

COMPAC  
THE SURFACES COMPANY

GOOD  
PRACTICE  
GUIDE  
OBSIDIANA  
COMPAC

# 1. SAFETY ABOVE ALL: GOOD PRACTICE GUIDE FOR MANUFACTURING COMPAC OBSIDIANA PRODUCTS.

This section provides health and safety information and recommendations to be considered for aspects such as cutting, manufacturing, polishing and installing COMPAC OBSIDIANA.

The manufacturer or installer must comply with applicable health and safety legal requirements in force in each country.

The manufacturer or installer accepts and understands that manufacturing materials, particularly using dry-cutting, involves particles which are suspended in the air, including respirable crystalline silica, which may cause lung cancer, silicosis and other respiratory diseases. COMPAC strongly recommends that manufacturers take all necessary precautions, including wet cutting, carving, milling and polishing, as this reduces the risk of inhaling particles suspended in the air.

## 1.1 HEALTH AND SAFETY INFORMATION ON RESPIRABLE CRYSTALLINE SILICA (SIO<sub>2</sub>)

COMPAC OBSIDIANA designs contain less than 7% crystalline silica. Even so, dry handling is not recommended.

Respirable crystalline silica is a basic component in soil, sand, granite, quartz and many other minerals. When workers break, cut, perforate or chip these objects, they can generate suspended respirable crystalline silica particles which may be a health hazard if the workers are not wearing proper protection and workplaces do not have the relevant controls to reduce silica dust.

### HAZARD STATEMENTS

**H372:** Causes lung damage after repeated prolonged exposure (inhalation)

**H350i:** Can cause cancer by installation

**H335:** Can irritate respiratory tracts

**STOT RE1 H372**  
**STOR SE3, H335**  
**Carc 1°, H350i**



## **PRECAUTIONARY TIPS:**

**P201:** Request special instructions before use

**P202:** Do not handle substance before having read and understood all safety instructions

**P260:** Do not breathe dust generated by cutting, polishing and/or drilling.

**P264:** Carefully wash hands and face after handling.

**P270:** Do not eat, drink or smoke while handling the material.

COMPAC OBSIDIANA manufacturers and installers must at least comply with all occupational health and safety laws and regulations. In addition to the information in this Guide, COMPAC OBSIDIANA manufacturers and installers should be familiar with the European Network for Silica (NEPSI) and with its Good Practice Guide for handling silica, and also with the Occupational Safety and Health Administration (OSHA) Emphasis Program for Crystalline Silica in the United States.

Go to <http://nepsi.eu> and [www.osha.org](http://www.osha.org) for more information.

The instructions offer information and guidance on:

- Access to the work area.
- Machinery and hand-held tools with water supply.
- Local extraction and filter systems.
- General workplace ventilation.
- Maintenance and periodic control.
- Cleaning methods.
- Dust monitoring.
- Other risks: cuts, projection, noise, loads.
- Hygiene rules.
- Personal protective equipment.
- Installing countertops.
- Employee training and information.
- Health monitoring.

## **1.2 PREVENTIVE MEASURES**

### **1.2.1. ACCESS TO THE WORK AREA.**

Restrict access to the work area to authorised personnel only. Mark out the risk area.

### **1.2.2. CUTTING MACHINERY AND HAND-HELD TOOLS WITH WATER SUPPLY**

There are two main methods for controlling silica dust: filter systems and local extraction, and machinery with water supply.

Tools with a water supply system must be used for all material cutting, manufacturing, polishing and finishing tasks. It is difficult for moistened dust to rise and remain suspended in the air. Water pumps, hoses and nozzles must be maintained in excellent operating conditions and be regularly cleaned. When working with water, avoiding electrical risks is essential by using ground fault circuit interrupters (GFCI) and sealed, waterproof electrical connectors for electric tools and equipment. Employees working in wet areas must also use rubber boots.

### **1.2.3. LOCAL EXTRACTION AND FILTER SYSTEMS**

A specialist engineering company must be used to design and install dust extraction systems.

The design must have the following elements: a hood, enclosure or other inlet to collect and contain the contaminant; ducts to remove the contaminant away from the source; a filter or other air cleaning device, normally placed between the hood and the fan; a fan or other air mover to provide the airflow; more ducting to discharge the cleaned air outside out or in the workplace.

The following must be considered when projecting the installation:

- Apply local exhaust ventilation at the source of generation to capture the dust. Enclose the dust source as much as possible to help prevent it spreading.
- Local exhaust ventilation should be connected to a suitable dust extraction unit (e.g., a bag filter/ cyclone).
- Do not allow workers to get between the source of exposure and the local exhaust ventilation, otherwise they will be directly in the path of the contaminated air flow. Worker location should be controlled regularly and they must be given instructions.
- Where possible, site the work area away from doors, windows and walkways to stop draughts interfering with the local exhaust ventilation and spreading the dust.
- Have a clean air supply coming into the work area to replace extracted air.
- Keep ducts short and simple and avoid long sections of flexible duct.
- Discharge extracted air to a safe place away from doors, windows and air inlets.

#### **1.2.4. GENERAL WORKPLACE VENTILATION.**

Provide a good general ventilation system as hazardous dust is very fine and can remain airborne for days.

Ensure the building is adequately ventilated, using forced ventilation is necessary. Ensure the ventilation system does not cause settled dust to be stirred up and that contaminated air does not spread to clean areas.

Dust suppression sprays (sprinklers or fine mist) may be used to prevent the generation of airborne dust from indoor and outdoor traffic routes and from conveyors.

Emissions from dust extraction systems in buildings must be in compliance with local environmental rules.

#### **1.2.5. MAINTENANCE AND PERIODIC CONTROL**

Ensure that the equipment is maintained, as advised by the supplier, in efficient working order and in good repair.

Clean equipment regularly, at least after each shift. Do not clean up with a dry brush or using compressed air. Do not allow dust deposits / waste to dry before cleaning.

Maintain the local exhaust ventilation as advised by the supplier/installer in efficient working order and in good repair. Noisy and vibrating fans can indicate a problem.

Replace consumables (filters, etc.) in accordance with the manufacturer's recommendations.

Never modify any part of the system. If you do so, check with the supplier and see that the system maintains the CE label or have an authorised professional conduct an inspection and a risk assessment. You must receive instructions for use and a diagram of the systems installed. You must receive a commissioning report that shows the airflows of all inlets, air speeds in the ducts and the pressure drop across the cleaner or filter. Contact the supplier for information on the expected performance for the local exhaust ventilation. Keep this information to compare with future test results.

Visually check the equipment at least once a week for signs of damage. If it is in constant use, check it more frequently.

### 1.2.6 CLEANING

Hazardous dust is formed by very fine particles that can easily remain airborne for days, so it is important to have a complete cleaning plan.

Clean equipment daily, at least once before leaving. Clean the work area daily. Use walls and flooring surfaces that are easy to keep clean and that do not absorb/accumulate dust. Clean floors and other surfaces regularly. Also clean all storage facilities and roof outlet. Use vacuum or wet cleaning methods. Do not clean up with a dry brush or using compressed air as this will greatly increase the level of exposure. Deal immediately with leaks. Do not allow dust deposits / waste to dry before cleaning. If vacuum cleaning systems will need to deal with large or bulk spillages of powdered material, they should be especially designed to avoid overloading or blocking. When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear the appropriate personal protective equipment and ensure the measures are taken to prevent crystalline silica dust from spreading outside the work area.

Where necessary to prevent dust from spreading between levels, use solid floors and cover them with a wear resistant material which is coloured to highlight dust contamination.

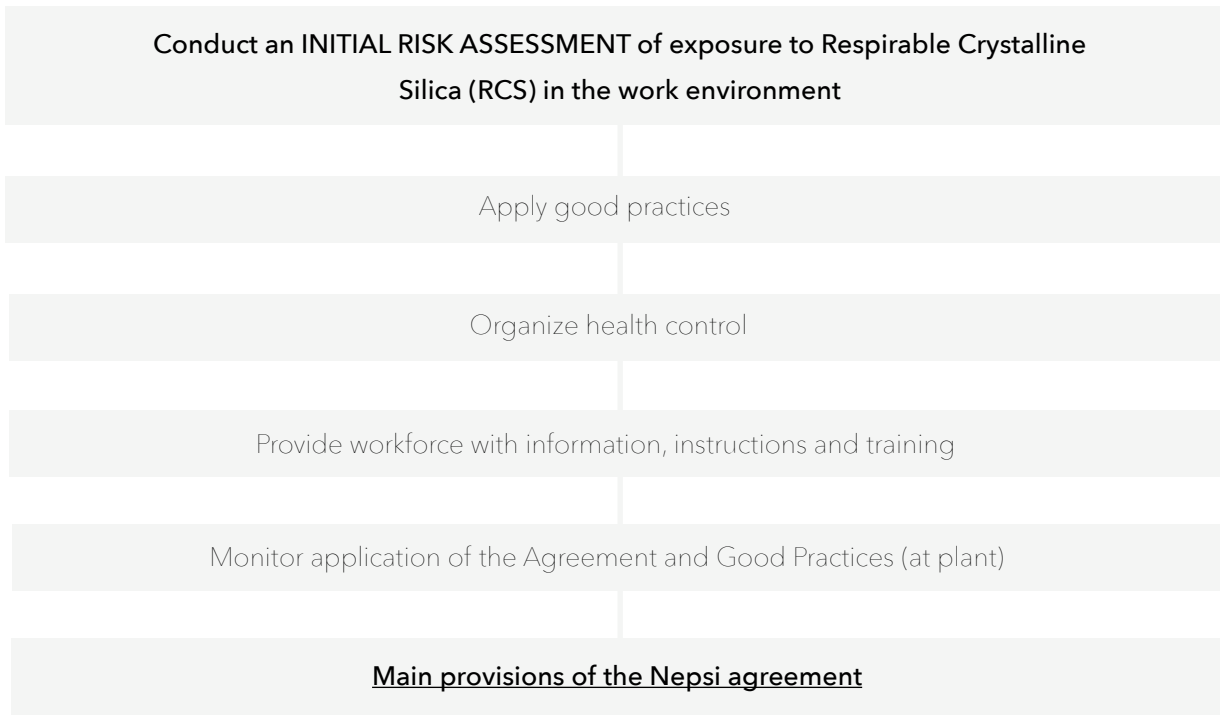
Control panels can be protected from dust using plastic protection or similar membrane. Provide an adequate number of correctly positioned water connection points when using wet cleaning methods.

Provide an adequate number of vacuum connection points when using a central vacuum cleaning system.

### 1.2.7. DUST MONITORING

Regular risk assessments must be carried out to determine whether existing controls are adequate. Both personal and static measurements can be used jointly as they are complementary. It is up to experts designated by the employers and the employees' representatives to opt for the more adequate solutions, while respecting applicable provisions. The sampling strategy, equipment to be used, analysis methods, etc., must be determined by specialist technicians in Industrial Hygiene. Keep all dust control campaign documents and adopt a quality system, as described above.

Personnel conducting sampling work should set a good example by wearing respiratory protective equipment in the required areas. Dust must be measured regularly. Consult the NEPSI agreement.



### 1.2.8 OTHER RISKS

When working with COMPAC OBSIDIANA there may be some risks such as: bumps and cuts with objects and tools, particle projection, exposure to noise, vibrations and handling loads.

- Pay attention to the results of risk assessments carried out by specialist technicians in Health and Safety.
- Use the right tools for each job and keep them in good working order.
- Use the protective equipment required at each time: dust mask, gloves, eye protection, ear protection and high-vis jacket in the loading area.
- Always use a helmet when handling slabs.

- Make sure trestles have safety bars to prevent slabs falling when lifted or lowered. Safety bars must fit into all trestles, the warehouse and also trucks.
- Workers manoeuvring cranes, mobile cranes or forklifts must receive proper training. Inspect cranes, mobile cranes and forklifts daily.
- A professional inspector should regularly inspect cranes, mobile cranes and forklifts according to the manufacturer's instructions and regulations.
- A professional inspector should regularly inspect electrical installations according to the manufacturer's instructions and regulations.
- Use mechanical means to transport heavy parts or materials. Avoid handling or moving weights over 20 kg or in forced postures as much as possible; also avoid repetitive movements.

### 1.2.9. PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment must be used in work areas or posts where risks could not be eliminated; they must be clearly marked with the appropriate signs.

Personal protective equipment must comply with the relevant EC regulations on design and manufacture with respect to health and safety. The company must provide all CE marked personal protective equipment.

Respiratory protection against silica must be type P3. Note that facial hair will reduce the effectiveness of a mask. Operators with facial hair should be provided with respirators or similar alternatives.

Where PPE is used, a programme should be established covering all aspects of equipment selection, use and maintenance.

When more than one PPE element must be worn, ensure that they are compatible.

Check effectiveness of respiratory protective equipment before use. Seek advice from the supplier on appropriate fit testing methods.

Keep personal protective equipment delivery records. Provide storage facilities to keep PPE clean when not in use.



### **1.2.10 HYGIENE RULES**

Provide a place for workers to store their clothes. Clean clothes must be separated from work clothing.

This area must have toilets, showers and wash basins, as well as personal lockers. Workers must not eat before washing their face and hands, and removing work clothing.

Mark a specific, clean area where workers can prepare their food, eat and drink away from their workstation.

Provide workers with an adequate supply of clean work clothes, including spare sets.

For those handling silica flour, overalls should be made of a fabric to prevent dust being absorbed.

Never use compressed air to clean work clothing. Workers should not smoke at their workplace.

### **1.2.11. EMPLOYEE TRAINING AND INFORMATION**

Ensure that employees receive training on risks associated with COMPAC OBSIDIANA manufacturing tasks.

New workers must take part in a training session on all aspects of health and safety, including the employer's safe work procedures for hazardous substances such as respirable crystalline silica.

Use various training methods and include visual aids, videos, group debates and documents.

Worker knowledge must be assessed at the end of each session to see if they have understood the training material.

Training sessions must be organised regularly to keep workers updated on health and safety.

Inform workers on the health and safety repercussions related to respirable crystalline silica dust, noise and any other risk associated with the activity.

Provide training on:

- Good practices to be used in the workplace and safe work procedures.
- When and how they must use respiratory protective equipment (RPE) or personal protective equipment (PPE).
- Dust control programmes and other planned corrective measures.
- Safety data sheets of the products used. Work equipment, machines and tools that may affect their work.
- Work equipment, machines and tools that may affect their work.

If a worker's personal exposure to silica dust measurement exceeds the relevant occupational exposure limit, inform the worker in detail of the results of their personal exposure monitoring.

Participation in training sessions must be mandatory. Participation must be documented and a record kept.

Workers should be asked their opinion on each training session in order to help organise future sessions.

### **1.2.12. HEALTH MONITORING**

Your health monitoring department must take into account certain jobs with exposure to silica.

Specific health monitoring protocols must be determined for exposed workers.

- Spirometry
- X-rays
- Frequency
- High resolution tomography

Health controls must be carried out in some countries before signing the contract. Seek information on the situation in your country.

As usual, companies must comply with all applicable laws and regulations.