

Good Practice Sheet for Uses of Chromates

D1 Storage and handling of closed containers¹

This sheet will help employers to comply with the requirements of EU Directive 2004/37 and the terms of the REACH authorizations for uses of chromates. Working with chromates may cause cancer. This sheet describes good practice to reduce exposure. It covers the points that should be followed to reduce exposure. It is important to follow all the points, or use equally effective measures. This document should be made available to all persons who may be exposed to chromates in the workplace so that they make the best use of the control measures available.

The Process

This GPS covers activities relating to handling during storage, delivery, dispatch and transportation of chromates during formulation, surface treatment or plating.

Chromates are used as such or in formulations. Solid chromates are supplied in drums or bags as crystals or flakes. In case the respective chromate is delivered in bags and not in drums, open bags need to be “overpacked” in a well labelled appropriately sized liter UN bucket before returning into storage to avoid loss or product degradation. Liquid chromate solution is delivered in appropriate packaging (e.g. tanks, IBC containers).

The chromate is delivered to the site. It is stored in a designated area. It may be removed from the store for dispatch to the downstream user or transferred to the production plant.



Photograph shows worker transferring a drum containing chromium trioxide.

Equipment Design and Access

Chromates are very hazardous to human health and the environment. Chromates are strong oxidizers and may cause fire or explosion depending on the concrete product characteristic. They should be handled and stored according to the relevant regulatory requirements and the information provided on the SDS. Adequate facilities and equipment should be provided to ensure the worker is not exposed to chromates and to avoid spillages or releases to the environment during transfer to and from storage and at the point of storage.

- ✓ A dedicated, dry, covered, cool and secure storage area must be provided. Access to the storage area should be restricted to suitably qualified personnel.
- ✓ Keep in the original container. In case of bags, open bags need to be “overpacked”. Containers should be clearly and adequately labelled according to CLP.
- ✓ Keep containers tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers.
- ✓ Empty containers retain product residue and can be hazardous.

¹ Chromates may include the following substances: Chromium Trioxide (S1), Dichromium tris(chromate) (S2), Potassium dichromate (S3), Sodium dichromate (S4), Strontium chromate (S6), Pentazinc chromate octahydroxide (S7), and Potassium hydroxyoctaoxidizedichromate (S8).

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Chromates Emissions

Chromates are completely contained when stored and transferred correctly. Chromate release may occur on damaged containers. Residue could occur on previously opened containers/bags.

Risk Management Measures - Workers

- In case of accidentally damaged drums, bags or containers, the spills or releases must be cleaned. See GPS D6 and SDS for details on accidental release measures
- Restrict access to the storage area to permitted workers only by appropriate measures.

Risk Management Measures - Environment

- Floors, drains and equipment in process areas and chemical and waste storage areas should be sealed and regularly maintained to ensure integrity.

Personal Protective Equipment (PPE)

PPE for normal storage operations, including safeguarding against accidental releases, should be available. This typically includes:

- protective eye goggles
- protective gloves
- safety shoes
- safety clothing.

GPS E1 and your supplier's extended Safety Data Sheet (SDS) provide relevant information on PPE.

Training and Supervision

All persons with access to the storage areas must be instructed about the safe way of handling chromate containers and use of PPE and other control equipment. Workers must be properly trained and equipped to carry out their duties, and to safely cease such duties as needed. Adequate supervision must be available at all times.

Monitoring

Not relevant as no exposure expected.

Other Relevant Good Practice Sheets

Other GPS are also likely to be applicable. A full list can be accessed [Link](#).

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