



Compounding Solutions

2B Minerals S.r.l.

Legal and administrative seat: Viale Europa, 81 – 41011, Campogalliano (MO), ITALY
Phone +39 059 527059 Fax +39 059 527633 E-mail: lionexp@yahoo.it
Initial capital € 10.000 paid in full - Tax Identification Number, VAT Payer Number and Number in the Register of Enterprises 02364590352

SAFETY DATA SHEET (IN COMPLIANCE WITH REGULATION 1907/2006/EC – REACH – Article 31)

NAME OF SUBSTANCE: **Micronized quartz**
Version 006, Revision date: 11th of November 2019

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

1.1 Product identifier

Trade name:	2B-SIL2, 2B-SIL2.5, 2B-SIL3, 2B-SIL4, 2B-SIL10
Chemical name:	quartz
CAS number	14808-60-7
EINECS number	238-878-4
REACH registration number	exempted from registration in accordance with the standard, referred to in Article 2, Paragraph 7 Letter b) - Annex V

1.2 Relevant identified uses of the substance or mixture and uses advised against.

Intended permitted uses:	As mineral charge in protective coatings, ceramic varnishes, resin components, rubber mixes.
Uses advised against:	Dry sanding (according to the numerous national laws, sand containing over 5 % of crystalline silica should not be used for dry sanding. European manufacturers apply this principle as a general recommendation).

1.3 Details of the supplier of the safety data sheet

Name of the company:	Zabo S.r.l.
Address:	Viale Europa, 81, 41011 - Campogalliano (MO)
Phone:	+39 (0)59 527915
Fax:	+39 (0)59 527633
E-mail:	zabo@interfree.it

Distributor:

Name of the company:	2B Minerals S.r.l.
Address:	Viale Europa, 81 – 41011, Campogalliano (MO)
Phone:	+39 (0)59 527059
Fax:	+39 (0)59 527633
E-mail:	quality@2bminerals.it

1.4 Number in case of emergency

Toxicology centres

The Bambino Gesù Children's Hospital – Rome – Phone 06 68593726
The University Hospital of Foggia – Foggia – Phone 800183459
The Antonio Cardarelli Hospital – Naples – Phone 081 7472870
The Umberto I Policlinic – Rome – Phone 06 49978000
The Agostino Gemelli University Policlinic – Rome – Phone 06 3054343
The Careggi Hospital - Medical Toxicology Department – Florence – Phone 055 7947819
The National Toxicology Information Centre – Pavia – Phone 0382 24444
The Ca' Granda Hospital – Milan – Phone 02 66101029
The Hospital Pope John XXIII – Bergamo – Phone 800883300

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

The product classified as dangerous in accordance with the requirements of Directive 1272/2008/EC (CLP) (as amended and completed). The product requires preparation of safety data sheet, in accordance with the provisions of the Regulation (EC) No. 1907/2006 (as amended).

Classification in accordance with the provisions of the Regulation (EC) No. 1272/2008

Target organ toxicity, repeated exposure (category 1)



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2.2 Label elements

Hazard pictograms
Warning
Hazard statements
Precautionary statements



Attention

H372: Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation)

P260: Do not breathe dust

P314: Get medical advice/attention if you feel unwell

2.3 Other hazards

Can cause damages to cornea by abrasion.
PBT and vPvB assessment: no data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical identity

Chemical name:	Alpha-quartz > 90%
Synonyms:	Crystalline silica, Tripolite, Rock crystal, Chalcedony.
Chemical formula:	SiO ₂
CAS number	14808-60-7
EC number	238-878-4

The product contains crystalline silica (respirable fraction, CAS 14808-60-7, CE 238-878-4) classified as STOT RE 1 (H372i) in concentrations higher than 10%.

The percentage of free crystalline silica (respirable fraction) - indicated above - was conservatively calculated considering the entire granulometric fraction with the average diameter of below 10 µm as respirable. This is in accordance with what is claimed by ACGIH (*American Conference of Governmental Industrial Hygienists*), whose opinion is that 100% of the inhaled dust with the granulometry larger than 10 µm does not reach the lungs. For detail information on the real granulometric composition of the product please contact the supplier.

The complete classification and hazard statements are included in section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Skin contact:	Wash with water and soap. If skin irritation occurs: seek medical attention.
Eye contact:	Rinse with plenty of water for at least 15 minutes, lifting the upper and lower eyelids. Seek medical attention if irritation persists.
Ingestion:	If the person did not lose consciousness, rinse mouth with water. When symptoms occur: seek medical attention.
Inhalation:	Move the victim away from the hazard zone to fresh air. In case of respiration problems, seek medical attention.

4.2 Most important symptoms and effects both acute and delayed

A prolonged exposition and/or a massive inhalation of respirable free crystalline silica may cause pulmonary fibrosis, usually known as silicosis. The principle symptoms of silicosis are cough and shortness of breath. An increase of the risk of pulmonary cancer was noticed in people affected by silicosis.

4.3 Indication of any immediate medical attention and special treatment needed

Where necessary, seek medical attention and hand over this safety data sheet to a doctor. Treatment depending on symptoms. No special recommendations.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

The product is refractory.

Proper extinguishing media:

Use an extinguishing medium adapted to the nature of fire.

Improper extinguishing media:



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No information available.

5.2 Special hazards arising from the substance or mixture

The nature of degradation products is unknown.

5.3 Advice for fire-fighters

Use complete fire protection. Extinguishing water should not be drained to the sewerage system. Contaminated extinguishing water and fire residues should be disposed in accordance with the laws in force.

Equipment

Working clothes fit for fire fighting, open circuit compressed air breathing apparatus (EN 137) equipped with fire protection (EN 469), protective gloves for fire-fighters (EN 659) and fire-fighter's footwear (HO A29 or A30).

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Evacuate the persons to a safe place. Avoid dust formation. Provide appropriate ventilation.

6.2 Environmental precautions

Avoid release of material and its contact with soil, watercourses, sewerage systems. In case of release of materials into watercourses, soil or sewerage system, inform competent authorities.

6.3 Methods and materials for containment and cleaning up

Recycle, where possible. Waste should be disposed of according to the laws in force. In order to prevent dust formation, avoid dry cleaning and use wet cleaning systems or vacuum cleaners.

6.4 Reference to other sections

Information concerning personal protective equipment, see: section 8.

Disposal, see: section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid dust formation. Avoid contact with eyes and skin. Provide proper ventilation in areas where dust formation is likely. In case of insufficient ventilation, use suitable respiratory protective equipment (see: section 8). Empty containers with product residues may be dangerous.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions: provide removal of dust formed during loading to silos. Keep the product in closed containers or bags, preventing their accidental release. Store in a cool and dry place with good ventilation. Protect against moisture. Store in the original unopened container.

7.3 Specific end use(s)

No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

At workplaces where dust is dispersed, observe the exposure limits determined in the laws in force (for example: total dust, respirable dust, crystalline silica respirable dust).

Crystalline silica respirable dust: OEL (EU) = 0.1 mg/m³ (inhalable fraction, 8h)

8.2 Exposure controls

Recommended technical controls:

Provide proper ventilation and filtration in areas where dust formation is likely. Respect the limits for the emissions in the atmosphere.

Wash hands carefully before breaks and after work. Take off and wash the dusted clothing.



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See also section 7.

Respiratory protection:	In case of exposure to dust concentrations higher than limits, use appropriate respiratory protective equipment with protection level or meeting the requirements of the relevant EC standards (facial, filtering, certified according to EN 149 or dust mask, certified according to EN 140). In case of insufficient ventilation the use of appropriate breathing apparatus is recommended. We recommend to use a facial mask covering the mouth and the nose, equipped with the P3 filter (UNI EN 143).
Eye protection:	During work with the product, wear protective glasses with lateral protection wings, meeting the requirements of UNI EN 166.
Hand protection:	Normally not required.
Skin protection:	Normally not required.
Environmental exposure controls:	Avoid dust formation, prevent wind dispersal.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance and colour:	Solid, dust, white
Odour:	Odourless
Odour threshold:	Not applicable
pH:	7 (water suspension)
Melting point:	1500°C-1700°C
Boiling point/range:	2230°C
Flash point:	Not applicable
Evaporation rate:	Not applicable, solid
(Solid/gas) flammability:	Not applicable to inorganic substances
Flammability/explosive limits:	Not applicable
Vapour pressure:	Not applicable to substances with a melting point >300° C
Vapour density:	Not applicable
Relative density:	2,635 – 2,660 g/cm3
Solubility:	0,45% in water Soluble in hydrofluoric acid
Partition coefficient n-octanol/water:	Not applicable, inorganic substance
Auto-ignition temperature:	Not applicable, substance is not auto-igniting
Decomposition temperature:	Not applicable to substances with a melting point >300° C
Viscosity:	Not applicable
Explosive properties:	Non-explosive
Oxidising properties:	Non-oxidizing

9.2. Other information

Content of SiO ₂ %:	> 99 %
Shape:	Angular
Granulometry:	97% between 0 and 30 microns
Total dust (average diameter < 10 µm):	> 75 %
Total dust (average diameter < 5 µm):	> 50 %
Molecular mass:	60,1

10. STABILITY AND REACTIVITY

10.1 Reactivity

No special reaction with other substances under normal use and storage conditions.

10.2 Chemical stability

Product stable under normal use and storage conditions.

10.3 Possibility of hazardous reactions



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No hazardous reactions under normal use and storage conditions.

10.4 Conditions to avoid

Avoid dust formation.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

Under normal use and storage conditions, there are no hazardous decomposition products. Under specific conditions, in particular, at high temperatures, alpha-quartz may be converted into cristobalite or tridymite.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

No detailed data on the product available.

Acute toxicity

LC50 Mixture (vapour inhalation): Not classified (no significant components).

LC50 Mixture (vapour/dust inhalation): Not classified (no significant components).

LD50 Mixture (oral contact): Not classified (no significant components).

LD50 Mixture (skin contact): Not classified (no significant components).

Skin corrosion/irritation

Classification criteria for this hazard class are not met.

Serious eye damage/irritation

Classification criteria for this hazard class are not met.

Respiratory or skin sensitisation

Classification criteria for this hazard class are not met.

Germ cell mutagenicity

Classification criteria for this hazard class are not met.

Carcinogenicity

Classification criteria for this hazard class are not met.

Reproductive toxicity

Classification criteria for this hazard class are not met.

Specific target organ toxicity (STOT) — single exposure

Classification criteria for this hazard class are not met.

Specific target organ toxicity (STOT) — repeated exposure

In case of prolonged or repeated exposure, the product causes lung damage.

Due to prolonged exposure, crystalline silica causes silicosis or other lung diseases.

Aspiration hazard

Classification criteria for this hazard class are not met.

Impact on health

Prolonged and/or massive inhalation of dust containing free respirable crystalline silica may cause silicosis, nodular pulmonary fibrosis due to the deposition of respirable crystalline silica particles in the lung alveoli.

In 1997 IARC (International Agency for Research on Cancer) put crystalline silica on list of substances having carcinogenic effect on humans, but indicated that "carcinogenicity in humans has not been found in all analysed industrial conditions. Carcinogenic effect depends on characteristics of crystalline silica or external factors referring to the biological and physical condition of both the environment and humans".

IOM (Occupational Medicine Institute) declared that "the data following the epidemiological studies is inadequate to determine whether crystalline silica should be considered carcinogenic in humans, and it is possible to observe sensitivity to risk of lung cancer in persons suffering from silicosis, even if it is impossible to determine its direct impact".

SCOEL (European Commission's Scientific Committee for Occupational Exposure Limits) in 2002 affirmed that "the main effect in humans of the inhalation of respirable crystalline silica is silicosis. There is sufficient information to conclude that the relative lung cancer risk is increased in persons with silicosis (and apparently, not in employees without silicosis who are exposed to silica dust in quarries and ceramic industry). Therefore, preventing the onset of silicosis will also reduce cancer risk (...)".

12. ECOTOXICOLOGICAL INFORMATION

There are no data on ecotoxicity of quartz, a substance often present in the environment. It is not possible to predict the detailed and negative environmental effects.

12.1 Toxicity



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No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment: not applicable.

12.6 Other adverse effects

No important effects or known critical hazards.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal of residues/ unused product: can be disposed of in dumps in compliance with the laws in force. The material must be covered to prevent emission of dust. Recycling is preferable to elimination, where possible. Observe the laws currently in force.

Packaging: comply with the regulations concerning recyclable materials. In any event, it is necessary to prevent dust formation due to residues present in the packing, and to provide the worker with adequate protection. Observe the laws currently in force.

14. TRANSPORT INFORMATION

14.1 UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Information regarding the laws may not be comprehensive. This product may be subject to other regulations.



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Regulation (EC) No. 1907/2006 (REACH) as amended.
Annex XIV – List of substances subject to authorisation: none
Annex XVII – Restrictions related to the product or the substances contained:
Restrictions related to the product: point 3
Restrictions related to the substances contained: none
Substances included in a candidate list (Article 59 of the Regulation (EC) No. 1907/2006 (REACH): none

15.2 Chemical safety assessment

The substance exempt from the obligation of registration pursuant Article 2, Paragraph 7 of the Regulation (EC) No. 1907/2006. The substance exempt from the obligation of chemical safety assessment.

16. OTHER INFORMATION

This Safety Data Sheet has been drawn up according to the requirements of the Regulations 1907/2006/EC, 830/2015/EC, 1272/2008/EC. Update of the entire document.

Full text of recommendations on hazards and classifications:

H372 - Causes damage to organs (lungs) through prolonged or repeated exposure through respiratory tracts (inhalation).
STOT RE 1 – Specific target organ toxicity in case of repeated exposure, category 1

Bibliographic references and data sources:

Regulation (EC) No. 1907/2006 of the European Parliament (REACH)
Regulation (EC) No. 1272/2008 of the European Parliament (TO THE CLP REGULATION)
Regulation (EC) No. 790/2009 of the European Parliament (I ATP TO THE CLP REGULATION)
Regulation (EU) No. 830/2015 of the European Parliament
Regulation (EU) No. 286/2011 of the European Parliament (II ATP TO THE CLP REGULATION)
Regulation (EU) No. 618/2012 of the European Parliament (III ATP TO THE CLP REGULATION)
Regulation (EU) No. 487/2013 of the European Parliament (IV ATP TO THE CLP REGULATION)
Regulation (EU) No. 944/2013 of the European Parliament (V ATP TO THE CLP REGULATION)
Regulation (EU) No. 605/2014 of the European Parliament (VI ATP TO THE CLP REGULATION)
Regulation (EU) No. 2015/1221 of the European Parliament (VII ATP TO THE CLP REGULATION)
Regulation (EU) No. 2016/918 of the European Parliament (VIII ATP TO THE CLP REGULATION)
Regulation (EU) No. 2016/1179 of the European Parliament (IX ATP TO THE CLP REGULATION)
Regulation (EU) No. 2017/776 of the European Parliament (X ATP TO THE CLP REGULATION)

Exposure limit values of the chemical substances at a workplace:

- Italy decree-law No. 81 of 9 April 2008.
- EU OEL Directives 2019/130/EU; 2017/2398/EU; 2017/164/EU; 2009/161/EU; 2006/15/EC; 2004/37/EC; 2000/39/EC.

I.A.R.C. Monographs on the valuation of Carcinogenic Risk to Humans, volume 68 Silica, Silicates, Dust and Organic Fibres – Lyon, 15-22 Oct. 96

Scientific Opinion on the Health Effects of Airborne Crystalline Silica, A. Pilkington et al., Report TM/96/08, Institute of Occupational Medicine, Edinburgh Jan, 99

Materials from third parties:

No liability shall be accepted for use of materials manufactured by third parties together with the product described in this safety data sheet. In such cases, it shall be the user's responsibility to obtain from every manufacturer or supplier all the information and details concerning the materials supplied.

Responsibility:

The details provided correspond to the current condition to the best of our knowledge and experience as for the date indicated. However, we cannot guarantee complete accuracy, reliability and completeness. It is the user's responsibility to obtain adequate and complete information regarding the specific use of the product.