Good Practice Sheet for Uses of Chromates

D9 Cleaning of spray equipment after use[1]

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 the cleaning of equipment after spray activities in a closed system or in the spray cabin, paint shop or paint mixing room by the worker who conducted spraying.

During spray activities, chromates are used and handled in liquid form. Spray equipment used during handling of and processing with chromates needs to be cleaned or decontaminated following use. Cleaning activities are therefore normally carried out directly following spray activities.

Cleaning is normally carried out in the spray cabin, paint shop or paint mixing room or in a dedicated adjacent area.

Equipment Design and Access

Cleaning or decontamination of equipment must be carried out taking care to minimise worker exposure or release to the environment.

- ✓ Walls and the floor of the spray area should be covered with protective masking (paper/film/foil) before spraying. The masking material is periodically removed to hazardous waste and replaced.
- ✓ Tools (e.g. spray guns) shall be cleaned with solvent in a closed system.
- ✓ Tools (e.g. paint guns, brushes) may be cleaned with water or solvent in the spray cabin, paint shop or paint mixing room

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

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Chromates Emissions

Following spray activities, there is residual chromate on spray equipment and PPE. There may also be residual chromate in the spray zone.

Risk Management Measures - Workers

- Controls are in place to ensure access to the designated room is restricted to authorized personnel when the plant is operational, including adequate clearance time after completion of a production cycle. Clearance time should be determined via an appropriate test.
- The restricted zone should be managed through use of physical barriers and signs.
- Implement appropriate measures e.g. provision of local cleaning facilities and hazardous waste management bins to prevent cross-contamination from the spray area, spray equipment and PPE to adjacent areas.
- Provide worker decontamination area, including adequate hygiene facilities. Workers must wash hands and face before eating, drinking or smoking.

Risk Management Measures - Environment

- 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 managed as a 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)

Typically, the worker maintains the same PPE for cleaning spray equipment as for the spraying activity itself. To minimize potential exposure to chromates, all persons cleaning spray equipment must wear:

- protective eye goggles
- protective gloves
- safety clothing / footwear
- plastic (chemical resistant) coverall to be worn over work clothes prior to decontamination
- respiratory protective equipment.

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

Training and Supervision

All persons performing cleaning activities must be instructed about the risks of working with chromates, the safe way of handling chromates 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 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 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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