

Good Practice Sheet for Uses of Chromates

D10 Infrequent maintenance and repair of filters from paint shops, paint cabins, or extracted benches, but also maintenance of tools contaminated with chrome dust¹

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 maintenance activities of equipment or tools which may be contaminated with dust containing hexavalent chromium over an extended duration. For example, this may include maintenance on equipment such as exhaust systems or the removal and replacement of filters.

It also covers unscheduled access to the equipment to perform maintenance and repair in case of a malfunction.

Equipment Design and Access

- ✓ The equipment design is described in GPS A and C series. Full access to all components of the plant is required for maintenance, repair and installation. A specific risk assessment and permit to work system must be in place for all unscheduled maintenance activities.
- ✓ The process should be in maintenance mode for the duration of these activities.

¹ Chromates may include the following substances: Strontium chromate (S6), Pentazinc chromate octahydroxide (S7), and Potassium hydroxyoctaoxidizincatedichromate (S8).

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Chromates Emissions

Chromate residues on equipment surfaces such as filters from paint shops, paint cabins, extracted benches, or portable vacuum cleaners might be possible. Exposure to chromate dust on equipment surfaces might also be possible.

Residual material in pumps or pipes could splash or be released under residual pressure. While the process is non-operational, low levels of airborne aerosols or dusts relating to disturbance of residual chromate cannot be discounted.

Risk Management Measures - Workers

- A permit-to-work system that takes into account specific chemical exposure must be in place for all maintenance, repair and installation works. Approval for such works must be gained according to the permit-to-work system.
- Prior to commencing maintenance work, surfaces should be thoroughly cleaned where possible, by means of wet cleaning and/or with a vacuum filter equipped with HEPA filters. Reducing agents may be used.
- Replaced parts and components must be cleaned and decontaminated prior to disposal in accordance with relevant legislation.
- Access control needs to be in place.

Risk Management Measures - Environment

- The air extraction system may not always be operational during maintenance. When operational, the air extraction system must discharge to atmosphere via a filtration or scrubber unit capable of removing chromates efficiently and consistent with best practice.
- Wastewater containing hexavalent chromium should not be discharged to surface or groundwater, but treated to effectively remove hexavalent chromium prior to release to the environment or disposed of as hazardous waste.
- Floors, drains and equipment in process areas and chemical and waste storage areas should be sealed and regularly maintained to ensure integrity.
- Dispose of waste (e.g. contaminated PPE, rags, masking) containing chromates via a licensed waste disposal contractor according to relevant regulatory requirements.

Personal Protective Equipment (PPE)

Appropriate PPE must be identified following a risk assessment. To minimize potential exposure to chromates, persons conducting maintenance work may need to wear:

- protective eye goggles
- protective vinyl work gloves
- safety clothing / anti-static protective boots
- disposable plastic (chemical-resistant) coverall to be worn over work clothes
- at least half-mask with P3 filter.

GPS E1 and your supplier's extended SDS provide relevant information on PPE.

Training and Supervision

All maintenance persons with access to the equipment must be instructed in the risks from working where chromates are in use, the safe way of managing chromate exposure 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

Adequate monitoring data for planned maintenance activities must be available to evidence that potential exposure of workers and potential environmental release are maintained to as low as reasonably practicable level. Expert input is advisable.

Monitoring should cover all relevant activities and be carried out at least annually. Downstream users may reduce the frequency of measurements once it is demonstrated that exposure of humans and releases to the environment has been reduced to as low a level as technically and practically possible and that the risk management measures and operational conditions correspond to the exposure scenarios and function appropriately.

GPS E2 provide further information on monitoring, including reference to relevant standards.

Other Relevant Good Practice Sheets

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

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