letters "UN" may be applied as the symbol.

Followed by:

Package Type Code

Type Code

Package type codes begin with a number that identifies the type/shape of package. The numbers range from 1 through 6 as shown:

- | | | |
|-------------|--------------|---------------|
| 1. Drums | 3. Jerricans | 5. Bags |
| 2. Reserved | 4. Boxes | 6. Composites |

In our example above, the "4" is for a box.

Material Code

The capital letter identifies the material of manufacture as shown below:

- | | | |
|---------------------|-------------------------------|---|
| A - Steel | F - Reconstituted Wood | M - Paper |
| B - Aluminum | G - Fibreboard | N - Metal other than steel or aluminum |
| C - Wood | H - Plastic | P - Glass |
| D - Plywood | L - Textile | |

The "G" in our example above identifies it's a fibreboard box.

Category Code

Some packages have an additional numerical category code following the material code. In these instances, the category gives further information about the design as shown below:

For Drums / Jerrican:

- 1 - Non-Removable Head (small opening)
- 2 - Removable Head (the whole top comes off)

For Bags:

- 5M1 - Multiwall
 - 5M2 - Multiwalled, Water-Resistant
- Refer Section 6 of IATA DGR for additional types

The letter "V" following the Package Type Code signifies a Special Package that may be used with any articles or inner packages. These packages may be used for any Packing Instruction that references the Package Type code without the "V".

Packaging Group

Now this is important! Following the package type code is the Packing Group code. The Packing Group code shows the level of testing that the package has been subjected to and links to the packing group of the material the package is authorized to contain. A Packing Group Code of:

- X - has been tested for Packing Groups I, II and III.
- Y - has been tested for Packing Groups II and III. and
- Z - has been tested for Packing Group III material only.

Our package example above is appropriate for materials of Packing Groups II and III.

Packages can be tested to be used multiple ways. You may see more than one packing group and corresponding weight or more than one line of test data.

Gross Mass or Relative Density

Solids or inner packages

For combination packagings designed to contain solids, or inner packages, the next field identifies the maximum gross mass that the package must not exceed. You will be able to tell if this field is a gross mass if the numbers are followed by the letter “S”

OR

Single packages for liquids

If there is no “S” following the number then the next two fields represent the relative density (aka specific gravity) of the liquid that the package has been tested for, followed by the hydrostatic test pressure of the package.

Our example package on the previous page is a combination package authorized for a gross weight of 24.7 kg.

Year of Manufacture

The year of manufacture is usually displayed by the last two digits of the year. However, it is possible that the full four digit year may be shown.

Our example package on the previous page was manufactured in 2024.

Authorizing Country of Manufacture

The UN Member state (Country) who has authorized the use of the UN symbol will be identified by the international Vehicle Registration Code (VRI) for the country, e.g AUS (Australia), GB (United Kingdom), D (Germany) etc

Package Identifier

The final markings will identify the package so it can be linked back to an approval certificate. Different Countries use different formats to achieve this. For Example: In Australia you will see a four, or five digit number preceded, or followed, by the name or code of the manufacturer. However in the USA the testing organization and number is shown.

VERY IMPORTANT!

Not all UN Specification packaging is equal!

Just because a package bears UN Specification Markings, it doesn't necessarily mean that it can be used for any DG. UN Specification packagings must be used in accordance with their Approval Certificate. The Approval Certificate will identify how to use the package and if there are any restrictions, e.g. if combination package is designed for liquids in metal tins, or lithium batteries, or if a steel drum has been manufactured with a corrosion resistant liner. etc

Before you purchase and/or use UN Specification packagings you must get the Approval Certificate for the package.

FAQ

Do packages expire with age?

You will have to check with your Competent Authority as some may put limits on package use, and package approvals. However, according to UN specifications, for other than plastics and Intermediate Bulk Containers (IBC), whilst a package is still good quality and condition it can be used and re-used. The only packages that will definitely expire are plastic packages and IBC which have a maximum life span of five years, though this may be shorter if designed for certain classes of DG e.g corrosives.

Plastics become brittle with age, and particularly when exposed to heat and strong sunlight, so will have a mark identifying the month and year of manufacture. This is often achieved by showing a date “clock” on the package. In the middle of the clock is the year of manufacture and an arrow points to the month of manufacture.

E.g.

