Respirable Crystalline Silica

EU Social Dialogue Agreement
Implementing the Good Practices

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Structure of the Agreement

Agreement: 15 Articles

Annex 1: “Good Practice Guide”

Annex 2: Dust Monitoring Protocol

Annex 3: Reporting Format

Annex 4: List of Research Projects

Annex 5: Descriptions of Industries

Annex 6: The Council – Secretariat

Annex 7: Procedure for the Adaptation of the Good Practices

Annex 8: Health Surveillance Protocol for Silicosis
Part 1: RCS Essentials

- Preamble …. and Note to Users
- Introduction
- Silica and the silica industry
- RCS dust and its health effects
- Risk management – What do I need to do?

Risk Assessment process - aimed primarily at :-

employers

Part 2: Task Manual

- Introduction
- Task Guidance Sheets

Aimed at both :-

employers and the workforce
Covers entire production and use of crystalline silica and materials/products/raw materials containing crystalline silica

This means:

- not just what you quarry or process
- but what you ‘import’ and process, e.g.:
  - sand
  - hard stone (granite, gritstone, quartzite, dolerite, etc.)
  - cement

NB: LIMESTONES can contain chert with up to 12% crystalline silica
2 basic questions:

*What do you quarry?* What is its percentage of ‘free’ crystalline silica?


You need to take account of all materials produced or processed on your site.

You need to consider the whole workforce, not just those directly employed.
Question 1:
How do I determine whether people are exposed to respirable crystalline silica dust in my workplace?

1. Change in:
   - processes
   - legislation
   - materials used
2. New technology available
3. Results of
   - Personal exposure monitoring
   - Health Surveillance programme

Refer to Table in Chapter 2.1 (Part 1) for examples

Is crystalline silica routinely present either in the material used in your process or is it generated?
Yes/I don't know

Are fine particles present within any of the materials used in your process or may they be generated?
No

See Table: Processes generating fine particles annex 2.

Conduct an assessment of personal exposure to respirable crystalline silica and document your findings.

Continuous review

Go to question 2.

Apply general prevention principles including continuous review.
Question 2:
How do I conduct an assessment of personal exposure to respirable crystalline silica dust?

1. Change in:
   - processes
   - legislation
   - material used
2. New technology available
3. Results of:
   - personal exposure monitoring
   - Health Surveillance programme

Identify the substances and processes in your workplace which may give rise to the generation of airborne respirable crystalline silica dust

Identify which workers may be exposed, in which locations and under what circumstances this exposure may occur.

Identify the frequency and duration of exposure for each individual

Identify existing control measures

Carry out personal exposure monitoring

Compare the results to the relevant exposure limits

Method in accordance with EU standard: EN 689

Continuous review

Continuous review

Go to question 3
Question 3:
I have done my exposure assessment, but I'm not sure how to interpret the results. What do I need to do now?
<table>
<thead>
<tr>
<th>Substitution</th>
<th><em>If economically feasible:</em> Can a dry process be replaced by a wet process? Can a manual process be automated?</th>
</tr>
</thead>
</table>
| Engineering Controls        | *Dust suppression:* Water, steam, mist or fog sprays  
*Dust collection:* Cyclones, scrubbers, bag filters |
| Good Housekeeping           | *Vacuum* clearance of process spillage; keep cab/cabins clean                                      |
| Work Patterns               | Safe working procedures; job rotation                                                               |
| Personal Protective Equipment (PPE) | *Not a substitute for good design!* Clothing materials; Respiratory Protective Equipment. Check *actual levels* of protection afforded; Well-fitting? Comfortable? Hygienic? |
| Training & Education        | Provision of adequate training, information and instructions specific to workstation / job          |
Agreement is bi-partite

Employers
• consult
• inform
• instruct
• train
• involve

Employees
• co-operate
• participate
• communicate

Where respirable crystalline silica is airborne ........

‘Clear’ air ≠ ‘safe’ air

...... the particles are mostly too small to be seen by the human eye
**Composition:**

- Silica
- Social Dialogue Agreement
- Typical Task Sheet

### 2.2.28 Quarry mobile plant - excavation & haulage

**Large scale:**

- Silica dust is generated by the operation of mobile plant in quarries. Dust is generated during mining, excavation and loading operations and during movement of vehicles across the quarry floor and on haul roads.

#### Access

- **Access restrictions:**
  - Access is restricted to persons wearing personal protective equipment.

#### Design and equipment

- **Dust control measures:**
  - Dust control measures, such as wetting or enclosure, should be used to control dust generation.
  - Personal protective equipment should be used by operators.

**Employee checklist:**

- Wear personal protective equipment when working with dusty materials.
- Keep dust-free areas clean and tidy.
- Ensure that all safety measures are followed.

#### Maintenance

- **Air conditioning system:**
  - Ensure that the air conditioning system is checked regularly and maintained in good working order.

**Examination and testing:**

- **Air conditioning system:**
  - The air conditioning system should be monitored and maintained regularly.
  - Ensure that all safety measures are followed.

#### Cleaning and housekeeping

- **Dust control measures:**
  - Ensure that all safety measures are followed.
  - Keep all safety measures in good working order.

### Personal Protective Equipment

- **Personal protective equipment:**
  - Ensure that personal protective equipment is worn by all personnel.
  - Ensure that all safety measures are followed.

**Training**

- **Employee training:**
  - Ensure that all personnel are trained in the use of personal protective equipment.
  - Ensure that all safety measures are followed.

**Supervision**

- **Supervision:**
  - Ensure that all personnel are trained in the use of personal protective equipment.
  - Ensure that all safety measures are followed.

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**Employee Checklist:**

1. Wear personal protective equipment when working with dusty materials.
2. Keep dust-free areas clean and tidy.
3. Ensure that all safety measures are followed.
4. Use, maintain and dispose of personal protective equipment in accordance with all safety instructions.
Dust Monitoring Protocol

- **Well-defined Job Function** - ‘multi-skilled’ if <50% of time in 1 job
- **Sampling Duration** - full shift (7 or 8 hours)
- **Samples per Job Function** - minimum 6 (for statistical purposes)
  Lesser number for compliance with national legislation, or prevention
- **Quartz Analysis** - X-ray Diffraction or Infra-red Spectroscopy
- **Full Documentation** - equipment & procedures
- **Accredited Laboratories** - for quartz analysis (quality & validity)
  alternative is for labs to join inter-laboratory comparison exercise
Do you have these on your site?

‘Plumbed-in’ dust extraction must become the norm for all new plant designs.

“The work starts now!!”
The work starts now!!!
Will provide high level of worker protection whilst avoiding over-restrictive, unrealistic & unnecessary legislation

Improved public image of a responsible industry

Confidence of the Trades Unions that the Agreement is sound

Better relations with:

- national & local authorities
- investors
- insurance companies
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Thank you for your attention