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Corrosive Substance Storage Cabinet (Metal Construction)

Installation and Maintenance Instructions.

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REQUIREMENTS

Standards: Our range of cabinets are designed and manufactured to conform to the Australian Standard AS3780-1994. Please refer to this Standard for further information on the Storage and Handling of Corrosive Substances Class 8.

Maximum quantities to be kept: The maximum quantity of corrosive substances kept in a single cabinet shall not exceed 1000 kg or L, of which not more than 250 kg or L shall be of Packaging Group II and not more than 50 kg or L shall be of Packaging Group I.

Where there is more than one cabinet in any building or area, either –

- a. the aggregate quantity of corrosive substances kept in all such cabinets shall not exceed the quantities as stated above, or
- b. The cabinets shall be separated from each other by at least 5 m.

Also the following requirements apply to storage in cabinets;

- a. A supply of water shall be available at a nearby location.
- b. Adequate ventilation shall be provided for package storage and handling areas.
- c. Packages shall not be kept near incompatible substances.
- d. Packages shall be kept away from sources of heat.
- e. Packages shall be kept securely closed when not in use.
- f. Packages shall be kept in such a manner as to avoid spillage.
- g. Packages shall be kept on surfaces which, in the event of spillage, are resistant to damage by the contents of the packages.
- h. Appropriate spill-retention measures shall be provided at locations where packages are likely to be opened or their contents transferred.
- i. The contents of a package shall not be transferred to any other container for the storage unless the latter is suitable for the storage of the corrosive substance and is clearly and exclusively marked to indicate the identity and hazard potential of that substance.
- j. Appropriate personal protective equipment shall be worn by any person involved in product transfer operations, e.g. decanting or filling.
- k. Any spills or leaks shall be cleaned up immediately, and disposed of in accordance with Section 9 of the Standard.
- l. Wastes shall be kept, and shall be disposed of in accordance with Section 9 of the Standard.
- m. Storage areas shall be secured against unauthorised entry, in accordance with Clause 1.7 of the Standard.



Cabinet Design: The following requirements apply to the design of cabinets:

- a. Cabinets shall be provided with a self-closing, close-fitting door, held shut by catches at not fewer than two points. The door shall not open inwards, and shall be capable of being opened from the inside the cabinet.
- b. The cabinet bottom shall form a liquid-tight compound at least 150mm deep and capable of containing at least 25% of the maximum storage capacity.
- c. Any shelves within cabinets shall be such as will permit free air movement.

Materials of Cabinet Construction: The walls, floor, doors and roof of a cabinet shall either be constructed of corrosion-resistant materials or be protected by a corrosion-resistant lining or coating.

Cabinet Location: The following requirements apply to the location of cabinets for corrosive substances:

- a. Where applicable, the above stated separation distances shall be observed;
- b. Cabinets shall be located in relation to exits and stairways that they do not impede escape of persons in an emergency or event of fire.
- c. Cabinets shall be located near to a provision for the washing of hands.

Storage in a cabinet: Cabinets designated for the storage of packages of corrosive substances shall not be used for the storage of incompatible goods.

Note: It is generally considered not to store Acids and Alkalis together in the one cabinet.

Ventilation provisions: All Our Safety Cabinets are fitted with two vent bungs, which incorporate a flash arrester and a bung cap for each vent. Ventilation of the cabinet is not mandatory for fire safety purposes. If venting is not required, the vent caps should be kept tightly sealed.

Where ventilation is installed, it shall be designed so that vapours are prevented from escaping into any room. Any ventilation exhaust shall be to the outside atmosphere and in a location, which allows the safe dispersal of vapours and is away from any ignition sources. In most instances vapours should be extracted from the lower opening, allowing fresh air to enter through the upper opening. It is recommended to use PVC or similar plastic piping for the vent ducting. This type of material is less likely to be affected by corrosive vapour.

Fire protection measures: Fire protection is an important consideration in storage and handling locations for dangerous goods. Fire protection requirements for the premises shall be obtained from, and be implemented in conjunction with, the relevant regulatory authorities, including the fire authority. (Refer to section 8.3 of the Standard).

Clean up materials and equipment: In order to deal with leaks and spills, (whether major or minor), clean-up equipment, chemicals for neutralizing or decontaminating spills, and absorbent materials shall be maintained at every premises on which corrosive substances are kept or handled. Sufficient neutralizer should be available to treat the contents of the largest container kept. (Refer to section 7.5 of the Standard)



Housekeeping within the cabinet: The cabinet has a two-pack epoxy baked enamel finish, which is acid-resistant. However, some corrosive materials do attack paint and metals, so all spills and leakages must be cleaned up immediately. All lids must be kept firmly on containers to minimise vapour emission and to ensure a long service life for your cabinet. Regular cleaning of the inside surfaces may be necessary to minimise build up of corrosive residue.

Packaging of the Cabinet: The cabinet is packaged on a disposable wooden skid for ease of handling and transporting by a forklift or similar equipment. The cabinet is encased with shrink-wrapping and protective packaging to further protect the cabinet from damage during transit. Remove all packaging and wooden skid before locating the cabinet to the desired location. Refer to location instructions as per above.

Shelving: Cabinets are supplied with heavy-duty baked enamel painted steel shelving together with polyethylene plastic spill trays. The number of shelves and trays supplied will depend on the model of the cabinet. Additional shelving and trays can be ordered if required. The cabinets are designed to enable the shelves to be located in a variety of positions. The bottom shelf must be fitted to the lowest position to cover the sump area. No storage is permitted in the floor area.

CABINET OPERATION

The cabinet should be positioned on an even level floor to ensure the cabinet doors operate freely. An uneven floor can cause a twisting of the cabinet and affect the closing of the doors.

Single Door Cabinets: These cabinets are fitted with a self-closing door, including an automatically activating latch and handle mechanism. This is a requirement of the Standards.

To open the door - Turn the handle 90 degrees anti clockwise upwards and pull the door open. The latch bar will recess into the door until the door is closed. Do not force the handle as this can damage the latching mechanism. Also do not attempt to open the door beyond designed limits.

Do not prop the door open whilst accessing the cabinet, as this will prevent the door from closing in an emergency.

To close the door - Simply release the door and allow it to close by itself. The door will gently close and the latch mechanism will automatically activate. There is no need to push or force the door closed. This can also cause damage to the closing mechanism.
The handle can be locked if required with the key supplied.



Double Door Cabinets: These cabinets are fitted with sequential self-closing doors, which include an automatically activating latch and handle mechanism. This is a requirement of the Standards.

To open the doors - Turn the handle 90 degrees anti clockwise upwards and pull the right door open. The latch will recess into the door until the door is closed. Do

not force the handle as this can damage the latching mechanism. Once the right hand door has been opened about half way the left hand door can then be opened. Do not force the left door open without opening the right door properly otherwise this can damage the sequential mechanism.

Do not prop the door open whilst accessing the cabinet, as this will prevent the door from closing in an emergency.

To close the doors - simply release both doors and allow them to close by themselves. The doors will gently close, with the left door closing first, then, followed by the right door. The right door will be held partially opened by the sequential mechanism, which is quite normal. Once both doors are closed, the latch mechanism will automatically activate. There is no need to push or force the doors closed. This can also cause damage to the closing mechanism.

Do not attempt to open the doors beyond designed limits as this can cause damage.

The handle can be locked if required with the key supplied.

Adjustment to doors: The door closing speed has been pre set during final assembly. From time to time the closing rate of the doors may change. This can be adjusted. Please refer to the decal located on the inside right door for instructions on adjusting closing speed.

Maintenance of Cabinets: The cabinet should be checked on a regular basis to ensure correct operation. Should the doors not operate correctly or damage to the cabinet be sustained, report this to an appropriate person for further attention. If this has occurred the cabinet may therefore not comply with Standards. Due to the nature of the types of chemicals stored in the cabinet it may require periodic cleaning of the internal surfaces to minimise build up of corrosive residue.

Also refer to **Housekeeping** within the cabinet as part of the maintenance procedure.

The cabinet performance may be adversely affected if it is not properly maintained or if any structural modifications are made.