SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Test dust in accordance with ECE R 45 Annex 4 Section 2.1.1

UFI: V800-P0U8-2002-TN0U

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

Use of the substance/mixture

Test dust

1.3. Details of the supplier of the safety data sheet

Company name:	KSL staubtechnik gmbh	
Street:	Westendstraße 11	
Place:	D-89415 Lauingen	
Telephone:	+49 (0) 9072 95 00-0	Telefax: +49 (0) 9072 95 00-50
E-mail:	info@ksl-staubtechnik.de	
Contact person:	Dr. R. Stadler	Telephone: +49 (0) 9072 95 00-0
E-mail (Contact person):	info@ksl-staubtechnik.de	
Internet:	www.ksl-staubtechnik.de	

1.4. Emergency telephone number:

+49 (0) 9072 / 95 00-0 (Availability: Mon-Thu 08:00-16:00, Fri 08:00-12:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

STOT RE 1; H372

Full text of hazard statements: see SECTION 16.

Causes damage to the lungs through prolonged or repeated exposure by inhalation.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Quartz powder

Signal word: Danger

Pictograms:

Hazard statements

H372	Causes damage to organs (lung) through prolonged or repeated exposure if inhaled.

Precautionary statements

P260	Do not breathe dust.
P264	Wash Hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P284	In case of inadequate ventilation wear respiratory protection.
P314	Get medical advice/attention if you feel unwell.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

The product is an inorganic substance, does not fulfil the criteria for PBT and vPvB substances according to Annex

XIII of REACH Regulation 1907/2006/EC.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
14808-60-7	Quartz powder			88 %
	238-878-4			
	STOT RE 1; H372			
16291-96-6	Vegetable carbon dust			10 %
	240-383-3			
9004-32-4	sodium carboxymethylcellulose			2 %

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
9004-32-4		sodium carboxymethylcellulose	2 %
	oral: LD50 = >2500 mg/kg		

Further Information

This product contains more than 10% respirable quartz and is therefore classified as STOT RE1.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

If symptoms persist, it is advisable to consult a doctor. Tell the doctor what substance/product was involved and what measures were taken.

After inhalation

Provide fresh air. Dust from the throat and nose should be removed quickly. If symptoms such as discomfort, coughing or persistent irritation occur, consult a doctor. Inhalation should generally be avoided.

After contact with skin

Wash off with soap and water.

After contact with eyes

If necessary, remove the contact lens and rinse the eye under running water with the eyelid open to remove all particles. If possible, use isotonic eye solution (0.9% NaCl). Do not rub the eye dry, as additional corneal damage is possible due to the mechanical stress.

After ingestion

Rinse mouth thoroughly with water.

4.2. Most important symptoms and effects, both acute and delayed

Repeated inhalation of larger quantities over a longer period of time increases the risk of lung diseases (silicosis). The main symptoms of silicosis are coughing and breathing problems / shortness of breath. May cause eye irritation (due to exposure to foreign bodies).

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

No special measures are known.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam , Water mist

Unsuitable extinguishing media

none

5.2. Special hazards arising from the substance or mixture

The subcomponent "vegetable carbon dust" (10% admixture) may cause dust explosions.
In the event of a fire, this component can produce carbon monoxide and carbon dioxide when combined with oxygen.
The overall product has not been rated.

5.3. Advice for firefighters

none

Additional information

No measures are necessary as the mixture is non-flammable.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Avoid dust formation. Wear protective clothing as described in Section 8. Follow the instructions for safe handling as described in Section 7.

For emergency responders

Emergency plans are not required. However, respiratory protection is necessary in case of high dust exposure.

6.2. Environmental precautions

No special environmental measures are necessary.

6.3. Methods and material for containment and cleaning up

For containment

Avoid generating dust.

For cleaning up

Inhalation should generally be avoided. Avoid dry sweeping. Use approved spray and suction systems for cleaning. Use personal protection equipment.

Other information

Blowing off for cleaning purposes is not permitted.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid dust formation and accumulation. Handle packaged products carefully to prevent the packaging from bursting. Areas where dust is generated must be equipped with suitable ventilation systems. If the workplace atmosphere is not sufficiently dedusted, wear suitable respiratory protection (in accordance with EN 143). Gloves according to EN 374 are recommended.

Advice on protection against fire and explosion

Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.
Hot product develops combustible smouldering gases. Smouldering gases can form explosive mixtures with air.
The NaCMC component is self-igniting at temperatures > 210°C. The risk of a dust explosion cannot be ruled out.

Advice on general occupational hygiene

When using do not eat, drink or smoke. Wash hands after use/contact. Wear a dust mask and safety goggles in dusty atmospheres.

Further information on handling

Measures to prevent aerosol and dust generation : Only sweep with a suitable broom. For cleaning, use suitable methods such as vacuum suction that are as dry as possible and do not cause dust to form.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a dry place, tightly sealed, preferably in the original container.

Hints on joint storage

Keep away from food and beverages.

Further information on storage conditions

No special measures are necessary.

7.3. Specific end use(s)

Use appropriately and sparingly with suitable test equipment depending on the intended use. No additional information is available for the specific end uses (see section 1.2).
Further information can be found in the guide to good practice on protecting workers' health through good handling and use of crystalline silica and products containing it (see section 16).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Appropriate engineering controls

Avoid dust formation. Use of closed processes and local extraction equipment to keep the dust concentration below the permissible exposure level. Use a ventilation system if there is a high proportion of dust in the air. If dust formation cannot be avoided, the dust content of the air must be kept below the exposure limit values by ventilation. Application of organisational measures, e.g. by keeping people away from dusty areas.
Recommended measurement methods for workplace measurements: See publication series of the Employer's Liability Insurance Association.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear closed safety goggles in accordance with EN 166 if dust is generated.

Hand protection

People who suffer from dermatitis or have particularly sensitive skin should take suitable protective measures (e.g. wear gloves or use protective cream). Wash hands before breaks and after work. Gloves according to EN 374 are recommended.

Skin protection

No personal protective equipment is necessary when used as intended. Handle the product in accordance with the safety instructions.

Respiratory protection

Install effective extraction and / or ventilate sufficiently. If the permissible exposure limit values are exceeded at the workplace, a respirator mask must be worn that complies with the applicable EU or national regulations (e.g. particle filter P2 or P3 in accordance with EN 143).

Thermal hazards

Hygiene measures: Do not eat, drink or smoke at work. Wash hands and shower if necessary before breaks and at the end of work. Avoid contact with eyes and skin. After work, workers should wash or shower and use skin care products. Clean contaminated clothing, shoes, watches, etc. before reuse.

Environmental exposure controls

See also sections 6 and 7.
Air: Avoid drifting due to wind. Compliance with the dust emission limit values in accordance with the Technical

Instructions on Air Quality Control.
Water: Waste water and groundwater supply must be observed.
Soil: Compliance with the Federal Soil Protection Ordinance. No special control measures required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Powder solid
Colour:	grey
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not applicable
Flammability:	not applicable
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Flash point:	not applicable
Auto-ignition temperature:	not applicable
Decomposition temperature:	not applicable
pH-Value:	not applicable insoluble
Viscosity / kinematic:	not applicable
Water solubility:	not applicable

Solubility in other solvents

The NaCMC component is soluble in water and alkalis, forming viscous solutions.

Partition coefficient n-octanol/water:	not applicable
Vapour pressure:	not applicable
Vapour pressure:	not applicable
Density:	undeterminable
Relative density:	undeterminable
Relative vapour density:	not applicable
Particle characteristics:	X50 value: 0µm - 300µm

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive. The subcomponent "vegetable carbon dust" (10% admixture) may cause dust explosions.

Oxidizing properties

The product is not: oxidising.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Moisture and water during storage can lead to clumping and loss of product quality. The following applies to the

NaCMC component: Risk of combustible smouldering gases forming at temperatures >215°C / heating >50°C.

10.5. Incompatible materials

strong oxidising agents

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
9004-32-4	sodium carboxymethylcellulose				
	oral	LD50 >2500 mg/kg	Rat	Supplier	

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

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

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (Quartz powder)
May cause silicosis, a dust lung disease, through repeated exposure.

Aspiration hazard

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

Information on likely routes of exposure

Dust can cause irritation to the eyes and respiratory tract (due to foreign bodies).

Practical experience

Chronic effects with prolonged exposure: This product is contaminated with more than 10% respirable quartz and is therefore classified as STOT RE1 according to the criteria defined in Regulation (EC) No 1272/2008. Prolonged and/or intense exposure to dust containing respirable crystalline silica may cause silicosis. This disease is a nodular pulmonary fibrosis caused by inhalation and deposition of mineral dust. In 1997, the International Agency for Research on Cancer (IARC) concluded that occupational exposure to crystalline silica can cause lung cancer in humans. However, the IARC qualified that this does not apply to all forms of exposure or all types of crystalline silica. (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans from Chemicals, Silica, Siliceous Dusts and Organic Fibres, 1997, Volume 68, IARC, Lyon, France). In 2003, the EU Scientific Committee on Occupational Exposure Limits to Chemical Agents (SCOEL) concluded that the main effect of inhalation of respirable crystalline silica dust in humans is silicosis. "There is sufficient information to conclude that there is an increased relative risk of lung cancer for people suffering from silicosis. People working in quarries or in the ceramics industry who are exposed to silica dust but do not suffer from silicosis are obviously not affected by this increased risk of lung cancer. It can therefore be assumed that avoiding silicosis also reduces the risk of cancer..." (SCOEL SUM Doc 1994-final, June 2003). There is therefore ample evidence that an increased risk of lung cancer is limited to people who already have silicosis. The protection of workers from silicosis should be ensured by adhering to the occupational exposure limits set by the authorities and, if necessary, by implementing

additional risk management measures (see section 16).

11.2. Information on other hazards

Endocrine disrupting properties

There are no known endocrine-disrupting properties or other harmful effects.

Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]|[d]	Species	Source	Method
9004-32-4	sodium carboxymethylcellulose					
	Acute fish toxicity	LC50 >21000 mg/l	96 h	Salmo trutta fario (L) (Freshwater trout)	Supplier	OECD 203

12.2. Persistence and degradability

The product has not been tested.
Quartz is not biodegradable.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
9004-32-4	sodium carboxymethylcellulose			
	DOC reduction OECD 302B	10-30%	28	

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Pick up the product dry. Avoid dust formation.
Can be disposed of in accordance with local authority regulations. If necessary, coordinate disposal with the local authorities.

Contaminated packaging

Discuss the exact waste code with the waste disposal company.
010410 - dusty and powdery waste
150106 - mixed packaging according to material recycling

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Downstream user conditions or monitoring arrangements:

The product is not subject to the registration requirements of EC Regulation 1907/2006 (REACH).

Information according to Directive 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	- - non-hazardous to water

Additional information

TRGS 500 , TRGS 510 , TRGS 559 , TRGS 900 , TRGS 906 , Technische Anleitung zur Reinhaltung der Luft (TA-Luft), Regulation on occupational health care (ArbMedVV) , BG principles for occupational health check-ups

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

STOT RE 1: Specific target organ toxicity - repeated exposure, hazard category 1

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
EC/EEC: European Community/European Economic Community
EU: European Union
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
M-factor: Multiplying factor
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
DGR: Dangerous Goods Regulations
ICAO: International Civil Aviation Organization
TI: Technical Instructions
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Key literature references and sources for data

We refer to information provided by raw material suppliers/manufacturers and the ECHA database on classification and labelling as sources for the most important data and technical information.

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
STOT RE 1; H372	Calculation method

Relevant H and EUH statements (number and full text)

H372	Causes damage to organs (lung) through prolonged or repeated exposure if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.

Further Information

The information in this safety data sheet describes the safety requirements of our product and is based on our current state of knowledge. It does not constitute a guarantee of product properties and does not establish a contractual legal relationship. This safety data sheet is intended solely as a source of information for the user. It has been compiled with the utmost care; however, no guarantee can be given for the accuracy of the data, nor can any liability be accepted for the consequences of printing, typesetting or transmission errors. Existing laws, regulations and rules, including those not mentioned in this data sheet, must be observed by the recipient of our products on their own responsibility.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)