



# pennine aggregates

Suppliers of Bulk & Bagged Aggregates

tel: 01298 78148

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email: [sales@pennineaggregates.co.uk](mailto:sales@pennineaggregates.co.uk)

Staden Lane Business Park  
(adjacent to Fire Station)  
Buxton, Derbyshire, SK17 9RZ  
[www.pennineaggregates.co.uk](http://www.pennineaggregates.co.uk)

Safety Data Sheet (in compliance with Reach Regulation EC 1907/2006)

Quartz Sand SDS Ref: MS01 0001

Revision date – June 2009

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1 Identification of the substance or preparation

Substance: Quartz

Synonyms: Quartz sand; silica sand; crystalline silica; silicon dioxide

Registration number: Exempted according to Article 2 § (7) of REACH

Trade/Brand names: As advised by our Customer Services Dept

### 1.2 Use of the substance or preparation

Main applications of quartz sand – non exhaustive list

Glass, Silicate chemistry, abrasives, foundry sand, filler for textured coatings, glues and mortars, filtration, sports and leisure, specialist construction etc.

### 1.3 Company undertaking identification

*[entity within EU]*

Company name: Pennine Aggregates Ltd  
Address: Staden Lane Business Park  
Buxton  
SK17 9RZ

Phone number: +44 (0)1298 78184

Fax number: +44 (0)1298 73119

Email of responsible person for SDS: [sales@mineralsmarketing.com](mailto:sales@mineralsmarketing.com)

### 1.4 Emergency telephone

Emergency telephone number: +44 (0)1298 78148

Available outside office hours: Yes

## 2. HAZARD IDENTIFICATION



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Quartz sand does not meet the criteria for classification as dangerous as defined in Directive 67/548/EEC.

## Precautionary Information:

The product does give potential for generation of respirable dust during handling and use. Dust may contain respirable crystalline silica. Prolonged and or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Name   | Chemical                      | EINECS    | CAS        | REACH    | Classification                |
|--------|-------------------------------|-----------|------------|----------|-------------------------------|
| Quartz | Silicon<br>Dioxide<br>ca.99 % | 238-878-4 | 14808-60-7 | Exempted | Reg No EU (67/548/EC)<br>None |

## 4. FIRST AID MEASURES

No actions are to be avoided, nor are there any special instructions for rescuers

**Eye Contact:** Rinse with copious quantities of water immediately.

**Ingestion:** Not hazardous. No special first aid measures necessary.

**Inhalation:** No special first aid measures. Remove to fresh air and consult a physician if necessary.

**Skin Contact:** Not hazardous. No special first aid measures necessary.

## 5. FIRE FIGHTING MEASURES

The product does not burn. No hazardous releases in case of fire.

**Suitable extinguishing media** Not applicable

**Extinguishing media which should not be used** Not applicable

**Special exposure hazards** Not applicable

**Special protective equipment for fire fighters** Not applicable

## 6. ACCIDENTAL RELEASE MEASURES



**Personal precautions:** Avoid airborne dust generation. In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment in compliance with national legislation.

**Environmental precautions:** No special requirements.

**Methods for cleaning up:** Use water spraying or vacuum cleaning systems to prevent airborne dust generation. Avoid dry sweeping.

## 7. HANDLING AND STORAGE

### 7.1 Handling

Avoid airborne dust generation. Handle bags carefully so as to prevent accidental bursting. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. If you require advice on safe handling techniques please contact your supplier, or check the Good Practice Guide referred to in Section 16.

### 7.2 Storage

Ensure abatement of airborne dust produced during the loading of silos. Keep containers closed and store bagged products so as to prevent accidental bursting.

### 7.3 Specific use(s)

For industry specific guidance, check the Good Practice Guide referred to in Section 16.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Exposure limit values

Respect workplace regulatory provisions for all types of airborne dust (total dust, respirable dust and respirable crystalline silica dust).

The UK Control of Substances Hazardous to Health Regulations 2002 (as amended) require adherence to good practice principles in the control of exposure to hazardous substances.

Additionally, a WEL (Workplace Exposure Limit) for respirable crystalline silica dust of  $0.1\text{mg}/\text{m}^3$  applies in the United Kingdom, measured as an 8 hour TWA (Time Weighted Average).

For the equivalent limits in other countries, please consult a competent occupational hygienist or the local regulatory authority.

### 8.2 Exposure controls



## 8.2.1 **Occupational exposure controls**

Control of occupational exposure may be achieved by enclosing plant and equipment and by ensuring good standards of ventilation in the workplace. Provide appropriate local exhaust ventilation in places where airborne dust is generated. Isolate personnel from dusty areas. In case of insufficient ventilation, wear suitable respiratory protective equipment. Maintain good hygiene standards and wash soiled clothing regularly.

**Respiratory protection:** In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment (eg dust mask or respirator with particulate filter) that complies with EN149:2001. It is good practice to conduct fit-testing when selecting respiratory protective equipment.

**Hand protection:** No specific hazard.

**Eye protection:** Wear safety goggles or safety glasses with side-shields in circumstances where there is a risk of penetrative eye injuries.

**Skin protection:** No specific hazard.

## 8.2.2 **Environmental exposure controls**

No specific requirements.

## 9. **PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 **General information**

Appearance: Solid, granular, in various colours (from white to brown)

Odour: Odourless

### 9.2 **Important health, safety and environmental information**

|                                  |                          |
|----------------------------------|--------------------------|
| Density:                         | 2.65g/cm <sup>3</sup>    |
| Grain Shape:                     | Sub-angular              |
| Particle size range:             | See technical data sheet |
| pH:                              | See technical data sheet |
| Water solubility:                | Negligible               |
| Solubility in hydrofluoric acid: | Yes                      |
| Boiling point/boiling range:     | Not applicable           |
| Flash point:                     | Not applicable           |
| Flammability (solid, gas):       | Not applicable           |
| Explosive properties:            | Not applicable           |
| Oxidising properties:            | Not applicable           |
| Vapour pressure:                 | Not applicable           |



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|                        |                                |
|------------------------|--------------------------------|
| Relative density:      | Not applicable                 |
| Partition coefficient: | n-octanol/water Not applicable |
| Viscosity:             | Not applicable                 |
| Vapour density:        | Not applicable                 |
| Evaporation rate:      | Not applicable                 |

## 9.3 Other information

Melting point: 1610°C

## 10. STABILITY AND REACTIVITY

### 10.1 Conditions to avoid

No particular incompatibility

### 10.2 Materials to avoid

No particular incompatibility

### 10.3 Hazardous decomposition products

Chemically stable

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Acute effects

Skin irritation: Data shows no skin irritation effects.

Eye irritation: Data shows no eye irritation effects.

### Chronic effects

Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (*IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.*)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits)



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concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003).

So there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see IMA-Europe table of OELs in the EU at <http://www.ima-eu.org/en/publication.htm>)

## 12. ECOLOGICAL INFORMATION

No specific adverse effects known. Not persistent, not bio accumulative.

## 13. DISPOSAL CONSIDERATIONS

### **Waste from residues/unused products:**

Can be landfilled in compliance with local regulations. The material should be buried to prevent dust being picked up by the wind. Where possible, recycling is preferable to disposal.

**Packaging:** No specific requirements. Recycling and disposal of packaging should be carried out by an authorised waste management company.

## 14. TRANSPORT INFORMATION

No special precautions are required under regulations relating to the transportation of dangerous goods.

## 15. REGULATORY INFORMATION

### **National Legislation**

Sand blasting According to the Control of Substances Hazardous to Health Regulations 2002, sand and other substances containing free crystalline silica cannot be used as an abrasive for blasting articles in any blasting apparatus.

### **European Legislation**

Directive 67/548/EEC Quartz sand does not meet the criteria for classification as dangerous as defined in Directive 67/548/EEC.



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Dry Blasting According to national regulations in EU member states, sand containing more than a certain amount of free crystalline silica cannot be used for dry blasting. This amount varies between 1% and 5%, according to country.

## 16. OTHER INFORMATION

### Third party materials

Insofar as materials not manufactured or supplied by Sibelco UK Ltd are used in conjunction with, or instead of Sibelco UK Ltd materials, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of Sibelco UK Ltd Quartz Sand in conjunction with materials from another supplier.

### Liability

Such information is to the best of Sibelco UK Ltd knowledge and belief accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

### Social Dialogue on Respirable Crystalline Silica

A multi-sectoral social dialogue agreement on *Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it* was signed on 25 April 2006. This autonomous agreement, which receives the European Commission's financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25 October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from <http://www.nepsi.eu> and provide useful information and guidance for the handling of products containing respirable crystalline silica.

### UK Health and Safety Executive - silica (quartz)

Extract taken from <http://www.hse.gov.uk/quarries/silica.htm>

Quartz is found in almost all kinds of rock, sands, clays, shale and gravel. Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis". It usually takes a number of years of regular daily exposure before there is a risk of developing silicosis. Silicosis is a disease that has only been seen in workers from industries where there is a significant exposure to silica dust, such as in quarries, foundries, the potteries etc. No cases of silicosis have





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been documented among members of the general public in Great Britain, indicating that environmental exposures to silica dust are not sufficiently high to cause this occupational disease.

In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis.

It should also be noted that excessive long term exposures to almost any dust, are likely to lead to respiratory (breathing) problems.

Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE in the following Hazard Assessment Documents EH75/4 and EH75/5.

These documents are available from HSE Books.

## References

Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers, Twin Gardens (6<sup>th</sup> floor), rue des Deux Eglises 26, B-1000 Brussels, Belgium. Tel: +32 2 210 44 10, Fax: + 32 2 210 44 29, e-mail: [secretariat@ima-europe.eu](mailto:secretariat@ima-europe.eu), [www.ima-europe.eu](http://www.ima-europe.eu)