GOOD PRACTICES FOR SPRAY GLAZING IN CERAMICS

This activity relates to the automatic or manual spray glazing of ceramic products with glazes containing crystalline silica.

ACCESS

Restrict access to the work area to authorised personnel only.

DESIGN AND EQUIPMENT

- If possible, enclose the work area fully.
- Make the enclosure deep enough to contain equipment and materials.
- The airflow at the face of the enclosure should be at least 1 m/s. Refer to task guidance sheet **2.1.13**.
- Keep the open area as small as possible while allowing enough room for safe working.
- Provide a turntable to make it easier to cover all surfaces and the operator does not need to spray against the airflow.
- **DO NOT store items inside the ventilated area; they will obstruct the airflow. Ensure large items do not obstruct the work opening.**
- Use filters to avoid glaze deposits on electric motors, fan blades and ventilation ducts.
- If possible, provide a water spray system, to absorb overspray of gaze and put it to a reservoir.
- Where possible, locate the work area away from doors, windows and walkways to stop draughts interfering with the ventilation and spreading dust.
- Provide an air supply to the workroom to replace extracted air.
- Provide an easy way of checking the control is working, e.g. a manometer, pressure gauge or tell-tale (a small flag).
- Discharge extracted air to a safe place away from doors, windows and air inlets.
- **Air recirculation is not recommended.**

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MAINTENANCE

- Ensure equipment used in the task is maintained as advised by the supplier/installer in efficient working order and in good repair.
- Replace consumables (filters etc.) in accordance with the manufacturer's recommendations.

EXAMINATION AND TESTING

- Obtain information on the design performance of the ventilation equipment from the supplier. Keep this information to compare with future test results.
- Visually check all equipment at least once per week for signs of damage or, if it is in constant use, check it more frequently. If used infrequently, then check it before each use.
- Have the ventilation equipment examined and tested against its performance standard, at least once each year.
- Keep records of inspections for a suitable period of time which complies with national laws (minimum five years).
- Put in place measures to control the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated.

CLEANING AND HOUSEKEEPING

- Clean your workplace and equipment on a regular basis.
- Deal with spills immediately.
- Use vacuum or wet cleaning methods.
- **DO NOT clean up with a dry brush or using compressed air.**
- Store containers in a safe place and dispose of empty containers safely.

TRAINING

- Give your employees information on the health effects associated with respirable crystalline silica dust.
- Provide employees with training on: dust exposure prevention; checking controls are working and using them; when and how to use any respiratory protective equipment provided and what to do if something goes wrong. Refer to task guidance sheet **2.3.4** and part 1 of the Good Practice Guide.

SUPERVISION

- Have a system to check that control measures are in place and that they are being followed. Refer to task guidance sheet **2.3.3**.
- Employers should make sure that employees have all the means to perform the checklist given below.

PERSONAL PROTECTIVE EQUIPMENT

- Refer to task guidance sheet **2.1.15** dedicated to Personal Protective Equipment.
- Risk assessment must be carried out to determine whether existing controls are adequate. If necessary, respiratory protective equipment (with the appropriate protection factor) should be provided and worn.
- Provide storage facilities to keep personal protective equipment clean when not in use.
- Replace personal protective equipment at intervals recommended by the manufacturer/supplier.

EMPLOYEE CHECKLIST

- ☐ Make sure the ventilation system is switched on and is working.
- ☐ Make sure it is running properly; check the manometer, pressure gauge or tell-tale.
- ☐ Look for signs of damage, wear or poor operation of any equipment used. If you find any problems, tell your supervisor.
- ☐ If you think there is a problem with your dust control equipment, ensure additional control measures are taken to reduce exposure to respirable crystalline silica dust while the problem persists.
- ☐ Make sure that paper bags and other waste material aren't drawn into the ventilation duct.
- ☐ Make sure that large items do not obstruct the working opening.
- ☐ Remove broken products immediately from the work area.
- ☐ Put lids on containers immediately after use.
- ☐ Clear up spills immediately. Use vacuum cleaning or wet cleaning methods for solids. For liquids, contain or absorb with granules or mats or wash away with a lot of water. Dispose of spills safely.
- ☐ Do not clean up with a dry brush or using compressed air.
- ☐ Use, maintain and store any respiratory protective equipment provided in accordance with instructions.
- ☐ Check and implement the measures of controlling the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated.

This guidance sheet is aimed at employers to help them comply with the requirements of workplace health and safety legislation, by controlling exposure to respirable crystalline silica. Specifically, this sheet provides good practice advice on dust control during spray glazing of ceramic products with glazes containing crystalline silica.

Following the key points of this task guidance sheet will help reduce exposure.

Depending on the specific circumstances of each case, it may not be necessary to apply all of the control measures identified in this sheet in order to minimise exposure to respirable crystalline silica. i.e. to apply appropriate protection and prevention measures. This document should also be made available to persons who may be exposed to respirable crystalline silica in the workplace, in order that they may make the best use of the control measures which are implemented.

This sheet forms part of the Good Practices Document on silica dust prevention, which is aimed specifically at the control of personal exposure to respirable crystalline silica dust in the workplace.