

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

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

1.1 Product identifier

Trade name : CLAYTONE-IMG 400

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

Use of the Substance/Mixture : Rheology Additive

1.3 Details of the supplier of the safety data sheet

Company : BYK-Chemie GmbH
Abelstrasse 45
46483 Wesel

Telephone : +49 281 670-0
Telefax : +49 281 65735

Information : Regulatory Affairs
Telephone : +49 281 670-23532
Telefax : +49 281 670-23533
GHS.BYK@altana.com

1.4 Emergency telephone number

GBK Gefahrgutbuero GmbH, Tel. +49 6132 84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

The product contains less than 1% w/w RCS (respirable crystalline silica) as determined by the SWERF method. The respirable crystalline silica content can be measured using the "Size-Weighted

CLAYTONE-IMG 400

Product code: 00000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

Respirable Fraction – SWERF[®] method. All details about the SWERF method is available at www.crystallinesilica.eu.

Depending on the handling and use (grinding, drying, bagging), airborne respirable dust may be generated. Dust contains respirable crystalline silica. Prolonged and or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable dust should be monitored and controlled. The product should be handled using methods and techniques that minimize or eliminate dust generation.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical nature : Organophilic phyllosilicate

Hazardous components

No hazardous ingredients

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

If breathed in, move person into fresh air.
- In case of skin contact : Wash off with soap and plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

CLAYTONE-IMG 400

Product code: 00000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water mist
Foam
Dry chemical
Carbon dioxide (CO₂)

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Dust can form an explosive mixture in air.
Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Take measures to prevent the build up of electrostatic charge.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid dust formation.

6.2 Environmental precautions

Environmental precautions : No special environmental precautions required.

Try to prevent the material from entering drains or water courses.

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Avoid spillage on floor as the product can become very slippery when wet.

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : No materials to be especially mentioned.

Other data : Keep in a dry place. No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Quartz (SiO ₂)	14808-60-7	TWA (Respirable dust)	0,1 mg/m ³ (Silica)	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for			

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

	<p>sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used</p>
--	---

Further occupational exposure limits

Description	Value type	Control parameters	Basis
dust of any kind The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used	TWA	10 mg/m ³ Inhalable	GB EH40
The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means	TWA	4 mg/m ³ Respirable	GB EH40

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
---	--	--	--

8.2 Exposure controls

Personal protective equipment

- Eye protection : Safety glasses
- Hand protection
Material : Protective gloves
- Skin and body protection : Protective suit
- Respiratory protection : No personal respiratory protective equipment normally required.
- Protective measures : Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

Environmental exposure controls

- General advice : No special environmental precautions required.
Try to prevent the material from entering drains or water courses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : powder
- Colour : off-white
- Odour : odourless
- pH : No data available
- Melting point/range : Not applicable
- Boiling point/boiling range : Not applicable
- Flash point : Not applicable

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

Evaporation rate	: Not applicable
Upper explosion limit	: Not applicable
Lower explosion limit	: $\geq 0,05$ g/l
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Relative density	: No data available
Density	: No data available
Bulk density	: 1,40 - 1,80 g/m ³
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: Not applicable
Viscosity	
Viscosity, dynamic	: Not applicable

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable at normal ambient temperature and pressure.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid : No data available

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

No decomposition if stored normally.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Remarks: No data available

Components:

Alkyl quaternary ammonium bentonite:

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: May irritate eyes.

Components:

Alkyl quaternary ammonium bentonite:

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation
GLP: yes

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

Alkyl quaternary ammonium bentonite:

Test Type: Buehler Test
Species: Guinea pig

CLAYTONE-IMG 400

Product code: 00000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

Germ cell mutagenicity

Components:

Alkyl quaternary ammonium bentonite:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Repeated dose toxicity

Product:

Remarks: No data available

Components:

Alkyl quaternary ammonium bentonite:

Species: Rat, male and female
NOAEL: > 1.000 mg/kg
Application Route: Oral
Exposure time: 28 d
Method: OECD Test Guideline 407
GLP: yes
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Further information

Product:

Remarks: This product contains <3% crystalline silica. The respirable crystalline silica as determined by the SWeRF method is <1% w/w. See section 2.3

SECTION 12: Ecological information

12.1 Toxicity

Product:

CLAYTONE-IMG 400

Product code: 00000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Components:

Alkyl quaternary ammonium bentonite:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: Tested according to Directive 92/69/EEC.
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): > 1.000 mg/l
Exposure time: 72 h
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

Toxicity to bacteria : EC50 (activated sludge): > 300 mg/l
Method: OECD Test Guideline 209
GLP: yes

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

Alkyl quaternary ammonium bentonite:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301B
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

12.4 Mobility in soil

Product:

Mobility : Remarks: Bentonite is almost insoluble and thus presents a low mobility in most soils

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

Components:

Alkyl quaternary ammonium bentonite:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..

12.6 Other adverse effects

Product:

Additional ecological information : Remarks: No data available

Components:

Alkyl quaternary ammonium bentonite:

Additional ecological information : Remarks: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

CLAYTONE-IMG 400

Product code: 00000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances
Not applicable

15.2 Chemical Safety Assessment

Surface treated substance. Direct registration is not required. ECHA FAQ 6.3.8

SECTION 16: Other information

Further information

Training advice : Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Other information : Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial

CLAYTONE-IMG 400

Product code: 000000000000314417

Version 1.1 SDB_GB

Revision Date 20.07.2015

Print Date 23.08.2017

circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (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)

According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.