

SM QUARTZ® GOOD PRACTICE GUIDELINES

Good practice guidelines to protect the health of SM QUARTZ® operators in charge of cutting, drilling, grinding, and polishing operations.

WHY YOU MUST PROTECT YOURSELF

Cutting, drilling, grinding, etc. products that contain quartz generates dust, which is mainly made of silica. The finest particles of dust, defined as "breathable", can penetrate the lungs and, in case of prolonged exposure to high volumes, the natural defence of the body is no longer able to eliminate it. Accumulation of crystalline silica in the lungs may damage your health irreversibly. One of the main diseases this may cause is silicosis.

During processing, operator are also exposed to other risks, such as cuts, crushing, perforations and noise.

SLABS FABRICATION

ACCESS TO THE WORK AREA

Access to the work area must be allowed to authorised personnel only.

PROTECTION AGAINST RISK OF DUST

MEASUREMENT OF DUSTS IN THE AIR

The protection systems must be selected after having evaluated the risks accurately. This evaluation must be made with static and personal samples to detect the quality of the air in the work environment.

Employers and worker's representatives must select the most suitable solutions in terms of protection.

The documentation relative to the checks made for the evaluation of risks must be stored.

PROCESSING EQUIPMENT

Make sure that the cutting, grinding, polishing, and drilling equipment are of humid type. Water prevents dust from forming and being diffused in the air.

Make sure that the equipment is always efficient and that the amount of water supplied is sufficient. Equipment maintenance must comply with the user manuals to guarantee constant and optimal work efficiency.

Make sure that the work area has an efficient processing water drain system.

GENERAL VENTILATION OF THE WORK AREAS

Guarantee suitable general ventilation exploiting the natural ventilation of doors and windows or forced ventilation.

Make sure that natural ventilation does not interfere with the local exhaust ventilation systems, as it may reduce its efficiency.

Emissions of air extracted from the work environments must comply with the local environmental standards in force.

Make sure that the fresh air provided in the work environments is uncontaminated or filtered, and sufficient to dissolve the airborne dust.

LOCAL EXHAUST VENTILATION SYSTEM (TAKEN FROM NEPSI 2.1.13)

The local exhaust ventilation system must be designed and installed by qualified personnel.

The exhaust ventilation system must consist of: a hood, a contaminant collection container; ducts to suction contaminants from the source; an air-cleaning filter or other suitable device, positioned between the hood and the fan; a fan or similar device to ensure airflow; duct to convey the filtered air out of the working area.

Install a local exhaust ventilation system in the areas where dust is generated.

Encase the source of dust production in the best possible way to prevent its diffusion.

The local exhaust ventilation system must be connected to a suitable dust extraction system (e.g. bag filter or cyclone filter).

Do not stand between the suction and the dust generation source to avoid being caught in the contaminated airflow.

The work area should be away from doors, windows, and passages to prevent drafts of air from interfering with the local exhaust ventilation systems and to prevent dust from being diffused in the environment.

Make sure that the exhaust air is replaced by fresh air by means of a suitable supply system.

The ducts must be short and simple. Avoid using long hoses.

Set-up a simple check method of the local exhaust ventilation system, e.g. an anemometer.

Drain the filtered air away from doors, windows or air inlets.

MAINTENANCE AND INSPECTION OF LOCAL EXHAUST VENTILATION SYSTEMS

The local exhaust ventilation system must be kept efficient by complying with the recommendations of the supplier/installer. Pay attention to vibrations or noise coming from the fans, as these can indicate the presence of malfunctions.

Replace the consumables (filters, etc.) complying with the manufacturer's indications.

Do not modify the components of the local exhaust ventilation system before having consulted the manufacturer/installer.

Contact the manufacturer/installer to request information on the project performance of the local exhaust ventilation system and store it for future verifications.

On a weekly basis (or more frequently, if used continuously), visually check the visible pipes to detect any damage. Inspect systems that are used rarely before using them.

Store the inspections records for a certain period, in compliance with the national standards and, in any case, for no less than 5 years.

CLEANING AND AUXILIARY OPERATIONS

On a daily basis, clean the work area and the equipment with humid or suction methods.

Avoid cleaning with methods that raise dust, e.g. dry brush or compressed air. In the event this is not possible, make sure that the operators wear suitable PPE (personal protective equipment).

PROTECTION AGAINST OTHER RISKS

When processing the sheets, the operator is exposed to risks, such as cuts, impacts, perforations, crushing, vibrations and loud noises.

Always wear PPE, such as gloves, goggles, earmuffs, or earplugs, and accident-prevention shoes.

Avoid lifting and transporting loads exceeding 20 Kg. If necessary, do it correctly, avoiding forced positions. Avoid repetitive movements for long periods.

Use mechanical means to handle and transport heavy loads.

Make sure that the equipment used is efficient and in good conditions.

HYGIENIC STANDARDS

The operators' clothing worn during the SM QUARTZ® processing phases must be stored separately from the other clothing and in specific spaces.

Before eating, the operators must wash their hands and face and take off their work clothes.

Do not use compressed air to clean overalls.

PERSONAL PROTECTIVE EQUIPMENT

Indicate the areas where the PPE must be used.

The PPE must comply with the European designing and manufacturing provisions and occupational standards and carry the CE marking.

Establish a program to assess the aspects relative to the choice, use and maintenance of the devices for those areas where PPE is used.

The devices must be chosen according to their performance, comfort, and durability.

Wear more than one PPE, if required, and make sure that the devices are compatible between them.

The type of dust protection devices must be FFP3 when in the presence of silica.

When not in use, the PPE must be suitably stored to maintain good operation conditions.

Replace the PPE according to the frequency indicated by the manufacturer.

TRAINING

Inform employees on the risks related to SM QUARTZ® processing.

Employees must be trained on all the aspects related to health and safety:

- health risks
- dust exposure prevention methods
- correct use of PPE
- safe work procedures
- equipment and possible danger
- safety sheets of the used products

For further information, refer to “Agreement on Workers' Health Protection Through the Good Handling and Use of Crystalline Silica and Products Containing it” published by NEPSI on their website <http://www.nepsi.eu>