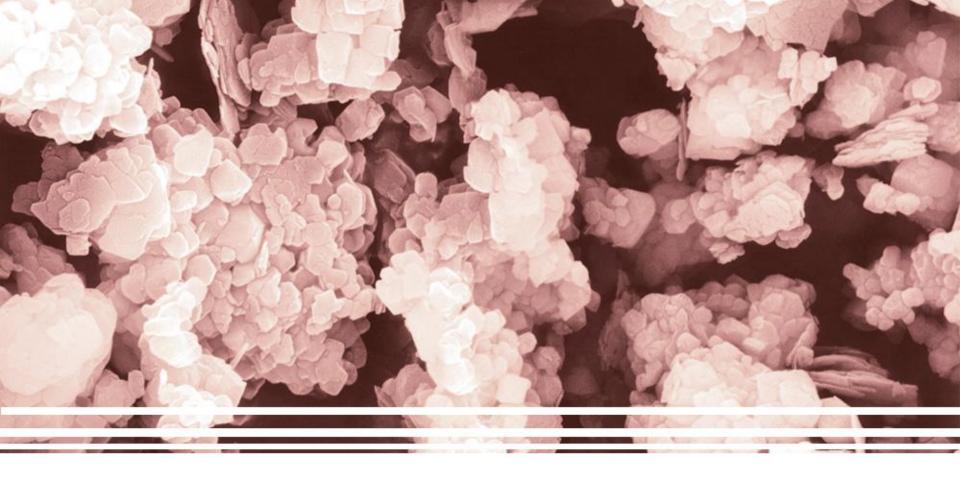


Why No GHS-Labelling?



We supply material for good ideas



History And Explanation Of Our Current Product Classification

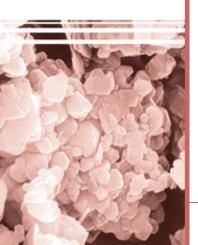




Topics



- Starting Situation
- Symbol Message
- Customer Response
- The Solution 'Dustiness'
- Safety Data Sheet History
- Summary







TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

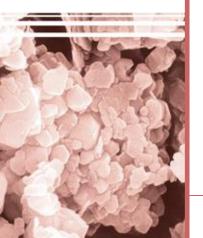
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



The trigger for all those changes in classification and labelling is the CLP Regulation ("Classification, Labelling and Packaging") from 2008:

- It complements the REACH Regulation,
- It replaces the current Dangerous Substance Directive
- and aligns the EU System to the Globally Harmonized
- System (GHS)
- for harmonized communication of hazard information
- of chemicals
- and should promote regulatory efficiency.





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

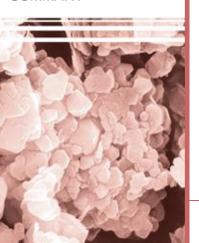
RESPONSE

THE SOLUTION

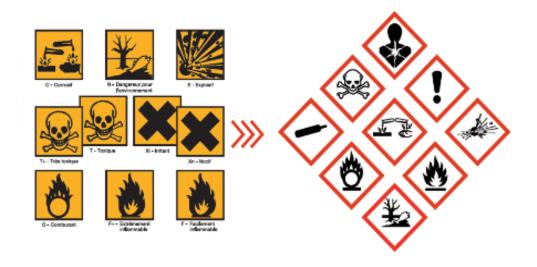
,DUSTINESS'

SDS HISTORY

SUMMARY



In simplified and pictorial terms it means:







TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

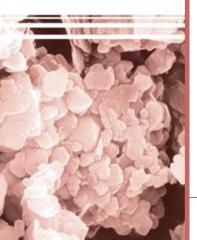
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



Already in 2002 IMA–EUROSIL recommended its member companies quartz flour products which contains more than 10 % by weight of respirable ($< 5 \mu m$ in diam.) particles to classify and label according the former Dangerous Substance Directive:

Danger Symbol:



Signal Word: Harmful (Xn)

Risk Phrase:

R 48/20, Danger of serious damage to health by prolonged exposure through inhalation





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

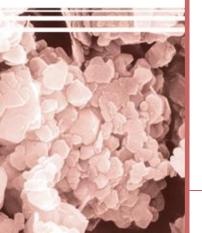
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



With the reasoning our material is no 'quartz flour' and already the knowledge by 'In Vitro' Cell Experiments' that NSE has a considerably lower toxicity level than other quartz-containing products we did not follow the IMA-EUROSIL recommendation.

In the years have been coming up our decision has been reinforced by new mineralogical findings which show that the silica portion of NSE is in fact no quartz but a very unique mixture of amorphous and crypto-crystalline silica.





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

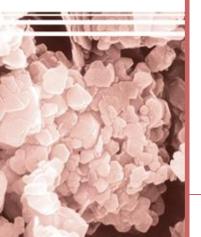
RESPONSE

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,DUSTINESS'

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SUMMARY



With transition to the new and more stringent CLP-Regulation we found us in the obligation to 'describe' the still existing hazard of silicosis adequately.

After having carefully weighed the legal consequences (-> IARC's cancer-classification for RCS, minimization of potential claims for compensation) IMA-EUROSIL advised its members to label quartz containing products with the STOT- symbol (-> related only to the respirable fraction!):





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

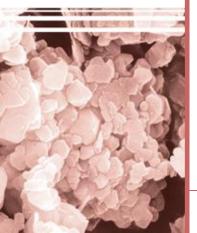
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



Danger Symbol:



Signal Word: Danger

Hazard Statements:

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

Precautionary Statements:

P 260, Do not breathe dust.

P 284, In case of inadequate ventilation wear respiratory protection.





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

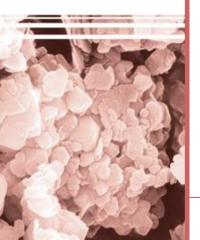
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



Danger Symbol:



Signal Word: Danger

Hazard Statements:

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

Precautionary Statements:

P 260, Do not breathe dust.

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Symbol Message



TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

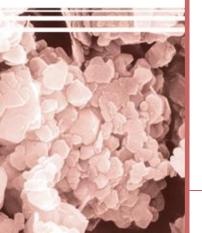
RESPONSE

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This labeling do not express an acute danger!

But it gives a hint that prolonged inhalation of airborne NSE – i.e. 8^h daily on 220 workdays/year over 10 to 20 years without any respiratory protection – may lead to silicosis.

... and very important:

Only if our material is present pure or unbounded in a powdery preparation only then the labeling is relevant and has to be applied!



Symbol Message



TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

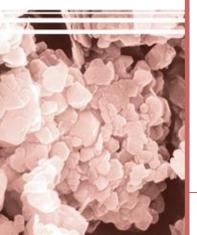
RESPONSE

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,DUSTINESS'

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SUMMARY



What is the situation in a **non-powdery** matrix like preparations of varnishes, paints, adhesives, polishes and much more?

Will our material be incorporated in a water or solvent based binder-containing preparation the potential to generate respirable fine-dust is stopped:

The route of exposition described by H 372 ceases to be valid and therefore the corresponding STOT symbol equally is not necessary anymore.



Symbol Message



TOPICS

STARTING SITUATION

SYMBOL MESSAGE

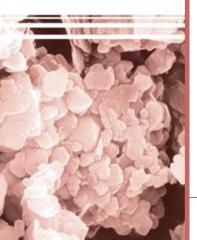
CUSTOMER RESPONSE

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.DUSTINESS'

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SUMMARY



This afore-mentioned evaluation is based upon regulation (EG) Nr.1272/2008 (CLP-Regulation), ANNEX I "CLASSIFICATION AND LABELLING REQUIREMENTS FOR HAZARDOUS SUBSTANCES AND MIXTURES, 1.1.1.5":

"For the purpose of classification for health hazards, route of exposure, mechanistic information and metabolism studies are pertinent to determining the relevance of an effect in humans. When such information, as far as there is reassurance about the robustness and quality of the data, raises doubt about relevance in humans, a lower classification may be warranted. When there is scientific evidence that the mechanism or mode of action is not relevant to humans, the substance or mixture should not be classified."



Customer Response



TOPICS

STARTING SITUATION

SYMBOL MESSAGE

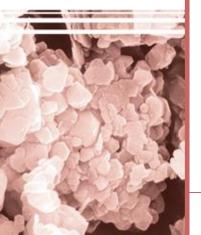
CUSTOMER RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



To convince our customers of the new GHS classification and labeling situation has been not as easy as thought.

There have been misunderstandings like:

- It's an acute dangerous product
- It's a carcinogenic substance
- ... and very surprising: the rule 1.1.1.5 could not be managed!
 - -> led eventual to the STOT labeling of a liquid varnish mixture!



Customer Response



TOPICS

STARTING SITUATION

SYMBOL MESSAGE

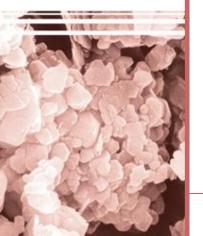
CUSTOMER RESPONSE

THE SOLUTION

.DUSTINESS'

SDS HISTORY

SUMMARY



This situation was for our customers for sure not acceptable.

"Get rid of the STOT classification and labeling otherwise we are not in the position to use your material anymore!"





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

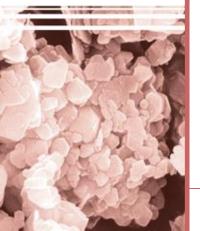
RESPONSE

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Basically all decisions concerning classification in GHS depends on the question ,How much by weight of the hazardous substance(s) is contained in the mixture?

In our specific case the part of respirable (A-dust) crypto-crystalline silica is *the* hazardous substance.





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

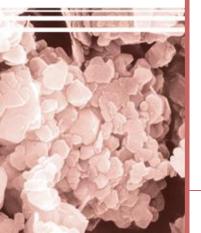
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



Traditionally the A-dust fraction will be measured by lasergranulometric grain size analysis of aqueous dispersions and leads beyond all question to a weight share of 30 to 90% and with that definitely to a STOT classification.

... but is this the truth to assess a workplace atmosphere?





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

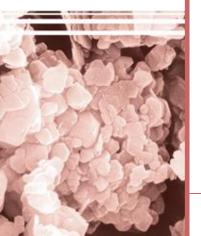
RESPONSE

THE SOLUTION

,DUSTINESS'

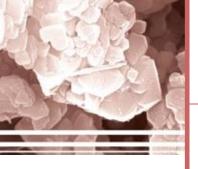
SDS HISTORY

SUMMARY



The tendency that airborne SILLITIN particles show a high level of agglomeration ability has been known qualitatively since decades.

With the 'Dustiness Conception' of the standard EN 15051-3 'Workplace Exposure – Measurement of the Dustiness of Bulk Materials' this effect can now be quantified.





March 2014

DIN EN 15051-3



ICS 13.040.30

Together with DIN EN 15051-1:2014-03 and DIN EN 15051-2:2014-03 supersedes DIN EN 15051:2006-07

Workplace exposure -

Measurement of the dustiness of bulk materials -

Part 3: Continuous drop method;

English version EN 15051-3:2013,

English translation of DIN EN 15051-3:2014-03

Exposition am Arbeitsplatz -

Messung des Staubungsverhaltens von Schüttgütern -

Teil 3: Verfahren mit kontinuierlichem Fall;

Englische Fassung EN 15051-3:2013,

Englische Übersetzung von DIN EN 15051-3:2014-03

Exposition sur les lieux de travail -

Mesurage du pouvoir de resuspension des matériaux pulvérulents en vrac -

Partie 3: Méthode de la chute continue;

Version anglaise EN 15051-3:2013,

Traduction anglaise de DIN EN 15051-3:2014-03

TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

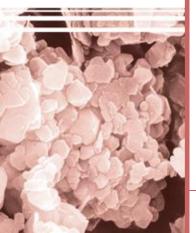
RESPONSE

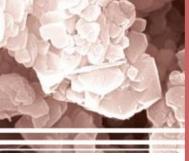
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EN 15051-3:2013 (E)

Introduction

DIN EN 15051-3:2014-03

This European Standard gives details of the design and operation of the continuous drop test method that classifies the dustiness of solid bulk materials, in terms of health-related fractions.

A dustiness classification is presented to provide users (e.g. manufacturers, producers, occupational hygienists and workers) with information on the potential for dust emissions when the bulk material is handled or processed in workplaces. It provides the manufacturers of bulk materials with information that can help to improve their products. It allows the users of the bulk materials to assess the effects of pre-treatments, and also to select less dusty products, if available. It is envisaged that different branches of industry might develop their own classification schemes using experimentally determined dustiness values of the bulk materials of interest.

Although this European Standard does not discuss the analysis of dust released from bulk materials (except in terms of health-related fractions), the test method produces samples with the potential for chemical analysis of the contents.

This European Standard was developed based on the results of the European project SMT4-CT96-2074 "Development of a Method for Dustiness Testing" (see [1]). This project investigated the dustiness of 12 bulk materials, with the intention to test as wide a range of bulk materials as possible, i.e. magnitude of dustiness, industrial sectors, chemical composition and particle size distribution. Meanwhile the method has been applied to investigate the dustiness of more than 500 different bulk materials (see [2]).

TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

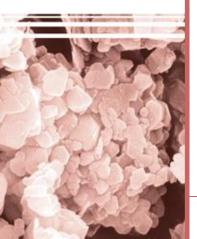
RESPONSE

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SUMMARY







DIN EN 15051-3:2014-03 EN 15051-3:2013 (E)

TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

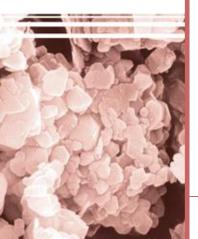
RESPONSE

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1 Scope

This European Standard specifies the continuous drop test apparatus and associated test method for the reproducible production of dust from a bulk material under standard conditions, and the measurement of the inhalable and respirable fractions of this dust, with reference to existing European Standards, where relevant (see Clause 6).

The continuous drop method intends to simulate dust generation processes where there are continuous falling operations (conveying, discharging, filling, refilling, weighing, sacking, metering, loading, unloading etc.) and where dust is liberated by winnowing during falling. It can be modified to measure the thoracic fraction as well, but this modification is not described in this European Standard. It differs from the rotating drum method presented in EN 15051-2 in that in this European Standard, the bulk material is dropped only once, but continuously, while in EN 15051-2, the same bulk material is repeatedly dropped.

Furthermore, this European Standard specifies the environmental conditions, the sample handling and analytical procedures and the method of calculating and presenting the results. A classification scheme for dustiness is specified, to provide a standardised way to express and communicate the results to users of the bulk materials.

This European Standard is applicable to powdered, granular or pelletised bulk materials.

This European Standard is not applicable to test the dust released when solid bulk materials are mechanically treated (e.g. cut, crushed) or to evaluate handling procedures for the bulk materials.





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

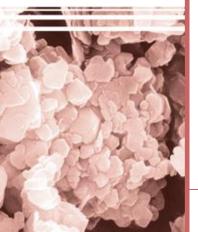
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY









TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

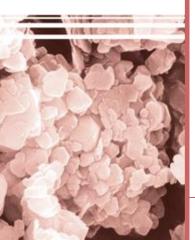
RESPONSE

THE SOLUTION

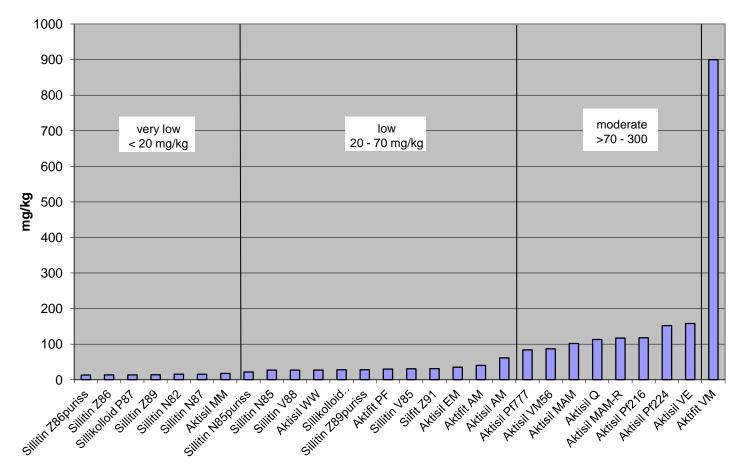
,DUSTINESS'

SDS HISTORY

SUMMARY



A-dust generation in accordance with DIN EN 15051-3







TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

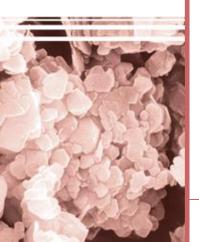
RESPONSE

THE SOLUTION

.DUSTINESS'

SDS HISTORY

SUMMARY



Based on method and measurement results we can adhere to the following facts:

- It is an EN Norm therefore it's 'State of the Art'
- It is an objective scientifically reproducible method
- Already the precursor of this norm has been mentioned in an EC Guidance Document 'as suitable to determine biologically relevant size fractions'
- The results in an impressive manner show the big difference between 'air-borne' and 'water-dispersed' situation





TOPICS

STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

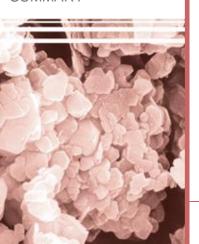
RESPONSE

THE SOLUTION

,DUSTINESS'

SDS HISTORY

SUMMARY



... and addition the most import finding is:

- The results confirmed the assumption of a strong agglomeration tendency and the fraction of respirable crypto-crystalline silica were found in the range of 0.001 to 0.06 % by weight for our whole product line.
- In conjunction with the GHS weight percentage limitation of ≥ 0.1 % by weight for hazardous substances no classification resp. labeling is required.



STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

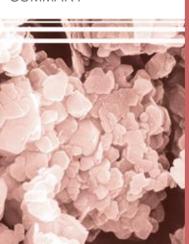
RESPONSE

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.DUSTINESS'

SDS HISTORY

SUMMARY



Appendix 2 Information and advice

- Staubentwicklung vermeiden
- Produkt enthält
 Ouarzfeinstaub
- Längerfristiges Einatmen kann zu Silikose führen
- Avoid dust formation
- Product contains respirable crystalline quartz
- Prolonged exposure to
 respirable crystalline quartz
 may cause silicosis
- P Trabalhar de maneira a levantar a menor quantidade possível de poeira.
- (T) 操作時,請儘量減少遊起粉塵。
- 出来る限り粉じんのたたないように 取り扱うこと。
- Работать так, чтобы образовывалось как можно
 меньше пыти.
- Mümkün olduğu kadar az toz kalkacak şekilde çaliş.
- P Não sacudir a roupa de trabalho suja.
- 耐磨沾污的工作服,請不要拍打。
- 制じんの付着した衣服をはたかない こと。
- Загрязненную рабочую оденду не вытряживать.
- (TA) Kirli elbiselerinin üzerine toz gidermek için vurma.

 Se não houver sistema de aspiração, usar máscaras portectoras contra poeira fina.

- 營在沒有拼氣裝置的工作環境,調整上貼應口罩。
- 集じん装置が無い場合、防じんマスクを使用すること。
- При отсутствии отсасывающих устройств необводнию использование масох для мелиси пыли.
- Emme tesisi yoksa, ince tozlara karşı, korunma maskesi tak.

PREPARATION

89, SILLIKOLLOID P 87, and their puriss grades

onal filler for elastomers, plastics, paints and varnishes, ive agents, welding electrodes, as well as in the

u) 3-3 30 neral.com

REDIENTS

s of quartz and kaolinite (natural product,

no classification no classification

e crystalline silica may cause lung fibrosis, commonly cosis are coughing and breathlessness. Exposure to dust

or rescuers.

d consult a physician.

the eyelids.



- Mur so arbeiten, daß möglichst wenig Staub entsteht.
- (GB) Keep dust formation as low as possible.
- Formez un minimum de poussière en travaillant.
- Durante el trabajo mantener el nivel de polvo mas bajo posible.
- Lavorare solo in modo che si formi la minor polvere possibile.
- Verschmutze Arbeitskleidung nicht ausklopten.
 Do not beat dust contaminated working clothes.
 - Ne battez pas vos vêtements de travail.
 - E No sacudir la ropa de trabajo usada.
 - Non shattere gli indumenti di lavoro sporchi.



- Wenn keine Absaugung vorhanden ist, Feinstaubmasken tragen.
- (38) Wear respirator where no air exhaust available.
- E Le port du masque est obligatoire dans les zones dépourvues d'aspiration.
- En las zonas sin extractores es obligatorio el uso de mascarillas.
- Se non vi sono impianti di aspirazione, usare la maschera protettiva contro il pulviscolo.



STARTING SITUATION

SYMBOL MESSAGE

CUSTOMER

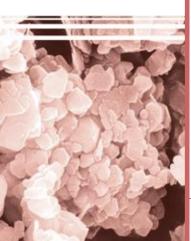
RESPONSE

THE SOLUTION

.DUSTINESS'

SDS HISTORY

SUMMARY



Produkt enthält kryptokristalline Kieselsäure

Product contains respirable crypto-crystalline silica

- Nur so arbeiten, dass möglichst wenig Staub entsteht.
- (B) Keep dust formation as low as possible.
- F Formez un minimum de poussière en travaillant.
- Durante el trabajo mantener el nivel de polvo mas bajo posible.
- Lavorare solo in modo che si formi la
- Verschmutzte Arbeitskleidung nicht ausklopfen.
- (GB) Do not beat dust contaminated working clothes.
- Ne battez pas vos vétements de travail.
- E) No sacudir la repa de trabajo usada.
- Non stattere gli indumenti di lavor o sporchi.
- Wenn keine Absaugung vorhanden ist , Feinstautmasken tragen.
- Wear respirator where no air exhaust available.
- E La port du masque est obligatoire dans les zones dépourvues d'aspiration .
- En las zonas sin extractores es obligatorio el uso de mascarillas.
- Se non vi sono impianti di aspirazione, usare la maschera protettiva contro il pulviscolo.
- Bitte beachten Sie die Hinweise im Sicherheitsdatenblatt unter www.hoffmann-mineral.com

- Trabalhar de maneira a lovantar a menor quantidade possivel de poeira.
- (TJ) 操作時、請信量減少效起相應。
- 出来る限り寄じんのたたないように 取り扱うこと。
- Работать так, цтобы образовь явалось как можно
- Mümkün olduğu kadar az toz kalkacak şekilde çaliş.
- P. Não sacudir a roupa de trabalho suja.
- (TJ) 粉磨沾污的工作服。請不要拍打。
- 粉じんの付着した衣類をはたかない こと。
- Загрязненную рабочую єденції не выпуклювать
- Kirli elbiselerinin üzerine taz gidermek için vurma.
- Se não houver sistema de aspiração, usar máscaras portectoras contra poeira fina.
- 若在沒有排氣裝置的工作環境,請戲 上防塵口罩。
- 集じん装置が無い場合。 防じんマス クを使用すること。
- При отсутствии отсасывающих устройств необходино использование масок для мелкой пыли
- Emme tesisi yoksa, ince tozlara karşi,
- Please note the advices in the MSDS at www.hoffmann-mineral.com











any

OLLOID P 87, and their puriss versions

h Article 2 § (7).

for elastomers, plastics, paints and varnishes, , and welding electrodes, as well as in the

uled out. Prolonged inhalation of large

C Directive 67/548/EC.

rade names SILLITIN and SILLIKOLLOID, is s and cryptocrystalline silica and lamellar

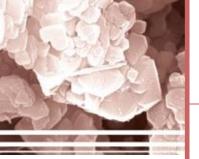
EC classification No classification No classification

ult a doctor.

ds.

HOFFWANIN HOFFMANN MINERAL GmbH & Co.KG DAIDSER/AL D-86633 Neuburg a. d. Donau

Made in Germany



STARTING SITUATION

SYMBOL MESSAGE

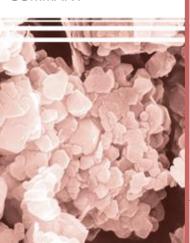
CUSTOMER RESPONSE

THE SOLUTION

.DUSTINESS'

SDS HISTORY

SUMMARY





HOREWANN

HOFFMANN MINERAL GmbH D-86633 Neuburg a.d. Donau cc +49 84 31 53-0 www.hoffmann-mineral.com info@hoffmann-mineral.com

DE GEFAHR Kiesebrde CAS-Nr. 1020665-14-8 (BG) Причиния укреждане на белите градължителна или поитаряща се инхалация. Не вдишвайте праха.

Schädigt die Lunge bei längerer oder wiedemoker Inhallstion Staub night eigetnen. Belliftung Atemachutz

FARE Kiselord

inhelation. Stavet må ikke indån

Alá hengitű pölké.

Ved utilistrækkelig udjuftning.

VAARA (T) Kvarisi CAS-nro 1020665-14-8

Käytä hengityksensuojainta, jos Brierweitto on rittämätön.

esetén károsítja a tüdőt,

Nem megfelelő szellőzés esetén légzésvédelem kitelező,

KR 설리카 설리카 GASHO 1025665-14-8

GEVAAR

Bij antoereikende ventilatie een

Nu inspirați praful. În cazul în care vertilerea este

Pri dhãoj alebo spakovanoj inhallici

V prípade nedostatočného vetrania, používojte ochranu dýchacích ciest.

protecție respiratorie.

Newdychulte predu

geschilde adembescherming dragen.

(NL)

(RO)

장기간 노출되거나반복적으로 흡입하 던 페에 손상은 중니다.

HU VESZÉLY Kovařůki CAS-az,: 1020665-14-6

EE OHT Rinimuld CAS-ns 1020665-04-8 Skadeligt for lungerne Imagenevarende eller gentagen

средства.

CAS nr 1020#65-14-8 Kehjustab kopsu pikacjalisel või korduval inhalteerimisel. Tolmu mitte sisse hingata. Chapileava ventilatelooni torral kanda lingamisteede kaltsevahendeid.

опасно

Еслучай на люца вентилация

несете респираторни гредпазни

Кварцова пръст САЗ-№ 1020055-14-0

PR DANGE... Silice n° CAS 102065-14-8 Plaque avéré d'affets graves pour les poursons à la suite d'inhalations népétées ou d'une inhelation prolongée. Ne pas respirer les poussières. Lorsque le ventilation du local set

insuffisante, porter un équipement de protection respiratoire.

سياسيوم. شدره / CAS: 1629865-14-8 در صورت استثمام طراحي يا سكر موجب اسي. Hosszabb vagy ismé**dő**dő be**lél**egzés and and do أز تقلس قبار از پرديز كايد." در صوری میم بچود کهریه کافی از ماسک تافسی استاناده کاید

APDRAUDĒJIMS Titnagžemis CAS-Nr. 1020065-14-8 Bjeeni Briks, juo kvėpuojant ar dažnai įkvepiant gali pažeiati plaučius, черкуера аифау, Esant epakankamam védisimul, naudoli kvépavimo taky apasugos 통풍이 불충분한 경우에는 마스크를 착

> ADVARSEL Kise@ord CAS-No. 1020165-14-4 (ND) Stader lungene ved gjenntatt

ML Klazelpuur CASev. 1000466-14-8 Veroorzaakt longkeschadiging bij langduriger of hehaddelijke inhalatie. imånding over lengre tid. Pust likke inn støvet Bruk munnbeskyttelse ved utlistrekkelig lufting.

PERÍCOL Pármint empcos nr. CAS 1020885-14-8 Officho Remesen, per Ne CAS 1020165-14-8 (RU) Provoscă leziuni de plămânilor în caz de inhelere prekugită sau repetată, Вреден для легких при длительном или неодинкратном ванхании. Едыхание пыли не допускается, insuficientă, purtați echipament de Пои непостаточной вентилянии использовать средства защиты ерганов дыхания, SK NEBEZPEČIE Kremajinová zamina & CAS, 1020095-14-8

priemones,

65m 65m CAS-Nr, 1020985-14-8 (H) ทุ่งกุรปฐลหากมีการสูงสมเป็นเวลานาน หรือต่อเนื่อง ท่ายหายใจเลาผู้และเข้าไป ในกรณีที่มีการระบายยากาศไม่ดี ให้สวน หน้าการเมืองกัน

CN 危效 磁第± CAS No. 1020665-044 长时间吸入或反复吸入可损伤溃疡。 通风不足对清無數呼吸防护器。

— رمار السيليكاء رقم التخصيص الكيماري رهم المسيوع ارمم المعصوص الموجودي 102965-14-4 / (CAS) ناصر الدون في عاله الاستثماق الطويل أو الفكون لا تتقس الدول *

GB DANGER
SEcous Earth
CAS # 1020665-14-8 Do not breathe dust. In case of inadequate ventilation was respiratory protection.

| PENICOLO | Silico | No. CAS 1020665-1446 voce denni ai polmoni in caso di inalezione prolungata o ripetuta, in caso di ventilizzione insufficiente utilizzare un appareochio respiratorio,

LV PAVANO Salicija smilja CAS-Nr. 1020665-14-4 Izraisa plitutu bojājumus, ja ligstoti Netee purputedus, Neatbilistešas ventilācijas gadījumi. izmantot pizmasku,

PAVOJUS

PL NIEBEZMECZEŃSTWO Krzemionka w CAS 1020666446 Powoduje uszkodzenie płuce popcez długotrwife bib powtarzane wdychanie. Nie wdychać pyłu. W przypatku niedostatecznej wentylnoj stosować indywidualne śradki ochrony dróg oddechowych,

SII FARA RIsegora CAS-nr 1020685-14-6 Skadar Engoma vid upprepad eller lingre tids inandning. Andas into in damn. Använd andningsakydd vid otlinicelig westflation.

TEMLIKE Sign) Toprak CAS-Nr. 1020865-1440 Uzun sürdi veye teknadeyen inhalasyon (içine çekme) durumunda akcigertede hasara neden olur. Tozu teneffüs etmeyiniz. Yetensiz tavalandamada solunum koruyucumaske kullaremeedir.

N and SILLIKOLLOID. alline silica and

No.1020665-14-8 with

nd their puriss grades

plastics, paints and welding electrodes, as

ation H 372 ation ation

PELIORO Tierrasilicas H* CAS 1020965-14-8 Provoce deños enlos pulmones tras

NEBEZPEČÍ

Při de**l**ší nebo apekované inhelac

V officedě pedcetstečného větníní

používejte vybavení pro ochranu

potrozouje přice. Nevdechujie prach

dichaclch cost.

Křemdinová zemína č. CAS, 1020665-14-8

(cz)

inhalación prolongada o repetida. No respirar el polvo. En caso de ventilición insut levar equipo de potección respiratoria.

GR ΚΊΝΔΓΝΟΣ Διοξμόδιο του παριπίου CAS-άρεξ 1020665-14-6 Προκοιλεί βλάβες στους τροείματος

τροκολεί βλάβες στους τουέρι ύστερα από παρατεταμένη ή επανειλημμένη εκτινοή Μεν ακοπείου στ Μεν ανατινέετε σκόνη. Σε περίπουση εννταρκούς αερισμού, να φοράτε μέσα εταμικής προστασίας της αναπνοής.

施院 シリカ CAS No. 1020665-14-8 長期間または繰り返し収入すると、 総を寄します。 粉塵を表入しないでくだ さい。 素気状態が悪い場合は、保護マ スクを着用してください。

Silika no, CAS 1020965-16-8 Merosakkan paru-paru jika disedut untuk tempoh berpanjangan atau berusengan, Jangan menyedutdebu. Gunakan perindungan bernafas jika

pengeliran udara tidak cukup.

PERIOD Terra siliciona n.º CAR 1020666-14-8 roca danos nos pulmões após inaleção prolongada ou repetida. Não inelar pô. Em caso de vertiligão inadequada, usar protecção respiratória,

MEBEZPEČENSTVO RITEMBRA BL CAS 1020885-14-8 Pri daţilem ali poravijajočem se vdihovenju škodi pljučem, No vdihovati prahs. Ob nezadostnem prezi potenti ya zasi/ito dibali

Rái ro Dá trấm tích (Diatomit) CAS-8c, 1020865-14-8 Gây thiệt hại cho phối nếu như hít vào lầu hoặc nhiều lần, Bui xin d'ûng hit vio. Sử dụng bộ phận báo vệ hai thể khi không khi không thoáng đầy đủ,

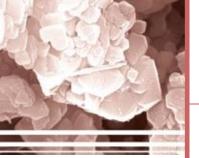
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STARTING SITUATION

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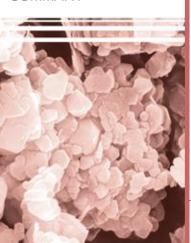
RESPONSE

THE SOLUTION

.DUSTINESS'

SDS HISTORY

SUMMARY



HOFFMANN

his so artieten, dass möglichst wenig

Staub entsteht. Verschmutzle Ameriskledung nicht ausklaphen. Wenn

de Hinveise im Sicherheitsästenblat unter

DK Niseljord Sergifor at entejde sådon, at der opstår

reindet muligt stav. Themadeal arteajdelej reåldese bankes rent, HAN der Rice

forefindes udsugning, stal der baires findezmasie. Felg anvisningerre på

sikterhedsbiedet, som findes på vww.hoffmann-mineral.com.

ою каулетачтага, кауга

HU

KR

hienos uocatinnaamana, Noucata

cs offeeds was fufficient-niness con

Kovatshi

Cask ügydelgezren, hegy a leheld

legkevesebb por keletkezzen. A szennyezett munkanuhat se rázza ki

Ha ninec elezivice, finan per elleni vedim saakot kell hasanáni. Vegye

cim en talainato biztonsasi aduttas

원건 경기자상을 확인하시기 바랍니다.

DE)

HOFFMANN WINERAL GHISH D-80633 Neuburg a. d. Doneu 12-443 84 31 53-4 www.hoffmann-mineral.com









Епорцена пръст Работете така, че да се обратува полновно най-милко прак. Не истуга айте замърхеного работне облекля. Ако не е beine Absaugung vorhanden bt. Harreup screpsupit Hocerte escrep to Perinteutrinisten tregen. Dite beecitien 3ie ingez. Marin, szevere riggis-interese. налице вспусками, населе насел за финуказаниета в информационния лист за Берепроцест на учни heffin ann.

mineral, com EE) Kasala 150võtaid, mis tektlavad võimalikul viite folmu. Mitte ideppida (e trez viiija: lödriete tr. Kul puydub väjalfinterertlantion, kareantonadi. Palun takutotechuluskamiga www.hoffmam-mineral.com.todulehel.

Pimas
Tylokontide nin, oti i syriyy
nahdolisimman vihän pityli. Älk tonuta
likontuncia tylyosillolla. Elei peldolmuna Torre do sili couse Fravaller de manière à produire le moire de pousière possible. Ne pas froiter la pouraitre sur les véterrents de travail. Sit r'ya pas demekanismo caspiration disponine, penerun masque, S'il veus plat. respecier les indications de la fiche de Nytwan kauttiturvallauudi edatteen sheila. donné sa de sécurité disponible sur : www.troffmarr-nineral.com

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Konmenter

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อยาจบรุกสามาเพียกโหก ทำใหม่เครื่องอยล์ขโหโซ โปซอสกมหรัฐภาค

Autoritus econdizionementologia commissammalmento doctorio

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Dirbitte laio, kad citu kap maron a maticu 가능하면 먼지가 생기지 않도록 작업하시기 난합니다. 먼지에 무용된 작업적은 취欠이 할아내가 바랍니다. Jel stutaina mechanizma nère dévétite veido liquire, Afirmipiole demes (화용기가 됐다면 방점다스트를 작용하십시오.그리고 다음 원리턴 점이지 informacją osugos duomenų lape, kur enminuot.com# 4 BB

Ricretagette Einsterd Werk zodang dat er zo min mogeljk stof Atteid på en elk måle af det bir då He stav ontstaat. Vervalide workkleding niet som mulg. Hitto stårbank stev et av stittart uttlugger. Als er geen stauging voerhanden is, most een it jezietnissier gedragen werden. Gelleve de kritisches ap mekanist avoug, má éu bruito analidismasks. Let informationerhet veiligheidsinformatiabled onder vow/teffmann minoral sem in auhi te alkforteladelabladene og avertold delte www.hoffmarrymineral.com.

RO RU Pimint silicies Lucreaga infrun mod in care produce cat Policing a company on, violate commissions and ma putri praf posibil. Nu atinget harrere de foculmentare. Il casul inicare nu exista un VANICACINE PLAN. TERMENTATION IS ребочей одскихи. В эторговые выпосной. mecanium de espirare dispenbil purial o DESTRUCTION OF THE PROPERTY AND ADDRESS OF THE PERSON OF T russes. Va rusan sa respectati informatile от меляодистврогой пыли. Обизательно dirifica tehnica de securitate. www.hoffmane-minerats.com соблюдень янструкция, садаржащихся в поскорная бакаживность, конторые выхолени ne appeor www.hofferann.mn.eral.com. d

SK) Kremelins Pracujta lentak, aby vzrádo co ragnarej practu. Znacistany pracovny oday nevytrepávajte. Akrile je ir dispozicili odnimenio, nosta manky na zestytimenio jeroretro prestiu. Plastie se informiscani uvedenjimi v kase bezpečnostných údajov na www.hoffmann-mineral.com.

CN) 作中語可能描述後意識生。 建布赖拉莱拉纳的工作数。 石榴用来集盘的梯、清晰和沙漠在月。 HUBS years beffer on a heral con-

超高中型含省外表中1000年。

نسيتين القرار بالمار اللات بعيث تتاون تحرة العام التائدة قبال

Silicogus Earth Viers in a way that produces as little dust as pessible. Do not heat first out of work clothing. If there is no suction mechanism available, wear a taxe mask, Pleask observe the information in the safety data

IT Torra milicoa Leverare in mode che si forni mera policee طور می نانز کماید که دانند اسکان کرد و خوار کسی possible: Non believe gl indumenti sporchi. پوماد شود. کیدن عارض و ا که آونه همه باشد، مخاطیه indossore or aschere per poliver sofilisin accords diction of expirations Attenues مثلوه عران سال برسية مكتم لوية شياليا. ا ale indication contenule reta scheta dati سنت زيز کرد سنت عور غطا په بستور بديرگ d sicurezza reperible al sito monufulfinano شخصنات پختر که در سایت mineral com

> LV Diffeja dioksids Strada let ta, lai pèc lespejas mazar sacellu deben. Je darbe: vieta ner galba rassiceje, valkajiet sejas masku izlasiet tredibas dalulasek INFWERE CORL

Kronmontes Practival Michae, alsy powitavan resilibile mate gyts. Nie trasped orberdatay. Dersom del sole entretallent nee i zabrudzeniej odzieży rzboczej. Jeziel nie mie wicagu, nesić nastę ochrane perectivoulous. Naledy provetrosca: nakazówa k zawadych w karde charakterystykt pod seresem nave hoffmarn-inneral com.

> SE Arbete affild på et abcart sitt at del bildes selite damini som mong, skana irresmusiga arbetelder rena. Om ultug seknes använd ellid federmonask. Beakla anvisningema i säkerhetsdafabladel på www.hoffmam-minera.com

Sit of Toursk Münkün ologunta az tez oluşacak şelebi çalışılmakçır. Kırlılş ebiselerrin topunu vurant ciliameya calsmayn. Taz emme tertibali maveul doğil be ince toz massest butern. LODen www.hoffsannmineral.com attinda belunan güvenlik bilgi. figmunduki usanları dikkate alıs

Pracuje jen lek, stry vznikalo co možsé neiměně prachu. Znedištěrý pracovní oděv nevyklepávejte. Pokut rom t dispozici edistryini, poultivette respiratory. Postuguite profe pokynů v bezpečnostním detovém listuria www.hoffmarn-mirerst.com.

Tierra sificaa Trakajar únicamente de modo que se الميز الميل المدار المواقع المواقع المواقع الميز الميل المدار المواقع المواقع

> Διοξείδιο του πυρείου Epocial and reference and retained ratios was δημοιργοίου ηλικότρη δικασή στότη. Μη выділи зарода (ріпліос Few Sey unage to Suvenienna anapedien and disprint uderant work on: Attests earliers. magaine and alleian are imposlible. week to finance mineral com-

JP シリシャスアース 対象対象リはこいを立てない相に作業し CTさい、作業重切られを向かるべく (オニーム収入装置が弾に場合け) 特徴でスクを各角してのされた 以下のサイトに記載される安全性デー 上の注意事項を守っていたとし、 www.hoffmann-mineral.com

Oliverus Cath erya carrigan semiganian, supaya sedál) deta "aliceous varti" sas yang akan dinasi. Jangan merasai palasan palasa yang terleba dabu "akisa sas sasth". Aka tidak terdapat elesin pengudakin, sila memaha: masik dan gogal perlindungan. Harap maklum makonnat matem Eriod an Outo Kessternatun

Torre officions Catalus só de modo a que ce forme o minimo possivel de pé. Não secudir vestuare de inspetto sup. Se não touver un sistema de absorção, usar mascaras para po fino. Por favor oceanie as Indicações na ficha de dados de segurança en vowhoffmann-mineral.com.

Kromanka Rovnejte teks, de be din manj prederja. Ne stresage pratu iz celovnih eblacit. Ce ri sistema za odsesovanje, uporabljajte zatičitne menke za fri p vih Upottovajlo sapdike v varnostnem listu, ki jit nejdele ne www.hoffreamminerel.com

Khoảng chất Glica Theo tac climital do gay to building it cang tit. Không nên phú rá áo quân tare việc đã là hám tưi. vec de gi sam su. Hillumtur militam việc không có giản hệ thống họi tuyth xin máy mang một ngo bộcg byi. Xin vu lớng tham khác các hưởng dân trong lời liệu MSDS tại đã chi .ITIN and up of amorphous and

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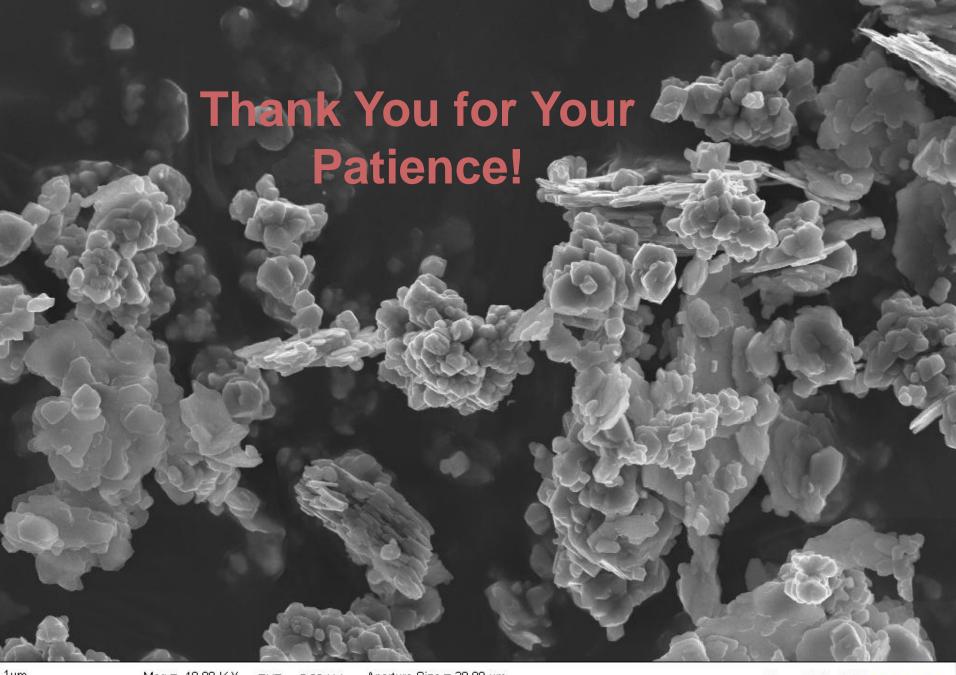
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1µm

 $Mag = 10.00 \, KX$ WD = 3 mm

EHT = 5.00 kV

Aperture Size = 20.00 µm

EHT = 5.00 kV Aperture Size = 20.00 µm LEO 1525 Date :30 Oct 2008 Signal A = InLens File Name ©370150 All rights 628 eryed y Hoffmann Mineral GmbH, Neuburg Zentrum für Werkstoffanalytik Lauf