# SAFETY DATA SHEET

In compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008
and Regulation (EC) 453/2010

## MINIGRAIN ARTIC

*Cristobalite sand*

*Without classification (respirable cristobalite < 1 %)*
*Version : 1* *Revision date : January 2015*

## 1- IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

| | |
|---|---|
| Product Identifier : | Cristobalite sand |
| REACH Registration No. : | Exempted in accordance with annex V.7 |
| Trade name : | MINIGRAIN ARTIC |

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

Main applications of the cristobalite flour - non-exhaustive list : paints, ceramics, glass fibres, adhesives, plastics, rubber seals, special concretes, silicone, etc.

### 1.3. Details of the supplier of the safety data sheet

**SILMER**
**Rue Ancel de Caïeu**
**F - 80410 CAYEUX SUR MER**
☏**03 22 26 61 00**
🖷 **03 22 26 59 24**
**www.silmer.fr**
silmer@gagneraud.fr

### 1.4. Emergency telephone number

(33) 3 22 26 61 00

Unavailabe outside office hours

## 2- HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

This product does not meet the classification criteria as a hazardous substance or mixture defined in the Regulation EC 1272/2008 and the Directive 67/548/EEC.

Depending on the type of handling and use (e.g. grinding, drying), airborne respirable crystalline silica particles may be generated. Prolonged and/ or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are coughing and breathlessness. Occupational exposure to respirable crystalline silica dust should be monitored and controlled.

This product should be handled with care to avoid dust generation.

Regulation EC 1272/2008 : No classification
Classification EU (67/548/EEC) : No classification

This product contains less than 1% respirable cristobalite.

### 2.2 Label elements

None

### 2.3 Other hazards

This product is an inorganic susbstance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.

## 3- COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Main constituent

| | |
|---|---|
| Substance : | Cristobalite sand |
| Amount : | approx. 99% |
| Synonym : | Calcinated silica |
| EINECS: | 238-455-4 |
| CAS: | 14464-46-1 |

### 3.2 Impurities

This product contains less than 1 % respirable cristobalite and is classified as STOT RE1.

## 4- FIRST AID MEASURES

### 4.1 Description of first aid measures

| | |
|---|---|
| Eye contact : | Rinse with copious quantities of water and seek medical attention if irritation persists. |
| Inhalation : | Movement of the exposed individual from the area to fresh air is recommended. |
| Ingestion : | No first aid measures required. |
| Skin contact : | No first aid measures required. |

### 4.2 Most important symptoms and effects both acute and delayed

No acute and delayed symptoms and effects are observed.

### 4.3 Indication of any immediate medical attention and special treatment needed

No specific actions are required.

## 5- FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

No specific extinguishing media is needed.

### 5.2 Special hazards arising from the substance or mixture

Non combustible. No hazardous thermal decomposition.

### 5.3 Advice for fire-fighters

No specific fire-fighting protection is required.

## 6- ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid airborne dust generation, wear personal protective equipment in compliance with national legislation.

### 6.2 Environmental precautions

No special requirements.

### 6.3 Methods and material for containment and cleaning up

Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. Wear personal protective equipment in compliance with national legislation.

### 6.4 Reference for other sections

See sections 8 and 13.

## 7- HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting. 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 to eat, drink and smoke in work areas ; wash hands after use; remove contaminated clothing and protective equipment before entering eating areas.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures / Precautions :
Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting.

### 7.3. Specific end use(s)

If you require advice on specific uses, please contact your supplier or check the Good Practice Guide referred to in section 16.

## 8- EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust, respirable crystalline silica dust).

Comply with occupational exposure limit
(In France 10 mg/m$^3$ maximum and 5 mg/m$^3$ for respirable dust)

Comply with occupational exposure limit for crystalline silica :
*(Consult annex 1)*

**In France** the decree no. 97-331 of 10 April 1997 sets the following limit values :
**0.05 mg/m$^3$ for cristobalite**
(Average concentration of airborne respirable dust inhaled by a worker during an 8 hour workday)

In addition, use the formula below to calculate if the limit value is met for a silicogenic or non silicogenic repirable dust mixture.

$$Cns/5 + 10Cq + 20Cc + 20\,Ct <= 1$$

Where Cns, Cq, Cc and Ct represent, respectively, the dust concentrations : non silicogens, quartz, cristobalite and tridymite in mg/m$^3$

For the equivalent limits in other countries, please refer to the attached annex listing the various regulations according to our knowledge today.

### 8.2 Exposure controls

#### 8.2.1. Appropriate engineering controls

Minimise airborne dust generation. Work in closed systems, use room exhaust ventilation systems or any other integrated safety engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

### 8.2.2. Individual protection measures, such as personal protective equipment

a) Eye / face protection : Wear safety glasses with side-shields in circumstances where there is a risk of penetrative eye injuries. œ

b) Skin protection : No specific requirements. For hands, see below. Appropriate protection (e.g. protective clothing, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.

Hand protection : Appropriate protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.

c) Respiratory protection : In case of prolonged exposure to airborne dust concentrations, wear a respiratory protective equipment that complies with the requirements of European or national legislation.
Use half or complete filter masks against particles category 2 or 3 (FP2 - FP3). See EN 143 : 2000 - respiratory protection equipment. Particle filters.

Hygiene measure : Do not shake work clothing
Do not remove dust with compressed air

### 8.2.3. Environmental exposure controls

Avoid wind dispersal.

## 9- PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| a) Appearance :<br>Grain shape : | Solid white granular form (crystalline)<br>Angular |
| b) Odour : | Odourless |
| c) Odour threshold : | Not relevant |
| d) pH : | pH (400 g/l water at 20°C) : 9 |
| e) Melting ponit : | 1718°C |
| f) Initial boiling point : | Not relevant |
| g) Flash point : | Not relevant |
| h) Evaporation ratio : | Not relevant |
| i) Flammability : | Not relevant |
| j) Upper / lower limits of flammability or explosivity limits | Not relevant |

| | |
|---|---|
| k) Vapour pressure : | Not relevant |
| l) Vapour density : | Not relevant |
| m) Relative density : | 2.35 g / $cm^3$ |
| n) Solubilities : | Solubility in water : negligible<br>Solubility in hydrofluoric acid : yes |
| o) Sharing coefficient : n-octanol/water | Not relevant |
| p) Self-flammability temperature | Not relevant |
| q) Decomposition temperature | Not relevant |
| r) Viscosity | Not relevant |
| s) Explosive properties | Not relevant |
| t) Comburent properties | Not relevant |
| $Si0_2$ : | 99 % |
| Granulometry : | cf. Product data sheet |

### 9.2 Other information

No other information

## 10- STABILITY AND REACTIVITY

### 10.1 Reactivity

Inert, non reactive

### 10.2 Chemical stability

Chemically stable

### 10.3 Possibility of hazardous reactions

No hazardous reactions.

### 10.4 Conditions to avoid

Not relevant

### 10.5 Incompatible materials

No particular incompatibility.

### 10.6 Hazardous decomposition products

Not relevant

## 11- TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

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

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## 12- ECOLOGICAL INFORMATION

### 12.1 Toxicity

Not relevant.

### 12.2 Persistence and degradability

Not relevant

### 12.3 Bioaccumulative potential

Not relevant

### 12.4 Mobility in soil

Negligible

### 12.5 Resultats of PBT and vPvB assessments

Not relevant

### 12.6 Other adverse effects

No specific adverse effects known.

## 13- DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Waste from residues / products unused : Where possible, recycling is preferable to disposal. Can be disposed of in compliance with local regulations.

Packaging : Dust formation from residues in packaging should be avoided and suitable worker protection assured.
Store used packaging in closed receptacles.
Recycling and disposal of packaging should be carried out in compliance with local regulations.
The re-use of packaging is not recommended. Recycling and disposal of packaging should be carried out by an authorised waste management company.

## 14- TRANSPORT INFORMATION

### 14.1 UN Number

Not relevant.

### 14.2 UN proper shipping name

Not relevant

### 14.3 Transport hazard classes

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.

### 14.7 Transport in bulk according to Annex II of MARPOL73 /78 and the IBC Code

Not relevant

## 15- REGULATORY INFORMATION

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

Refer to the regulatory limits in each country.
The product has not been classified by European regulations applying to hazardous substances / mixtures.

### 15.2 Chemical safety assessment

Exempted from REACH Registration in accordance with Annex V.7.

## 16- OTHER INFORMATION

**Indication of the changes made to the previous version of the SDS :**

*To be completed by changes that you will keep regarding the old version.*

**Third party materials :**

Insofar as materials not manufactured or supplied by SILMER are used in conjunction with, or instead of SILMER materials, it is the responsibility of the customer himself 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 MINIGRAIN ARTIC in conjunction with materials from another supplier.

**Liability :**

Such information is to the best of SILMER knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. The user is responsible for personally assuring the suitability and completeness of such information for his own particular use.

**Training :**

Workers must be informed of the presence of crystalline silica and be trained in the proper use and handling of this product as required under applicable regulations.

**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. Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers.

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 Researc h 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 section 16 below).

**References** are available on request from EUROSIL, the European Association of Industrial Silica Producers, Bd. S. Dupuis 233 Bte 124, 1070 BRUSSELS, Belgium.
Tel 0032 (0)2 524 55 00 – Fax 0032 (0)2 524 45 75 – email : secretariat@ima-eu.org.

# Annex 1
## Occupational Exposure Limits in mg/m$^3$ – Respirable dust
## In EU 27[1] + Norway & Switzerland

| Country/Authority (See caption p.2) | Inert dust | Quartz (q) | Cristobalite (c) | Tridymite (t) |
|---|---|---|---|---|
| Austria / I | 6 | 0,15 | 0,15 | 0,15 |
| Belgium / II | 3 | 0,1 | 0,05 | 0,05 |
| Bulgaria / III | 4 | 0,07 | 0,07 | 0,07 |
| Czech Republic/ IV | | 0,1 | 0,1 | 0,1 |
| Denmark / V | 5 | 0,1 | 0,05 | 0,05 |
| Estonia | | 0,1 | 0,05 | 0,05 |
| Finland / VI | | 0.2 | 0.1 | 0.1 |
| France / VII | | 5 or 25k/Q[2] | | |
| France / VIII | 5 | 0,1 | 0,05 | 0,05 |
| Germany/IX | 3 | /[3] | 0,15 | 0,15 |
| Greece/X | 5 | 0,1 | 0,05 | 0,05 |
| Hungary | | 0,15 | 0,1 | 0,15 |
| Ireland/ XI | 4 | 0,05 | 0,05 | 0,05 |
| Italy/ XII | 3 | 0,05 | 0,05 | 0,05 |
| Lithuania/ XIII | 10 | 0,1 | 0,05 | 0,05 |
| Luxembourg/ XIV | 6 | 0,15 | 0,15 | 0,15 |
| Malta / XV[4] | / | / | / | / |
| Netherlands/ XVI | 5 | 0,075 | 0,075 | 0,075 |
| Norway/XVII | 5 | 0,1 | 0,05 | 0,05 |
| Poland | | 0,3 | 0,3 | 0,3 |
| Portugal/XVIII | 5 | 0,05 | 0,05 | 0,05 |
| Romania/XIX | 10 | 0,1 | 0,05 | 0,05 |
| Slovakia | | 0,1 | 0,1 | 0,1 |
| Slovenia | | 0,15 | 0,15 | 0,15 |
| Spain/ XX | 3 | 0,1 | 0,05 | 0,05 |
| Sweden/XXI | 5 | 0,1 | 0,05 | 0,05 |
| Switzerland/XXII | 6 | 0,15 | 0,15 | 0,15 |
| United Kingdom/XXIII | 4 | 0,1 | 0,1 | 0,1 |

[1] Missing information for Cyprus and Latvia. – To be completed.
[2] Q : quartz percentage – K=1
ain [3] Germany has no more OEL for quartz. Employers are obliged to minimize exposure as much as possible, and to follow ce protective measures.
[4] When needed, Maltese authorities refer to values from the UK for OELVs which do not exist in the Maltese legislation.



BP 80040 – Rue Ancel de Caïeu 80410 CAYEUX SUR MER
Tel : (33) 3 22 26 61 00 – Fax : (33) 3 22 26 59 24
www.silmer.fr – silmer@gagneraud.fr
B.C.R. Amiens 2000B70226 – Siret 324 950 690 000 10 – EU Identification No. FR 45 324 950 690
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# Caption

| Country | | Adopted by/Law denomination | OEL Name (if specific) |
|---|---|---|---|
| Austria | I | Bundesministerium für Arbeit und Soziales | Maximale ArbeitsplatzKoncentration (MAK) |
| Belgium | II | Ministère de l'Emploi et du Travail | |
| Bulgaria | III | Ministry of Labour and Social Policy and Ministry of Health. Ordinance n°13 of 30/12/2003 | Limit Values |
| Czech Republic | IV | Governmental Directive n°441/2004 | |
| Denmark | V | Direktoratet fot Arbeidstilsynet | Threshold Limit Value |
| Finland | VI | National Board of Labour Protection | Occupational Exposure Standard |
| France | VII | Ministère de l'Industrie (RGIE) | Empoussiérage de référence |
| | VIII | Ministère du Travail | Valeur limite de Moyenne d'Exposition |
| Germany | IX | Bundesministerium für Arbeit | Maximale ArbeitsplatzKoncentration (MAK) |
| Greece | X | Legislation for mining activities | |
| Ireland | XI | 2002 Code of Practice for the Safety, Health & Welfare at Work (CoP) | |
| Italy | XII | Associazone Italiana Degli Igienisti Industriali | Threshold Limit Values (based on ACGIH TLVs) |
| Lithuania | XIII | Dėl Lietuvos higienos normos HN 23:2001 | Ilgalaikio poveikio ribinė vertė (IPRV) |
| Luxembourg | XIV | Bundesministerium für Arbeit | Maximale ArbeitsplatzKoncentration (MAK) |
| Malta | XV | OHSA – LN120 of 2003, www.ohsa.org.mt | OELVs |
| Netherlands | XVI | Ministerie van Sociale Zaken en Werkgelegenheid | Maximaal Aanvarde Concentratie (MAC) |
| Norway | XVII | Direktoratet for Arbeidstilsynet | Administrative Normer (8hTWA) for Forurensing I ArbeidsmiljØet |
| Portugal | XVIII | Instituto Portuges da Qualidade, Hygiene & Safety at Workplace<br>NP1796:2004 | Threshold Limit Value |
| Romania | XIX | Government Decision n° 355/2007 regarding workers' health surveillance.<br>Government Decision n° 1093/2006 regarding carcinogenic agents (in Annex 3: Quartz, Cristobalite, Tridymite). | OEL |
| Spain | XX | Instrucciones de Técnicas Complementarias (ITC)<br>Orden ITC/2585/2007 | Valores Limites |
| Sweden | XXI | National Board of Occupational Safety and Health | Yrkeshygieniska Gränsvärden |
| Switzerland | XXII | | Valeur limite de Moyenne d'Exposition |
| United Kingdom | XXIII | Health & Safety Executive | Workplace Exposure Limits |

Source: IMA-Europe. Date: October 2007, updated version available at http://www.ima-eu.org/en/publication.htm



BP 80040 – Rue Ancel de Caïeu 80410 CAYEUX SUR MER
Tel : (33) 3 22 26 61 00 – Fax : (33) 3 22 26 59 24
www.silmer.fr – silmer@gagneraud.fr
B.C.R. Amiens 2000B70226 – Siret 324 950 690 000 10 – EU Identification No. FR 45 324 950 690
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