

> Quick Guide Packaging

Preventing or managing risk to people and the environment

The Hazardous Substances and New Organisms (HSNO) Act 1996 covers the safe management of all hazardous substances including those that are explosive, flammable, oxidising, toxic, corrosive and harmful to the environment (ecotoxic). The HSNO regime provides a set of lifecycle controls including regulations for packaging, identification, emergency management, disposal, tracking and handling.

This guide gives a general explanation of how to meet the requirements for packaging. It does not specify the exact packaging requirements that apply to any particular hazardous substance. For more detail, refer to the Hazardous Substances (Packaging) Regulations 2001 (and amendments).

What is covered by the packaging requirements?

The requirements of the Hazardous Substances (Packaging) Regulations, follow the packaging requirements of the UN system for transport of dangerous goods. Note that a 'package' is defined as the packaging plus its contents. 'Packaging' includes the container holding a substance and any other components necessary for the container to perform its containment function, for example combination packaging systems.

Exclusions from the packaging requirements

The following are not subject to the Packaging Regulations:

- containers permanently fixed in one place, including any container permanently fixed to a vehicle
- large transportable containers such as intermediate bulk containers (IBCs) and portable tanks (these are covered by the Hazardous Substances (Tank Wagons and Transportable Containers) Regulations 2004)
- containers for holding compressed gases or aerosols (these are covered by the Hazardous Substances and (Compressed Gasses) Regulations 2004)
- fuel systems, electrical systems or control systems of a vehicle, aircraft or ship
- fuel gas distribution systems, installations or appliances that are subject to controls specified in regulations made under the Gas Act 1992.

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Why is packaging important?

We need to ensure hazardous substances are packaged in containers of sufficient strength and resilience to prevent potentially hazardous incidents. There are three requirements that need to be considered in determining the appropriateness of packaging for any hazardous substance. These are:

1. The general requirements, relating to ‘fit for purpose’
2. The United Nation’s Packing Group requirements relating to hazardous properties, and
3. Additional packaging requirements.

1. The general requirements

Every package used to contain hazardous substances must:

- Be able to retain its contents in non-emergency situations
- Be compatible with its contents so that packaging performance is not degraded by the substance (eg corrosive substances will degrade inappropriate packaging)
- Be suitable for the properties and state of the substance
- Not be marked as belonging to a packing group if it does not meet the requirements of that packing group.

Packaging must not be re-used with other substances if they are incompatible with the previous substance, unless all traces of the previous substance have been removed.

2. UN Packing group requirements

HSNO packaging requirements are aligned with international standards, notably the United Nation’s Transport of Dangerous Goods Model Regulations where three ‘Packing Groups’: PG 1, PG 11 and PG 111 are identified. UN PG 1 is equivalent to Schedule 1 of Packaging Regulations. UN PG II is equivalent to Schedule 2 and UN PG 111 is equivalent to Schedule 3.

A fourth packaging standard (Schedule 4) may be used for less hazardous substances or when hazardous substances are packaged in smaller quantities. To use Schedule 4 packaging, certain qualifying criteria (contained in Schedule 5) relating to hazard classification, quantity and physical state must be met.

Each Packing Group has a specific minimum level of performance set out in standardised tests that involve a package’s resistance to dropping; stacking; pressurisation (internal); and leaking.

3. Additional hazardous property requirements

Some hazard classifications have additional packaging requirements. For example child resistant closures are required for packages holding less than 2.5kg of substances with certain toxic or corrosive hazard.

How to find out the packaging requirements for a substance?

First, find out the hazard classification of the substance. This is the key to determining which packing group is required. The hazard classification will determine both the packing group required and any additional packaging requirements relating to its hazardous properties.

Where a substance has two or more hazard classifications, as many will, the most stringent (lowest number) of the packing groups triggered is the one required to be met. Packaging must take into account all requirements imposed by each of the substances' hazard classifications.

You will need to look at the ERMA New Zealand Register on our website for the final controls applied for approved hazardous substances.

Who is responsible for packaging?

Any manufacturer or importer packing or repacking hazardous substances will need to ensure that the packaging is designed and constructed specifically for use with that particular hazardous substance.

For most businesses, the practical effect of packaging is limited to activities relating to re-packaging hazardous substances and re-using containers on site (as they will have been supplied hazardous substances in packages meeting the packaging requirements).

Further information

Obtain copies of other Quick Guides on Approved Handlers, Person in Charge, Labelling, Emergency Management, Tracking from ERMA New Zealand.

Also refer to the ERMA New Zealand *User Guide to HSNO Control Regulations and Hazardous Substances (Packaging) Regulations 2001 (and amendments)* for more information on packaging requirements.

Contact details

ENVIRONMENTAL RISK MANAGEMENT AUTHORITY



NGĀ KAIWHAKATŪPATO WHAKARARU TAIAO

PO BOX 131 Wellington

Phone: +64 4 916 2426 Fax: +64 4 914 0433

Email: info@ermanz.govt.nz

Website: www.ermanz.govt.nz