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## 1. Identification of the substance/mixture and of the company

### 1.1. Product identifier

Neuburg Siliceous Earth, surface-treated / No other synonyms

#### REACH registration number

Exempted in accordance with Annex V.7 and Art.3, No.5 (Definition of Polymers)

#### Trade names

AKTISIL AM, EM, MAM, MAM-R, MM, PF 216, PF 777, Q, VE, VM 56, WW

### 1.2. Relevant identified uses of the substance

AKTISIL is used as a functional filler for elastomers, plastics, paints and varnishes, adhesives, and polishing and protective agents, as well as in the construction and chemical industries.

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

HOFFMANN MINERAL GmbH

Muenchener Strasse 75, 86633 Neuburg (Donau), Germany

Phone: +49 (0) 84 31 53-0; Fax: +49 (0) 84 31 53-3 30

www.hoffmann-mineral.com, [info@hoffmann-mineral.com](mailto:info@hoffmann-mineral.com)

### 1.4. Emergency telephone number

Phone: +49 (0) 84 31 53-0 -> Not available outside office hours

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## 2. Hazards identification

### 2.1. Hazards for people and environment

Due to the potential for generation of airborne respirable cryptocrystalline silica, lung fibrosis cannot be ruled out. Prolonged inhalation of large amounts of A-dust may lead to silicosis. Occupational exposure to respirable cryptocrystalline silica A-dust should be monitored and controlled.

### 2.2. Classification of the substance

According to EC Directive 1272/2008 this product is classified as STOT RE 1.

### 2.3. Label elements

Hazard pictogram:



Signal word:

**DANGER**

Hazard statement:

H 372, Causes damage to lung through prolonged or repeated inhalation.

Precautionary statements:

P 260, Do not breathe dust.

P 285, In case of inadequate ventilation wear respiratory protection.

### 2.4. Other hazards

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

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### 3. Composition/information on ingredients

#### 3.1. Chemical characterization (individual substances)

Description: AKTISIL products are based on Neuburg Siliceous Earth and coated with various bonding agents. Neuburg Siliceous Earth is one in nature originated inorganic compound of amorphous and cryptocrystalline silica and lamellar kaolinite.

As unique mineralogical entity Neuburg Siliceous Earth got the individual CAS-No.1020665-14-8 with the CAS-Name 'Siliceous Earth'. The EINECS number is 310-127-6.

#### 3.2. Components

CAS no.	Name according to EC Directive	EC classification
7631-86-9	Cryptocrystalline Silica (A-dust)	STOT RE 1; H 372
7631-86-9	Amorphous Silica	No classification
1318-74-7	Kaolinite	No classification

#### Bonding agents

Various organofunctional silanes and/or paraffins: The exact chemical composition and concentration of the bonding agents is part of company know-how and, therefore, confidential.

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### 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 special measures.

#### 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.

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### 5. Firefighting measures

#### 5.1. Extinguishing media

No specific extinguishing media is needed.

**Aktisil WW:** Foam, fire extinguishing powder, carbon dioxide and water spray

#### 5.2. Specific hazards arising from the substance

Non combustible. No hazardous thermal decomposition.

**Aktisil WW:** flammable

#### 5.3. Advice for fire-fighters

No specific actions are required.

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## 6. Accidental release measures

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

Avoid dust formation. If the atmosphere is particularly dusty, breathing apparatus must be worn.

### 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 (minimum dust class M) for removal. Keep in closed containers, ready for disposal.

### 6.4 Reference for other sections

See sections 8 and 13.

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## 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. Remove and wash soiled clothing.

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 Requirements for storage rooms and containers

Keep containers tightly closed.

Ensure that dust-protection measures are in place during silo loading.

### 7.3 Further information on storage conditions

Dry storage

### 7.4 Notes on fire and explosion protection

No specific fire-precaution requirements

**Aktisil WW:** Keep away from sources of ignition – No smoking.

### 7.5 Storage class

Non-combustible solids

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## 8. Exposure controls/personal protection

### 8.1 Additional information on the design of technical plants

Adequate ventilation and extraction must be provided at processing machines and at locations where dust may form.

### 8.2 Ingredients with threshold limit values

If a concentration of  $\leq 0.10 \text{ mg/m}^3$  (average value for one shift) is observed for cryptocrystalline silica in the alveolar dust content, it is almost certain that employees will not suffer from any silicotic disease.

Activities performed in dusty atmospheres must be monitored: dust samples taken in accordance with EN 481.

For additional information, see [www.hoffmann-mineral.com](http://www.hoffmann-mineral.com).

### 8.3. Personal protective equipment

General precautions	Wash hands before breaks and at the end of a shift. Do not inhale dust. Do not eat or drink while working. Remove soiled clothing and wash it before wearing again.
Respiratory protection	If A-dust exceeds the concentration of 0.15 mg/m <sup>3</sup> , wear an appropriate fine-dust filter mask (FFP 2).
Hand protection	Not applicable
Eye protection	Safety glasses with side shields
Body protection	Not applicable
Hygiene measures	Keep street and work clothing separate.

### 8.4. Environmental exposure controls

No specific requirements.

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## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

Physical state	Solid, powder
Colour	White to beige
Odour	Odourless
Odour threshold	Not relevant

#### pH

Method: (400g/l water at 20°C)

5 - 8

#### Melting point

> 1600°C

#### Density at 20°C

Method: DIN ISO 787 Part 10

2.6 g/cm<sup>3</sup>

#### Grain shape

Corpuscular / lamellar

#### Solubility in water at 20°C

Method: DIN ISO 787 Part 8

Negligible

#### Solubility in hydrofluoric acid

Yes

### 9.2. Further information

Detailed mineralogical tests (*Göske, report no. 7042729*) have shown that the silica content of Neuburg Siliceous Earth is a unique mineral specimen, which has not previously been found or described in this particular form anywhere else in the world.

For additional information, see [www.hoffmann-mineral.com](http://www.hoffmann-mineral.com).

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## 10. Stability and reactivity

### 10.1. Reactivity

Inert, not reactive

### 10.2. Chemical stability

Chemically stable

### 10.3. Possibility of hazardous reactions

No hazardous reactions

### 10.4. Conditions to avoid

**Aktisil WW:** Keep away from open flames. – No smoking.

### 10.5. Incompatible materials

No particular incompatibility

### 10.6. Hazardous decomposition products

Traces of sulfur dioxide (only applies to products: AKTISIL MM and AKTISIL PF 216).

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## 11. Toxicological information

### 11.1. Acute toxicity, oral, dermal, inhalation

Based on available data, the classification criteria are not met.

### 11.2. Skin corrosion/irritation

Based on available data, the classification criteria are not met.

### 11.3. Serious damage/eye irritation

Based on available data, the classification criteria are not met.

### 11.4. Respiratory/Skin sensitization

Based on available data, the classification criteria are not met.

### 11.5. Aspiration hazard

Based on available data, the classification criteria are not met.

### 11.6. Reproductive toxicity

Based on available data, the classification criteria are not met.

### 11.7. Germ cell mutagenicity

Based on available data, the classification criteria are not met.

### 11.8. Carcinogenicity

Based on available data, the classification criteria are not met.

### 11.9. STOT – single exposure

Based on available data, the classification criteria are not met.

### 11.10. STOT – repeated exposure

Due to the potential for generation of airborne respirable cryptocrystalline silica this product is classified as STOT RE 1 according to EC Directive 1272/2008.

Prolonged inhalation of large amounts of A-dust may lead to silicosis, a nodular pulmonary fibrosis caused by deposition of fine respirable particles of cryptocrystalline silica in the lung.

### **In vivo/In vitro studies, experience with humans**

Phase analytical studies of Neuburg Siliceous Earth have shown the presence of crypto-crystalline silica. For this portion – if present in the form of dust – a fibrogenous (or fibrotic) action cannot be excluded, which means that inhalation of high amounts of such dust over long periods of time potentially can lead to silicosis. It is consequently advisable to monitor the dust exposure and comply with existing limits.

This quartz-like risk potential, as well as the discussion started in 1997 by IARC with the new classification of quartz, has also led to in-depth studies with respect to toxicological effects of Neuburg Siliceous Earth, whose silica content until very recently was thought to be composed of quartz. Several *in vitro* investigations at IBE (Bruch et al., 2001-2007) with cross-validation by *in vivo* experiments, upon analysis of the vector model have confirmed a markedly different toxicological profile for Neuburg Siliceous Earth, in the direction of a considerably lower toxicity level as compared with other quartz-containing products.

We would like to draw your attention at this point to a qualifying statement found in 1997 IARC Monographs, which puts the classification of quartz as carcinogenic to humans (Group I) into perspective in a most interesting way:

*“As part of their overall assessment, the IARC working group noted that a carcinogenic effect was not found in all the industrial situations examined. A carcinogenic effect may depend on the properties inherent to crystalline silica or on external factors, which influence the biological activity or the distribution of silica polymorphs.”*

A cohort study conducted by the German ‘Institut für Prävention und Arbeitsmedizin’ (KAFKA Studie 2011) at the sites of Hoffmann Mineral substantiated these particular circumstances. It encompasses 675 employees who worked for Hoffmann Mineral during the time period of 1923 till 2007.

The epidemiological findings of more than 80 years handling Neuburg Siliceous Earth could be summarized in the following conclusions:

Lung cancer:

Though a large number of employees were exposed to a highly elevated concentration (cumulative concentrations up to 90 mg/m<sup>3</sup> x year) of crypto-crystalline silica dust the study could not identify any significant lung cancer risk.

Silicosis:

Employees who worked underground or worked under long lasting exposure conditions of > 0.15 mg/m<sup>3</sup> alveolar respirable dust (crypto-crystalline silica) were at higher risk to get silicosis.

### **Further information on AKTISIL EM**

Contains small amounts of a functional epoxy group. In vitro tests have found that epoxy compounds can have a mutagenic effect. As the genotoxic effect has not been tested in vivo, the effects on human beings cannot yet be assessed.

The product may contain and release traces of methanol.

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## **12. Ecological information**

### **12.1. Toxicity**

Not relevant

The substances listed under section 3., “Composition/information on ingredients”, belong to the mineralogical class of silicates/oxides and are commonly found in the earth’s crust. They have no known harmful effects on the environment, nor are such effects to be expected.

### **12.2. Persistence and degradability**

Not relevant

### **12.3. Bioaccumulative potential**

Not relevant (Some organisms accumulate Si(OH)<sub>4</sub>)

### **12.4. Mobility in soil**

Negligible

### **12.5. Results of PBT and vPvB assessment**

Not relevant

**12.6. Other adverse effects**

No specific adverse effects known.

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**13. Disposal considerations**

**13.1. Waste treatment methods**

This material is not classified as hazardous waste according to Commission Decisions 2000/532/EC and 2001/118/EC.

**Waste from residues/unused products:** Can be landfilled in compliance with local regulations. Where possible, recycling is preferred to disposal. The material should be stored in sealed containers to prevent the formation of dust.

**Packaging:** Empty containers should be recycled, recovered or disposed of locally. Dust may form when folding empty paper bags and big-bags. Ensure that appropriate health and safety measures are in place.

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**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 applicable

**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 MARPOL 73/78 and the IBC Code**

Not relevant

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**15. Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance**

Nothing additionally known beyond the information which are given in the sections 2., 8., 11., 12.

**15.2. Chemical safety assessment**

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

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## 16. Other information

### Third-party materials

If third-party materials not manufactured or supplied by HOFFMANN MINERAL are used in conjunction with, or instead of HOFFMANN MINERAL products, it is the customer's responsibility to obtain all technical data and other properties relating to these and other materials from the supplier or manufacturer, as well as all relevant information pertaining to them. No liability can be accepted in respect of the use of HOFFMANN MINERAL products in conjunction with other materials.

### Liability

The information provided here is accurate and reliable to the best of HOFFMANN MINERAL's knowledge and belief. However, no warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of the information provided for his own specific application.

### Training

Workers must be informed about the presence of cryptocrystalline silica and 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.

**Safety Data Sheet (in compliance with Regulations (EC) 1907/2006, (EC) 1272/2008 and (EC) 453/2010) AKTISIL**

Version 1.00.02

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**HOFFMANN MINERAL**

Unternehmensgruppe Hoffmann



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**DE** **GEFAHR**  
Kieselstaub  
CAS-Nr. 1029865-14-0  
Schädigt die Lunge bei längerer oder wiederholter Inhalation.  
Staub nicht einatmen.  
Bei unzureichender Belüftung Atemschutz tragen.

**DK** **FARE**  
Kieseljord  
CAS-nr. 1029865-14-0  
Skadeligt for langema lungenvarerende eller gentagne inhalation.  
Støvet må ikke indåndes.  
Ved utilstrækkelig udluftning anvendes åndedrætsværn.

**FI** **VAARA**  
Kvartsi  
CAS-nro 1029865-14-0  
Vahingoitaa keuhkoja pitkäaikaisesti tai toistuvasti hengittytynä.  
Älä hengitä pölyä.  
Käytä hengitysosuojainta, jos ilmanvaihto on riittämätön.

**HU** **VESZÉLY**  
Kovalegő  
CAS-szám: 1029865-14-0  
Hosszabb vagy ismétlődő belégzés esetén károsítja a tüdőt.  
A por belégzése tilos.  
Nem megfelelő szellőzés esetén légvédelem kötelező.

**KR** 위험  
실리카  
CAS번호 1029865-14-0  
장기간 노출되거나 반복적으로 흡입하면 폐에 손상을 줍니다.  
분말 먼지를 흡입하지 마십시오.  
물품이 분출된 경우에는 마스크를 착용하십시오.

**ML** **GEVAAR**  
Kieselstaub  
CAS-nr. 1029865-14-0  
Veroorzaakt longbeschadiging bij langdurige of herhaaldelijke inhalatie.  
Stof niet inademen.  
Bij onvoldoende ventilatie een geschikte adembescherming dragen.

**RO** **PERICOL**  
Pământ siliceos  
nr. CAS 1029865-14-0  
Provoacă leziuni ale plămânilor în caz de inhalare prelungită sau repetată.  
Nu respira praful.  
În cazul în care ventilația este insuficientă, purtați echipament de protecție respiratorie.

**SK** **NEBEZPEČNÁ**  
Kremelinová zemina  
č. CAS 1029865-14-0  
Pri dlhšej alebo opakovanej inhalácii poškodzuje pľuca.  
Nevdychujte prach.  
V prípade nedostatočného vetrania, používajte ochranu dýchacích ciest.

**BG** **ОПАСНО**  
Кварцова пръст  
CAS-№ 1029865-14-0  
Признава уреждане на белите дробове посредством продължителна или повторна сел инхалация.  
Не вдъхват праха.  
В случай на лоша вентилация носете респираторни предпазни средства.

**EE** **OHT**  
Riimimüü  
CAS nr 1029865-14-0  
Kahjustab kopsu pikaajalised või korduvad inhaleerimisega.  
Tolmu mitte sisse hingata.  
Ebaselva ventilatsioon korral kanda hingamisteede kaitsvahendeid.

**FR** **DANGER**  
Silice  
n° CAS 1029865-14-0  
Risque avéré d'effets graves pour les pousmons à la suite d'inhalations répétées ou d'une inhalation prolongée.  
Ne pas respirer les poussières.  
Lorsque la ventilation du local est insuffisante, porter un équipement de protection respiratoire.

**HR** **OPASNOST**  
Kvarcni prašak  
CAS: 1029865-14-0 /  
Urešava opasnost za dugotrajno ili ponovljeno udisanje prašine.  
Ne dišati prašinu.  
U slučaju neadekvatne ventilacije koristiti zaštitnu opremu za zaštitu dišnih puteva.

**LT** **APDRAUDJUS**  
Tilmagėmis  
CAS-Nr. 1029865-14-0  
Įgyvendinti ilgą ir kvėpuojant ar dažnai įkvėpiant galį pakenkti plūčiui.  
Neįkvėpti dulkių.  
Esant nepakankamam vėdinimui, naudoti kvėpavimo takų apsaugos priemonę.

**NO** **ADVARSEL**  
Kieseljord  
CAS-Nr. 1029865-14-0  
Skader lungen ved gjentatt inndring over lengre tid.  
Pust ikke inn støvet.  
Bruk munnbeskyttelse ved utilstrekkelig lufting.

**RU** **ОПАСНО**  
Кремниевый, пер.  
№ CAS 1029865-14-0  
Вреден для легких при длительном или неоднократном вдыхании.  
Вдыхание пыли не допускается.  
При недостаточной вентиляции использовать средства защиты органов дыхания.

**TH** **อันตราย**  
ซิลิกา  
CAS No. 1029865-14-0  
การสูดดมฝุ่นซิลิกาอย่างต่อเนื่องหรือการสูดดมซ้ำๆกันอาจทำให้ปอดเสียหายได้  
ห้ามสูดดมฝุ่นซิลิกา  
หากการระบายอากาศไม่เพียงพอให้ใช้เครื่องป้องกันระบบทางเดินหายใจ

**CN** **危险**  
硅质土  
CAS No. 1029865-14-0  
长时间吸入或以重复吸入可损伤肺部。  
请勿吸入粉尘。  
通风不足时请佩戴呼吸防护用品。

**EG** **خطر**  
رمال السيليكا، رقم التسجيل 1029865-14-0 / (CAS)  
تسبب الرئتين في حالة الاستنشاق الطويل أو المتكرر.  
لا تنفس الغبار.  
في حالة عدم وجود تهوية كافية، استخدم الجهاز التنفسي في حالة عدم وجود تهوية كافية.

**GB** **DANGER**  
Siliceous Earth  
CAS # 1029865-14-0  
Causes damage to lung through prolonged or repeated inhalation.  
Do not breathe dust.  
In case of inadequate ventilation wear respiratory protection.

**IT** **PERICOLO**  
Silice  
No. CAS 1029865-14-0  
Provoca danni ai polmoni in caso di inalazione prolungata o ripetuta.  
Non respirare le polveri.  
In caso di ventilazione insufficiente utilizzare un apparecchio respiratorio.

**LV** **PAVĀJUS**  
Silīcija smiltis  
CAS-Nr. 1029865-14-0  
Izraisa plūšu bojājumus, ja ilgstoši vai atkārtoti ieelpojas.  
Neieelpojiet putekļus.  
Neatbilstošas ventilācijas gadījumā izmantot gaismašķi.

**PL** **NIEBEZPIECZENSTWO**  
Krzemionka  
nr CAS 1029865-14-0  
Powoduje uszkodzenie płuc poprzez długotrwałe lub powtarzane wdychanie.  
Nie wdychać pyłu.  
W przypadku niedostatecznej wentylacji stosować indywidualne środki ochrony dróg oddechowych.

**SE** **FARA**  
Kieseljord  
CAS-nr. 1029865-14-0  
Skader lungorna vid upprepat eller långvarig inandning.  
Andas inte in dammet.  
Använd andningskydd vid otillräcklig ventilation.

**TR** **TEHLİKE**  
Silisli Toprak  
CAS No. 1029865-14-0  
Uzun süreli veya tekrarlayan inhalasyon (ya da sürekli) durumunda akciğerlere hasara neden olur.  
Tozu tenefüs etmeyiniz.  
Yetersiz havalandırma söz konusu konuyu maske kullanınız.

**CZ** **NEBEZPEČÍ**  
Křemelinová zemina  
č. CAS 1029865-14-0  
Při dlouhé nebo opakované inhalaci poškozuje plicy.  
Nevdychujte prach.  
V případě nedostatečného větrání používejte vybavení pro ochranu dýchacích cest.

**ES** **PELIGRO**  
Tierra silicea  
n° CAS 1029865-14-0  
Provoca daños en los pulmones tras inhalación prolongada o repetida.  
No respirar el polvo.  
En caso de ventilación insuficiente, llevar equipo de protección respiratoria.

**GR** **ΚΙΝΔΥΝΟΣ**  
Ασβεστόλιθος  
CAS-Αριθ. 1029865-14-0  
Προκαλεί βλάβες στους πνεύμονες άμεσα από παρατεταμένη ή επαναλαμβανόμενη εισπνοή.  
Μην αναπνέετε σκόνη.  
Σε περίπτωση ανεπαρκούς αερισμού, να φορέσει πύλο αναπνευστικής προστασίας της αναπνοής.

**JP** **危険**  
シリカ  
CAS No. 1029865-14-0  
長期または繰り返して吸入すると、肺を害します。  
粉塵を吸入しないでください。  
換気が不十分な場合は、保護マスクを着用してください。

**MY** **BAHAYA**  
Silika  
no. CAS 1029865-14-0  
Merosakan paru-paru jika disedut untuk tempoh berpanjangan atau berulang.  
Jangan menyedut debu.  
Gunakan perlindungan bernafas jika pengaliran udara tidak cukup.

**PT** **PERIGO**  
Terra silicea  
n° CAS 1029865-14-0  
Provoca danos nos pulmões após inalação prolongada ou repetida.  
Não inalar pó.  
Em caso de ventilação inadequada, usar proteção respiratória.

**SJ** **NEBEZPEČENSTVO**  
Kremenka  
čl. CAS 1029865-14-0  
Pri daljšem ali ponovljenoem se vdihovanju škodi pljučem.  
Ne vdihovati praha.  
Ob nezadostnem prezračevanju nositi opremo za zaščito dihal.

**VN** **Rủi ro**  
Đá trôm tích (Điatomit)  
CAS No. 1029865-14-0  
Gây hại tai cho phổi nếu hít vào lâu hoặc nhiều lần.  
Bụi xin đừng hít vào.  
Sự dụng bộ phận bảo vệ hai thở khi không khí không thoáng đầy đủ.