

Page 1 of 18 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 29.09.2020 / 0017 Replacing version dated / version: 18.07.2019 / 0016 Valid from: 29.09.2020 PDF print date: 09.02.2021 Keramikpaste

### Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### **1.1 Product identifier**

### Keramikpaste

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

Lubricant

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Sector of use [SU]: SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU21 - Consumer uses: Private households (=general public = consumers) SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Chemical product category [PC]: PC24 - Lubricants, greases, release products Process category [PROC]: PROC 1 - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. PROC 2 - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC 7 - Industrial spraying PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC11 - Non industrial spraying Article Categories [AC]: AC99 - Not required. Environmental Release Category [ERC]: ERC 4 - Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC 7 - Use of functional fluid at industrial site ERC 8a - Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC 8d - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) ERC 9a - Widespread use of functional fluid (indoor) ERC 9b - Widespread use of functional fluid (outdoor) Uses advised against: No information available at present.

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

LIQUI MOLY GmbH Jerg-Wieland-Str. 4 89081 Ulm-Lehr Tel.: (+49) 0731-1420-0 Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number Emergency information services / official advisory body:

#### Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)



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#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture Classification according to Regulation (EC) 1272/2008 (CLP) Hazard class Hazard category Hazard statement Skin Irrit. 2 H315-Causes skin irritation. Aquatic Chronic 3 H412-Harmful to aquatic life with long lasting effects. Aerosol 1 H222-Extremely flammable aerosol. Aerosol 1 H229-Pressurised container: May burst if heated.

#### 2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

H315-Causes skin irritation. H412-Harmful to aquatic life with long lasting effects. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children. P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211-Do not spray on an open flame or other ignition source. P251-Do not pierce or burn, even after use. P280-Wear protective gloves. P332+P313-If skin irritation occurs: Get medical advice / attention. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

P501-Dispose of contents / container to an approved waste disposal facility.

Without adequate ventilation, formation of explosive mixtures may be possible.

#### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0.1 %).

In case of spreading near the ground, flashback to distance sources of ignition is possible.

#### **SECTION 3: Composition/information on ingredients**

### Aerosol

## 3.1 Substances

3.2 Mixtures	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	
Registration number (REACH)	
Index	
EINECS, ELINCS, NLP	921-024-6 (REACH-IT List-No.)
CAS	
	-



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content %	15-<20
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225
	Asp. Tox. 1, H304
	Skin Irrit. 2, H315
	STOT SE 3, H336
	Aquatic Chronic 2, H411

Titanium dioxide (in powder form containing 1 % or more of particles	
with aerodynamic diameter <= 10 µm)	
Registration number (REACH)	01-2119489379-17-XXXX
Index	022-006-002
EINECS, ELINCS, NLP	236-675-5
CAS	13463-67-7
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Carc. 2, H351 (as inhalation)

Impurities, test data and additional information may have been taken into account in classifying and labelling the product. For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms. If the person is unconscious, place in a stable side position and consult a doctor. Respiratory arrest - Artificial respiration apparatus necessary.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

#### Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary. Keep Data Sheet available.

#### Ingestion

Call doctor immediately - have Data Sheet available. Do not induce vomiting.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

The following may occur: Irritation of the respiratory tract Coughing Headaches Nausea Effects/damages the central nervous system Narcotic effect. With long-term contact: Dermatitis (skin inflammation) Drying of the skin. Other dangerous properties cannot be ruled out. In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours. **4.3 Indication of any immediate medical attention and special treatment needed** Symptomatic treatment.

**SECTION 5: Firefighting measures** 



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### 5.1 Extinguishing media

### Suitable extinguishing media

CO2 Extinction powder

### Unsuitable extinguishing media

High volume water jet

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

In case of fire the following can develop: Oxides of carbon Hydrocarbons Toxic pyrolysis products. Danger of explosion by prolonged heating. Explosive vapour/air or gas/air mixtures.

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Protective respirator with independent air supply. According to size of fire Full protection, if necessary. Cool container at risk with water. Dispose of contaminated extinction water according to official regulations.

#### **SECTION 6: Accidental release measures**

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

Remove possible causes of ignition - do not smoke. Ensure sufficient supply of air. Avoid inhalation, and contact with eyes or skin.

#### 6.2 Environmental precautions

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous. Prevent surface and ground-water infiltration, as well as ground penetration.

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

If spray or gas escapes, ensure ample fresh air is available.

Without adequate ventilation, formation of explosive mixtures may be possible. Active substance:

Soak up with absorbent material (e.g. universal binding agent) and dispose of according to Section 13. Only from a specialist.

#### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

### **SECTION 7: Handling and storage**

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

#### 7.1 Precautions for safe handling 7.1.1 General recommendations

Ensure good ventilation.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Do not use on hot surfaces.

Do not use the product in enclosed spaces.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities



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Keep out of access to unauthorised individuals. Not to be stored in gangways or stair wells. Store product closed and only in original packing. Do not store with oxidizing agents. Observe special regulations for aerosols! Observe special storage conditions. Keep protected from direct sunlight and temperatures over 50°C. Store in a well ventilated place. **7.3 Specific end use(s)** 

No information available at present.

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#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40): 600 mg/m3

<sup>(38)</sup> Chemical Name	Hydrocarbons, C6-	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane						
WEL-TWA: 600 mg/m3		WEL-STEL:				<20		
Monitoring procedures:	- (	Compur - KITA-187 S (551 174)						
BMGV:			Other inforr paragraphs	(		RCP-method,		
<sup>(38)</sup> Chemical Name	aerodynamic diam		nore of particle	es with		Content %:0,1-<1		
WEL-TWA: 10 mg/m3 (total inha (respirable dust)	llable dust), 4 mg/m3	WEL-STEL:						
Monitoring procedures:	-							
BMGV:			Other inform	nation:	-			
Chemical Name	Butane					Content %:		
WEL-TWA: 600 ppm (1450 mg/r	n3)	WEL-STEL: 750 ppm (1810 m	ng/m3)					
Monitoring procedures:		Compur - KITA-221 SA (549 459) OSHA PV2010 (n-Butane) - 1993	<b>-</b> .					
BMGV:			Other inform	nation:	-			
Chemical Name	Propane					Content %:		
WEL-TWA: 1000 ppm (ACGIH)		WEL-STEL:						
Monitoring procedures:	- (	Compur - KITA-125 SA (549 954) OSHA PV2077 (Propane) - 1990			1			
BMGV:			Other inform	nation:	-			
Chemical Name	Isobutane					Content %:		
WEL-TWA: 1000 ppm (EX) (AC	GIH)	WEL-STEL:						
Monitoring procedures:	- (	Compur - KITA-113 SB(C) (549 36						
BMGV:			Other inform	nation:	-			
Chemical Name	Silicon dioxide - ar	norphous				Content %:		
WEL-TWA: 6 mg/m3 (total inh. c	lust), 2,4 mg/m3	WEL-STEL:						
(resp. dust)	,							
Monitoring procedures:			-					
BMGV:			Other inform	nation:	-			
Hydrocarbons, C6-C7, n-alkanes	s isoalkanes cyclics	~5% n-bexane						
	xposure route /	Effect on health	Descriptor	Value	Unit	Note		
E	nvironmental ompartment		Decempter	Fuldo				
	uman - dermal	Long term, systemic effects	DNEL	699	mg/kg bw/day			
Consumer H	uman - inhalation	Long term, systemic effects	DNEL	608	mg/m3			
		II			1	1		



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Consumer	Human - oral	Long term, systemic	DNEL	699	mg/kg	
		effects			bw/day	
Workers / employees	Human - dermal	Long term, systemic	DNEL	773	mg/kg	
		effects			bw/day	
Workers / employees	Human - dermal	Long term, systemic	DNEL	300	mg/kg	
		effects			bw/day	
Workers / employees	Human - inhalation	Long term, systemic	DNEL	2035	mg/m3	
		effects				

Area of application	Exposure route /	Effect on health	Descriptor	Value	Unit	Note
	Environmental					
	compartment					
	Environment - freshwater		PNEC	0,184	mg/l	
	Environment - marine		PNEC	0,0184	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,193	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment, freshwater		PNEC	1000	mg/kg dw	
	Environment - sediment, marine		PNEC	100	mg/kg dw	
	Environment - soil		PNEC	100	mg/kg dw	
	Environment - oral (animal feed)		PNEC	1667	mg/kg feed	
Consumer	Human - oral	Long term, systemic effects	DNEL	700	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	10	mg/m3	

Zinc sulphide						
Area of application	Exposure route /	Effect on health	Descriptor	Value	Unit	Note
	Environmental					
	compartment					
	Environment - freshwater		PNEC	20,6	µg/l	
	Environment - marine		PNEC	6,1	µg/l	
	Environment - sediment,		PNEC	117,8	mg/kg dry	
	freshwater				weight	
	Environment - sediment,		PNEC	56,5	mg/kg dry	
	marine				weight	
	Environment - soil		PNEC	35,5	mg/kg dry weight	
	Environment - sewage		PNEC	100	µg/l	
	treatment plant					
Consumer	Human - inhalation	Long term, systemic	DNEL	2,5	mg/m3	
		effects				
Workers / employees	Human - inhalation	Long term, systemic	DNEL	5	mg/m3	
		effects				

Distillates (petroleum), hydrotreated heavy paraffinic							
Area of application	Exposure route / Environmental	Effect on health	Descriptor	Value	Unit	Note	
	compartment						
	Environment - oral (animal feed)		PNEC	9,33	mg/kg feed		
Consumer	Human - inhalation	Long term, local effects	DNEL	1,2	mg/m3		
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,6	mg/m3		
	Human - inhalation			1	U U		

Silicon dioxide - amorphous



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Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	4	mg/m3	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).

(8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE).
(11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer"

value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = 'Biologischer'
 Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

 $^{*}$  = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision. (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

### 8.2 Exposure controls 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042.

EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

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

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection: Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection: Protective nitrile gloves (EN 374). Minimum layer thickness in mm: 04 Permeation time (penetration time) in minutes: > 480 The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions. The recommended maximum wearing time is 50% of breakthrough time. Protective hand cream recommended. Skin protection - Other: Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments). Boots (EN ISO 20347) PVC Respiratory protection: Normally not necessary. If OES or MEL is exceeded. Gas mask filter A (EN 14387), code colour brown At high concentrations:

Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138) Observe wearing time limitations for respiratory protection equipment.



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Thermal hazards: Not applicable

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Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents. Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account. Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

#### 8.2.3 Environmental exposure controls

No information available at present.

#### **SECTION 9: Physical and chemical properties**

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

Physical state:	Aerosol. Active substance: liquid.
Colour:	White
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	n.a.
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	n.a.
Evaporation rate:	n.a.
Flammability (solid, gas):	Not determined
Lower explosive limit:	1,4 Vol-%
Upper explosive limit:	32 Vol-%
Vapour pressure:	4200 hPa
Vapour density (air = 1):	Vapours heavier than air.
Density:	0,728 g/ml (20°C)
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	510 °C (Ignition temperature)
Auto-ignition temperature:	No
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive. When using: development of explosive
	vapour/air mixture possible.
Oxidising properties:	No
9.2 Other information	
Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	58 %
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### **SECTION 10: Stability and reactivity**

10.1 Reactivity
The product has not been tested.

10.2 Chemical stability
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
No dangerous reactions are known.

10.4 Conditions to avoid
See also section 7.



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Heating, open flame, ignition sources Pressure increase will result in danger of bursting. **10.5 Incompatible materials** 

#### See also section 7.

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Avoid contact with oxidizing agents.

#### **10.6 Hazardous decomposition products**

See also section 5.2

No decomposition when used as directed.

### **SECTION 11: Toxicological information**

**11.1 Information on toxicological effects** Possibly more information on health effects, see Section 2.1 (classification).

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Hydrocarbons, C6-C7, n-alkane	es, isoalkanes	, cyclics, <5%	6 n-hexane			
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral	
					Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute	
					Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>20	mg/l/4h	Rat	OECD 403 (Acute	
					Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute	Skin Irrit. 2
					Dermal	
					Irritation/Corrosion)	
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye	Mild irritant
					Irritation/Corrosion)	(Analogous
						conclusion)
Respiratory or skin				Guinea pig	OECD 406 (Skin	No (skin contact)
sensitisation:					Sensitisation)	
Carcinogenicity:						Negative
Reproductive toxicity:					OECD 414 (Prenatal	Analogous
					Developmental Toxicity	conclusion,
-					Study)	Negative
Specific target organ toxicity -						STOT SE 3,
single exposure (STOT-SE):						H336
Specific target organ toxicity -						Negative
repeated exposure (STOT-RE):						
Aspiration hazard:						Yes



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Symptoms:			drowsiness,
			unconsciousness
			heart/circulatory
			disorders,
			headaches,
			cramps,
			drowsiness,
			mucous
			membrane
			irritation,
			dizziness,
			nausea and
			vomiting.
Specific target organ toxicity -			Not irritant
single exposure (STOT-SE),			(respiratory tract).
inhalative:			

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LD50	>6,8	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant, Mechanical irritation possible
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizising
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	(Ames-Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	No indications of such an effect.
Specific target organ toxicity - single exposure (STOT-SE):						Not irritant (respiratory tract
Symptoms:						mucous membrane irritation, coughing, respiratory distress, drying of the skin.



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Specific target organ toxicity -	NOAEL	3500	mg/kg/d	Rat		90d
repeated exposure (STOT-RE), oral:	NOALL	0000	ing/kg/d			500
Specific target organ toxicity -	NOAEC	10	mg/m3	Rat		90d
repeated exposure (STOT-RE), inhalat.:	NOALO	10	mg/m3	Nat		300
Butane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Germ cell mutagenicity:			Ŭ	Salmonella	OECD 471 (Bacterial	Negative
<b>č</b>				typhimurium	Reverse Mutation Test)	
Germ cell mutagenicity:					OECD 473 (In Vitro	Negative
<b>.</b> .					Mammalian	
					Chromosome	
					Aberration Test)	
Aspiration hazard:						No
Symptoms:						ataxia, breathin
						difficulties,
						drowsiness,
						unconsciousnes
						, frostbite,
						disturbed heart
						rhythm,
						headaches,
						cramps,
						intoxication,
						dizziness,
						nausea and
						vomiting.
Deserves						
Propane	En de sist	Value	11-21	0	To at moth s d	Notoo
Toxicity / effect	Endpoint LC50	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC30	658	mg/l/4h	Rat		Not irritant
Skin corrosion/irritation: Serious eye damage/irritation:						Not irritant
						Not irritant
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome	Negative

Com con matagementy.					Mammalian	riegative
					Chromosome	
Germ cell mutagenicity:				Salmonella	Aberration Test) OECD 471 (Bacterial	Negative
Gerni cen mutagenicity.				typhimurium	Reverse Mutation Test)	Negative
Reproductive toxicity	NOAEC	21,641	mg/l	typriintunun	OECD 422 (Combined	
(Developmental toxicity):	NONEO	21,041	ing/i		Repeated Dose Tox.	
					Study with the	
					Reproduction/Developm.	
					Tox. Screening Test)	
Aspiration hazard:						No
Symptoms:						breathing
						difficulties,
						unconsciousnes
						, frostbite,
						headaches,
						cramps, mucous
						membrane
						irritation,
						dizziness, nausea and
						vomiting.

loobutano						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Serious eye damage/irritation:				Rabbit		Not irritant



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Germ cell mutagenicity:	OECD 471 (Bacterial	Negative
	Reverse Mutation Test)	
Aspiration hazard:		No
Symptoms:		unconsciousness , frostbite, headaches, cramps, dizziness, nausea and vomiting.

Silicon dioxide - amorphous						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5110	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	IUCLID Chem. Data Sheet (ESIS)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	IUCLID Chem. Data Sheet (ESIS)	Not sensitizising
Germ cell mutagenicity:				Salmonella typhimurium	(Ames-Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:	NOAEL	>497	mg/kg bw/d			No indications of such an effect.
Aspiration hazard:						No
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	0,035	mg/l			Negative

### **SECTION 12: Ecological information**

Possibly more information on environmental effects, see Section 2.1 (classification).

Keramikpaste							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	-						n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and							n.d.a.
degradability:							
12.3. Bioaccumulative							n.d.a.
potential:							
12.4. Mobility in soil:							Product is
							slightly volatile.
12.5. Results of PBT							n.d.a.
and vPvB assessment							
12.6. Other adverse							n.d.a.
effects:							
Other information:							According to the
							recipe, contains
							no AOX.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane								
Endpoint	Time	Value	Unit	Organism	Test method	Notes		
						Concentration in		
						organisms possible.		
NOEC/NOEL	21d	0,17	mg/l	Daphnia magna				
LOEC/LOEL	21d	0,32	mg/l	Daphnia magna				
	Endpoint NOEC/NOEL	Endpoint Time NOEC/NOEL 21d	Endpoint         Time         Value           NOEC/NOEL         21d         0,17	Endpoint         Time         Value         Unit           NOEC/NOEL         21d         0,17         mg/l	Endpoint         Time         Value         Unit         Organism           NOEC/NOEL         21d         0,17         mg/l         Daphnia magna	Endpoint         Time         Value         Unit         Organism         Test method           NOEC/NOEL         21d         0,17         mg/l         Daphnia magna         Image: Comparison of the second		



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12.1. Toxicity to fish:	NOEC/NOEL	28d	2,045	mg/l	Oncorhynchus		
12.1. Toxicity to fish:	NOELR	28d	2,04	mg/l	mykiss Salmo gairdneri		
12.1. Toxicity to fish:	LC50	96h	11,4	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LL50	96h	11,4	mg/l	Salmo gairdneri	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOELR	48h	2,1	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	30	mg/l	Pseudokirchneriell a subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	81	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable, Analogous conclusion
12.3. Bioaccumulative potential:	BCF		242-253				
12.4. Mobility in soil:							Adsorption in ground., Product is slightly volatile.
Other information:	AOX		0	%			

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Oncorhynchus	OECD 203 (Fish,	
-				-	mykiss	Acute Toxicity	
						Test)	
12.1. Toxicity to daphnia:	LC50	48h	>100	mg/l	Daphnia magna	OECD 202	
2 1				Ū		(Daphnia sp.	
						Acute	
						Immobilisation	
						Test)	
12.1. Toxicity to algae:	EC50	72h	16	mg/l	Pseudokirchneriell	U.S. EPA-600/9-	
, ,				0	a subcapitata	78-018	
12.2. Persistence and							Not relevant for
degradability:							inorganic
							substances.
12.3. Bioaccumulative	BCF	42d	9,6				Not to be
potential:							expected
12.3. Bioaccumulative	BCF	14d	19-352				Oncorhynchus
potential:							mykiss
12.4. Mobility in soil:							Negative
12.5. Results of PBT							No PBT
and vPvB assessment							substance, No
							vPvB substance
Toxicity to bacteria:			>5000	mg/l	Escherichia coli		
Toxicity to bacteria:	LC0	24h	>10000	mg/l	Pseudomonas		
-				-	fluorescens		
Toxicity to annelids:	NOEC/NOEL		>1000	mg/kg	Eisenia foetida		
Water solubility:							Insoluble20°C

Butane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	24,11	mg/l		QSAR	
12.1. Toxicity to daphnia:	LC50	48h	14,22	mg/l		QSAR	



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## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods



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#### For the substance / mixture / residual amounts

EC disposal code no.: The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU) 16 05 04 gases in pressure containers (including halons) containing hazardous substances Recommendation: Sewage disposal shall be discouraged. Pay attention to local and national official regulations. Take full aerosol cans to problem waste collection. Take emptied aerosol cans to valuable material collection.

#### For contaminated packing material

Pay attention to local and national official regulations.

Recommendation:

Do not perforate, cut up or weld uncleaned container.

15 01 04 metallic packaging

15 01 10 packaging containing residues of or contaminated by hazardous substances

#### SECTION 14: Transport information

General statements 14.1. UN number: Transport by road/by rail (ADR/RID)	1950						
14.2. UN proper shipping name: UN 1950 AEROSOLS							
14.3. Transport hazard class(es):	2.1						
14.4. Packing group:	-						
Classification code: LQ:	5F 1 L						
14.5. Environmental hazards:	Not applicable						
Tunnel restriction code:	D						
Transport by sea (IMDG-code)							
14.2. UN proper shipping name: AEROSOLS							
14.3. Transport hazard class(es):	2.1						
14.4. Packing group:	-						
EmS: Marine Pollutant:	F-D, S-U n.a						
14.5. Environmental hazards:	Not applicable						
Transport by air (IATA)							
14.2. UN proper shipping name:							
Aerosols, flammable							
14.3. Transport hazard class(es):	2.1						
14.4. Packing group:	-	•					
14.5. Environmental hazards:	Not applicable						
<b>14.6. Special precautions for user</b> Persons employed in transporting dangerous goods must be transported by the transporting dangerous goods must be transported by the transport of transport of the transport of the transport of t							
All persons involved in transporting must observe safety regula Precautions must be taken to prevent damage.	tions.						
14.7. Transport in bulk according to Annex	II of MARPOL and the IBC Code						
Freighted as packaged goods rather than in bulk, therefore not							
Minimum amount regulations have not been taken into account							
Danger code and packing code on request.							
Comply with special provisions.							
SECTION 15: Regulatory information							

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



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Keramikpaste								
Observe restrictions								
Observe restrictions: Comply with national regulation	s/laws governing the prot	oction of vound	n noonlo at worl	k (national implementa	tion of	the Directive 94/33/EC)		
Comply with trade association/			people at woll			the Directive 94/55/EC)!		
Directive 2012/18/EU ("Seveso	III"), Annex I, Part 1 - The	e following cate	dories apply to	this product (others m	av also	need to be considered		
according to storage, handling		, enering eare	genee appij te					
Hazard categories	Notes to Annex I		Qualifying quantity (tonnes) of		Qualifying quantity (tonnes) of			
3			dangerous substances as		dangerous substances as			
					referr	referred to in Article 3(10) for the		
			application of - Lower-tier		application of - Upper-tier			
			requirements		requirements			
P3b	11.1, 11.2		5000 (netto)			0 (netto)		
The Notes to Annex 1 of Direct		lar those name	ed in the tables	here and notes 1-6, m	ust be t	taken into account when		
assigning categories and qualif	ying quantities.							
Directive 2012/18/EU ("Seveso	III") Appay   Part 2 Thi	a product contr	ing the substa	age listed below:				
	angerous substances	Notes to Anr		Qualifying quantity		Qualifying quantity		
				(tonnes) for the		(tonnes) for the		
				application of - Lowe	er-tier	application of - Upper-tier		
				requirements		requirements		
	iquefied flammable	19		50		200		
	ases, Category 1 or 2							
	ncluding LPG) and							
	atural gas		1. 0					
The Notes to Annex 1 of Direct		lar those name	ed in the tables	nere and notes 1-6, m	ust be 1	taken into account when		
assigning categories and qualif	ying quantities.							
Directive 2010/75/EU (VOC):			58 %					
Observe incident regulations.								
15.2 Chemical safety	assassmant							
15.2 Chemical safety assessment A chemical safety assessment is not provided for mixtures.								
	SECTI	ION 16: O	ther infori	mation				
Revised sections:			1, 2.3, 3, 5, 8	8, 11, 12, 15				
Employee training in handling of	dangerous goods is require	ed.	.,,_,_,_,	.,,,				
These details refer to the product as it is delivered.								
Employee instruction/training in handling hazardous materials is required.								
Classification and processes used to derive the classification of the mixture in accordance with								
the ordinance (EG) 1272/2008 (CLP):								
Classification in accordance with regulation Evaluation method used								
	-	ation	Lvaldatie		•			
(EC) No. 1272/2008 (CLP)								
Skin Irrit. 2, H315			Classification according to calculation procedure.					
Aquatic Chronic 3, H412		Classification according to calculation procedure.						
			Classification according to calculation procedure.					
				Classification based on the form or physical state.				

The following phrases represent the posted Hazard Section 2 and 3). H225 Highly flammable liquid and vapour. H351 Suspected of causing cancer by inhalation. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation.

H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.



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Skin Irrit. — Skin irritation Aquatic Chronic — Hazardous to the aquatic environment - chronic Aerosol — Aerosols Flam. Liq. — Flammable liquid Asp. Tox. — Aspiration hazard STOT SE — Specific target organ toxicity - single exposure - narcotic effects Carc. — Carcinogenicity

#### Any abbreviations and acronyms used in this document:

according, according to acc., acc. to Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the ADR International Carriage of Dangerous Goods by Road) AOX Adsorbable organic halogen compounds approx. approximately Article number Art., Art. no. ASTM ASTM International (American Society for Testing and Materials) ATE Acute Toxicity Estimate Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany) BAM BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany) BSEF The International Bromine Council body weight hw CAS **Chemical Abstracts Service** CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures) CMR carcinogenic, mutagenic, reproductive toxic DMEL Derived Minimum Effect Level DNEL Derived No Effect Level dry weight dw e.g. for example (abbreviation of Latin 'exempli gratia'), for instance European Community EC ECHA European Chemicals Agency EEC European Economic Community EINECS European Inventory of Existing Commercial Chemical Substances ELINCS European List of Notified Chemical Substances ΕN European Norms FPA United States Environmental Protection Agency (United States of America) et cetera etc. European Union EU EVAL Ethylene-vinyl alcohol copolymer Fax. Fax number gen. general Globally Harmonized System of Classification and Labelling of Chemicals GHS GWP Global warming potential International Agency for Research on Cancer IARC International Air Transport Association IATA IBC (Code) International Bulk Chemical (Code) International Maritime Code for Dangerous Goods IMDG-code including, inclusive incl. IUCLID International Uniform Chemical Information Database IUPAC International Union for Pure Applied Chemistry LC50 Lethal Concentration to 50 % of a test population LD50 Lethal Dose to 50% of a test population (Median Lethal Dose) I.Q Limited Quantities MARPOL International Convention for the Prevention of Marine Pollution from Ships not applicable n.a. n.av. not available n.c. not checked n.d.a. no data available OECD Organisation for Economic Co-operation and Development organic org. PBT persistent, bioaccumulative and toxic ΡE Polyethylene



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PNEC Predicted No Effect Concentration parts per million ppm PVC Polyvinylchloride REACHRegistration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals) 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List **REACH-IT List-No.** Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT. Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International RID Carriage of Dangerous Goods by Rail) SVHC Substances of Very High Concern Telephone Tel. UN RTDG United Nations Recommendations on the Transport of Dangerous Goods VOC Volatile organic compounds very persistent and very bioaccumulative vPvB wet weight wwt

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.

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These statements were made by: Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

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