pennine aggregates
Suppliers of Bulk & Bagged Aggregates

tel: 01298 78148
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Staden Lane Business Park
(adjacent to Fire Station)
Buxton, Derbyshire, SK17 9RZ
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Safety Data Sheet (in compliance with Reach Regulation EC 1907/2006, Regulation (EC) 1272/2008 and regulation (EC) 453/2010)
Quartz Sand SDS Ref: MS01 0001
Revision date – 2014

1. **I DENTIFICATION 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
Buxton
Derbyshire
SK17 9RZ

Phone number: 01298 78148
Fax number: 01298 78148

Email of responsible person for SDS: sales@pennineaggregates.co.uk

1.4 Emergency telephone

Emergency telephone number: 01298 78148

Available outside office hours: Yes

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2. HAZARD IDENTIFICATION

2.1 Classification of the substance: Quartz sand does not meet the criteria for classification as Hazardous as defined in the Regulation EC 1272/2008 and in Directive 67/548/EEC.

2.2 Label Elements: None

2.3 Other Hazards: This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH

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

3.1 Main constituent:

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

3.2 Impurities: This product contains less than 1% of quartz (respirable), which is classified as STOT RE1

4. FIRST AID MEASURES

4.1 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.

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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.

4.2 Most important symptoms and effects both acute and delayed – None observed

4.3 Indication of any immediate medical attention and special treatment needed – none required

5. **FIRE FIGHTING MEASURES**

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

5.1 Suitable extinguishing media Not applicable
Extinguishing media which should not be used - Not applicable
5.2 Special exposure hazards Not applicable
Special protective equipment for fire fighters - Not applicable
5.3 Advice to firefighters – no specific fire-fighting protection is required

6. **ACCIDENTAL RELEASE MEASURES**

6.1 Personal precautions: Avoid airborne dust generation. In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment in compliance with national legislation.
6.2 Environmental precautions: No special requirements.
6.3 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. Do not eat, drink or smoke in work areas: wash your hands after use; remove contaminated clothing and protective equipment before entering eating areas.

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.

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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 OEL (Occupational Exposure Limit) for respirable crystalline silica dust of 0.1mg/m³ 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 ***Appropriate Engineering Controls***

Minimise airborne dust. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specific exposure limits. If user operation generates dust, fumes or mist, use ventilation to keep exposure to airborne particles below exposure limits. Apply organisational measures e.g. by isolating personnel from dusty areas. Remove and wash soiled cloths.

8.2.2 ***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.

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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.

8.2.3 ***Environmental exposure controls***
Avoid wind dispersal.

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/cm³
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
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

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10.2 **Materials to avoid**
No particular incompatibility

10.3 **Hazardous decomposition products**
Chemically stable

11. TOXICOLOGICAL INFORMATION

a) Acute toxicity. Based on available data, classification criteria not met
b) Skin corrosion/irritation. Based on available data, classification criteria not met
c) Serious eye damage irritation: Based on available data, classification criteria not met
d) Respiratory or skin sensitisation: Based on available data, classification criteria not met
e) Germ Cell mutagenicity: Based on available data, classification criteria not met
f) Carcinogenicity: Based on available data, classification criteria not met
g) Reproductive toxicity: Based on available data, classification criteria not met
h) STOT-single exposure: Based on available data, classification criteria not met
i) STOT-repeated exposure: Based on available data, classification criteria not met
j) Aspiration hazard: Based on available data, classification criteria not met

12. ECOLOGICAL INFORMATION

12.1 Toxicity	Not relevant
12.2 Persistence and degradability	Not relevant
12.3 Bioaccumulation potential	Not relevant
12.4 Mobility in soil	Negligible
12.5 Results of PBT and vPvB assess	Not relevant
12.6 Other adverse effects	No specific adverse effects known

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. Re-use of packaging is not recommended.

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14. TRANSPORT INFORMATION

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

14.1 UN Number	Not relevant
14.2 UN Shipping name	Not relevant
14.3 Transport Hazard class	ADR: Not classified IMDG: Not classified ICAO/IATA: Not Classified RID: Not classified
14.4 Packing Group	Not relevant
14.5 Environmental Hazards	Not relevant
14.6 Special precautions for user	No special precautions
14.7Transport in bulk according to Annex II of MARPOL 73/78 And the IBC code	Not relevant

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.

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 Pennine Aggregates Ltd are used in conjunction with, or instead of Pennine Aggregates 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

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information relating to them. No liability can be accepted in respect of the use of Pennine Aggregates Ltd Quartz Sand in conjunction with materials from another supplier.

Liability
Such information is to the best of Pennine Aggregates 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.

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) 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)

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

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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 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 (6th 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@imaeurope.eu, www.ima-europe.eu