

Dangerous goods – Oxidising agents

Storage of minor quantities of class 5 oxidising agents >

This information bulletin has been developed to advise users of the correct storage of Class 5 oxidising agents.

What are class 5.1 dangerous goods

- Class 5.1 dangerous goods are those substances which, although not necessarily combustible themselves, may readily liberate oxygen, or be the cause of oxidation of other materials. As a result, they may start or contribute to the start of a fire and increase the violence of a fire.
- Examples of Class 5.1 substances include granular swimming pool 'chlorine' (calcium hypochlorite), some fertilisers (eg ammonium nitrate), hydrogen peroxide, and some bleaches.
- Oxidising agents may also react violently or even explosively with other substances, a well known example of this being calcium hypochlorite and brake fluid. Oxidising agents must be kept away from all flammable and combustible materials, and most other dangerous goods. Since oxidising agents supply oxygen to a fire, it is not usually possible to fight fires involving Class 5.1 substances by depriving the fire of air eg, the use of fire blankets, carbon dioxide and Halon fire extinguishers. Another hazard posed by oxidising agents is their ability to cause corrosion of many materials, and stores for Class 5.1 dangerous goods should be designed with this in mind.
- Many oxidising agents are also hazardous to people through inhalation of dusts and vapours, skin and eye contact and ingestion. Follow the recommendations in the Material Safety Data Sheet (MSDS) for the substance for personal protection and handling precautions.
- Oxidising agents are assigned to one of three categories, (known as packaging groups), according to the nature of the hazard:
 - > PGI, Packaging Group I – Great Danger;
 - > PGII, Packaging Group II – Medium Danger;
 - > PGIII, Packaging Group III – Minor Danger.

The label or material safety data sheet (MSDS) should be consulted if unsure about the packaging group number.

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What are minor quantities?

Storage of oxidising agents in packages, in quantities not exceeding those set out in Table 1 and separated from any other storage by at least 10m, may be regarded as minor storage.

The following precautions should be observed for any minor storage facility of Class 5.1 oxidising agents:

- A supply of water and an eyewash should be available at a nearby location.
- Adequate ventilation should be provided for package storage and handling areas.
- Packages should not be kept near incompatible substances eg, flammable and combustible material, most other dangerous goods.
- Packages should be kept away from source of heat.
- Packages should be kept securely closed when not in use.
- Packages should be kept in such a manner as to avoid spillage.

Table 1: Minor storage of class 5.1 oxidising agents

Type of Premises	PGI	PGII	PGIII
Farm If the farm is not less than 2ha and the store is at least 10m from a boundary	50kg or L	250Kg or L	25,000kg or L
Residential premises	5kg or L	25kg or L	100kg or L
All other premises	50kg or L	250kg or L	1,000kg or L

- Packages should be kept on non-combustible surfaces which, in the even of spillage, are resistant to damage by the contents of the packages.
- Appropriate spillage retention measures shall be provided at locations where packages are likely to be opened or their contents transferred eg, drip trays, bunds.
- The contents of a package shall not be transferred to any other container for storage unless it is suitable for the storage of the oxidising agent and is clearly and exclusively marked to indicate the identity and hazard potential of that substance.
- Appropriate personal protective equipment shall be worn by any person involved in product transfer operations, eg decanting or filling. This may include gloves, eye protection, aprons, breathing protection
- Any spills or leaks shall be cleaned up immediately, and disposed of in accordance with the local authorities and or the MSDS.
- Wastes should be kept and disposed of after seeking advice from local council, [Power and Water Corporation](#), [NT WorkSafe](#) or the [Department of Natural Resources, Environment, the Arts and Sport](#) (NRETAS).
- Storage areas shall be secure against unauthorised entry. At all times, the storage area shall either be attended by a responsible person or be securely locked.
- Requirements specifically for storage cabinets.

Where there is more than one cabinet in any building or area, the cabinets should be separated from each other by at least 3m.

- The aggregate quantity of corrosive substances kept in all such cabinets should not exceed 250kg or L, if kept indoors, or 850kg outdoors and consist of:
 - > Not more than 250kg or L of Packaging Group II;
 - > Not more than 50kg or L of Packaging Group I.

Further information

Australian Standard AS 4326-1995 provides more detailed information.

[Australian Standards](#) are available from the Territory Construction Association phone 8922 9666 or can be viewed online by visiting the Northern Territory Library, Parliament House, phone 8999 7177.

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