

Good Practice Sheet for Use of Chromium Trioxide

E7 Personal Protective Equipment (PPE)

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 chromium trioxide. Working with chromium trioxide 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 chromium trioxide in the workplace so that they make the best use of the control measures available.

Use of PPE to reduce workplace chemical exposure

The purpose of this GPS is to explain the purpose of, and set out the key requirements for the selection and use of PPE in case of potential eye, skin or inhalation exposure to chromium trioxide.

The human health hazards associated with chromium trioxide are described in GPS E6. Exposure to chromium trioxide in the form of liquid splashes, aerosols or mists, gases or dusts must be reduced as far as possible. PPE is an important measure for controlling / reducing workplace exposure to Chromium trioxide.

What is PPE?

PPE are devices worn by workers to protect them individually from exposure of hazardous substances, via inhalation or contact to skin and eye.

When is it necessary to wear PPE?

Adequate PPE must be worn at any time intentional or accidental exposure to chromium trioxide is possible and at a minimum when the use of PPE is recommended in SDS.

What PPE must I wear?

The requirements for PPE depends on the nature of activities or tasks. The specifications for PPE to be worn for each activity or task is set out in GPS series A-D which describe all the Risk Management Measures applicable for any activity.

What other requirements should I be aware of?

- All persons with potential contact to chromium trioxide must be instructed about the use of PPE.
- Good occupational hygiene is necessary to prevent cross contamination of PPE with chromium trioxide and to ensure Chromium trioxide is contained within the designated area.
- PPE must be regularly cleaned, maintained and replaced to ensure it is effective.
- Advice for selection and use of PPE in the SDS must always be followed.
- Workers must be properly trained and equipped to carry out their duties, and to safely cease such duties as needed. Adequate supervision must be provided at all times.

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Respiratory protection

Chromium trioxide can cause cancer when inhaled or ingested. A properly fitted, air-purifying or **air-fed respirator** complying with an approved standard must be used when a risk assessment indicates this is necessary, for example when dusts/powders are handled, or mists/aerosols can be generated.

Different masks/filters provide different levels of exposure protection. Respirator selection for each task must be based on known or anticipated exposure levels, taking into account other risk management measures in place. A P3 particle filter (sometimes also called "P3 filter mask"), removing at least 99.95% of airborne particles, is typically recommended when chromium trioxide dust or aerosol/mist formation is possible.

National authorities determine the protection level assigned to any particular mask or filter so this must be confirmed locally. A paper mask is not sufficient when a P3 particle filter is specified.

Protective eye goggles

Chromium trioxide is corrosive. Protective eye goggles are needed when contact with eyes is possible.

Tightly fitting safety goggles complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Face shields are required where facial skin protection is needed. They can only be used in conjunction with eye protection. The **face shield** is not a substitute for the safety glasses or goggles.

Protective gloves

Chromium trioxide is corrosive and sensitizing. Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times to prevent skin contact when a risk assessment indicates this is necessary. Glove manufacturers should confirm adequate breakthrough time (>1 hour) for Cr(VI). Suitable glove materials may include: butyl rubber (IIR); fluorinated rubber; polychloroprene; polyvinyl chloride.

Gloves must be changed immediately after contamination with chromium trioxide and disposed according to relevant regulations.

Acid-resistant clothing / footwear

Chromium trioxide is corrosive and sensitizing. PPE such as a chemical-resistant protective suit or shoes to prevent skin contact is specified based on the potential for exposure associated with the task being performed.

Applicable Guidance and Standards

Directive 89/656/EEC lays down minimum requirements for PPE used by workers at work.

Directive 89/686/EEC sets out requirements relating to the design, manufacture and supply of PPE.

EU Member States implement these directives into labour law. It is therefore necessary to check national requirements for PPE.

Most PPE is manufactured in accordance with the relevant standard. Consequently almost all PPE for use at work is marked according to the coding rules of the relevant EN Standards. A summary of available PPE standards and the marking requirements of those standards is provided at <http://www.hse.gov.uk/foi/internalops/oms/2009/03/>