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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revised on / Version: 12.12.2011 / 0009  
Replaces revision of / Version: 19.01.2011 / 0008  
Valid from: 12.12.2011  
PDF print date: 12.12.2011  
Keramik-Paste 50GR Art.: 3418

## 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

**Keramik-Paste 50GR**  
**Art.: 3418**

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

Lubricant  
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 - Use in closed process, no likelihood of exposure.  
PROC 2 - Use in closed, continuous process with occasional controlled exposure  
PROC 8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities  
PROC 8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
PROC 9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
PROC10 - Roller application or brushing  
Article Categories [AC]:  
AC99 - Not required.  
Environmental Release Category [ERC]:  
ERC 4 - Industrial use of processing aids in processes and products, not becoming part of articles  
ERC 7 - Industrial use of substances in closed systems  
ERC 8a - Wide dispersive indoor use of processing aids in open systems  
ERC 8d - Wide dispersive outdoor use of processing aids in open systems  
ERC 9a - Wide dispersive indoor use of substances in closed systems  
ERC 9b - Wide dispersive outdoor use of substances in closed systems

#### Uses advised against:

No information available at present.

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

LIQUI MOLY GmbH, Jerg-Wieland-Straße 4, D-89081 Ulm-Lehr  
Telephone (+49) 0731-1420-0, Fax (+49) 0731-1420-88

E-mail address of the competent person: [info@chemical-check.de](mailto:info@chemical-check.de), [k.schnurbusch@chemical-check.de](mailto:k.schnurbusch@chemical-check.de)

#### 1.4 Emergency telephone

**Advisory office in case of poisoning:**

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

Tel.: (+49) 0731-1420-0

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### 2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

Not determined

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## 2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments).

The mixture is not classified as dangerous in the terms of the directive 1999/45/EC.

## 2.2 Label elements

### 2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)

Not determined

### 2.2.2 Labeling according to Directives 67/548/EEC and 1999/45/EC (including amendments).

Symbols: Not applicable  
 Indications of danger: ---  
 R-phrases:

S-phrases:

Additions: n.a.

## 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.

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substance

n.a.

### 3.2 Mixture

--	
Registration number (ECHA)	--
Index	-
EINECS, ELINCS	-
CAS	-
content %	
Symbol	-
R-phrases	-
Classification categories / Indications of danger	---
Hazard class/Hazard category	Hazard statement

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### Inhalation

Supply person with fresh air and consult doctor according to symptoms.

#### 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.

#### Ingestion

Rinse the mouth thoroughly with water.

Give copious water to drink - consult doctor immediately.

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

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

#### **4.3 Indication of any immediate medical attention and special treatment needed**

n.c.

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

CO2  
Extinction powder  
Water jet spray  
Large fire:  
Water jet spray  
Alcohol resistant foam  
Cool container at risk with water.

##### **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  
Toxic gases

#### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.  
Protective respirator with independent air supply.  
Dispose of contaminated extinction water according to official regulations.

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

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

Ensure sufficient supply of air.  
Avoid contact with eyes or skin.  
If applicable, caution - risk of slipping

#### **6.2 Environmental precautions**

Prevent surface and ground-water infiltration, as well as ground penetration.  
Do not pour down the drain undiluted.

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

Pick up mechanically and dispose of according to Section 13.  
Or:  
Soak up with absorbent material (e.g. universal binding agent) and dispose of according to Section 13.

#### **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**

Ensure good ventilation.  
Avoid contact with eyes.  
Avoid long lasting or intensive contact with skin.  
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
Observe directions on label and instructions for use.  
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**

Store product closed and only in original packing.  
Not to be stored in gangways or stair wells.

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Store cool

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Chemical Name	Silica, amorphous	Content %:
WEL-TWA: 6 mg/m <sup>3</sup> (total inh. dust), 2,4 mg/m <sup>3</sup> (resp. dust)	WEL-STEL: ---	---
BMGV: ---	Other information: ---	

  

Chemical Name	Titanium dioxide	Content %:
WEL-TWA: 10 mg/m <sup>3</sup> (total inhalable dust), 4 mg/m <sup>3</sup> (respirable dust)	WEL-STEL: ---	---
BMGV: ---	Other information: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | 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.

Titanium dioxide						
Use-Area	Exposure-Route	Exposure-Pattern	Descriptor	Value	Unit	Note
Worker	Human - inhalation	Long term, local effects	DNEL (Derived No Effect Level)	10	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL (Derived No Effect Level)	700	mg/kg	
	Environment - freshwater		PNEC (Predicted No Effect Concentration)	0,127	mg/l	
	Environment - marine		PNEC (Predicted No Effect Concentration)	1	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC (Predicted No Effect Concentration)	0,61	mg/l	
	Environment - sewage treatment plant		PNEC (Predicted No Effect Concentration)	100	mg/l	
	Environment - sediment, freshwater		PNEC (Predicted No Effect Concentration)	1000	mg/kg dw	
	Environment - sediment, marine		PNEC (Predicted No Effect Concentration)	100	mg/kg dw	
	Environment - soil		PNEC (Predicted No Effect Concentration)	100	mg/kg dw	
	Environment - oral (feed)		PNEC (Predicted No Effect Concentration)	1667	mg/kg feed	

### 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.

#### 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.

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**Eye/face protection:**  
 With danger of contact with eyes.  
 Tight fitting protective goggles with side protection (EN 166).

**Skin protection - Hand protection:**  
 Protective nitrile gloves (EN 374)  
 Minimum layer thickness in mm:  
 >= 0,5  
 Permeation time (penetration time) in minutes:  
 480  
 Protective hand cream recommended.

**Skin protection - Other:**  
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)

**Respiratory protection:**  
 Normally not necessary.

**Thermal hazards:**  
 Not applicable

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:	Paste
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:	Not determined
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	n.a.
Upper explosive limit:	n.a.
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	1,09 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:	n.a.
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive.
Oxidising properties:	No

### 9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined

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Conductivity: Not determined  
 Surface tension: Not determined  
 Solvents content: Not determined

## 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.

None known

### 10.5 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

### 10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

## SECTION 11: Toxicological information

### Keramik-Paste 50GR

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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.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						n.d.a.
Other toxicity data:						Classification according to calculation procedure.

### Titanium dioxide

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		Not irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant, Mechanical irritation possible.

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Respiratory or skin sensitisation:					OECD 406 (Skin Sensitisation)	Not sensitizing
Respiratory or skin sensitisation:					OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizing
Symptoms:						mucous membrane irritation
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	3500	mg/kg/d	Rat		90 d
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	10	mg/m3	Rat		90 d

## SECTION 12: Ecological information

### Keramik-Paste 50GR Art.: 3418

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.
Other ecotoxicological data:							According to the recipe, contains no AOX.

### Titanium dioxide

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	>100	mg/l	(Oncorhynchus mykiss)	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	LC50	48h	>100	mg/l	(Daphnia magna)	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae:	EC50	72h	16	mg/l	(Pseudokirchneriella subcapitata)	U.S. EPA 600-9/78-018	
Persistence and degradability:							Not readily biodegradable
Bioaccumulative potential:							No
Mobility in soil:							Negative
Toxicity to bacteria:			>5000	mg/l	(Pseudomonas fluorescens)		
Toxicity to bacteria:			>5000	mg/l	(Escherichia coli)		
Toxicity to bacteria:	LC0	24h	>10000	mg/l	(Pseudomonas fluorescens)		
Water solubility:							Insoluble

## 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. (2001/118/EC, 2001/119/EC, 2001/573/EC)

12 01 12 spent waxes and fats

Recommendation:

Pay attention to local and national official regulations

E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

### For contaminated packing material

Pay attention to local and national official regulations

Dispose of packaging that cannot be cleaned in the same manner as the substance.

15 01 04 metallic packaging

## SECTION 14: Transport information

### General statements

UN number: n.a.

### Transport by road/by rail (ADR/RID)

UN proper shipping name:

Transport hazard class(es): n.a.

Packing group: n.a.

Classification code: n.a.

LQ (ADR 2011): n.a.

LQ (ADR 2009): n.a.

Environmental hazards: Not applicable

Tunnel restriction code:

### Transport by sea (IMDG-code)

UN proper shipping name:

Transport hazard class(es): n.a.

Packing group: n.a.

Marine Pollutant: n.a.

Environmental hazards: Not applicable

### Transport by air (IATA)

UN proper shipping name:

Transport hazard class(es): n.a.

Packing group: n.a.

Environmental hazards: Not applicable

### Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

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

Non-dangerous material according to Transport Regulations.

## SECTION 15: Regulatory information

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

For classification and labelling see Section 2.

Observe restrictions: n.a.

VOC (1999/13/EC): n.a.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections: 2, 3, 4, 7, 11, 12, 16

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## Legend:

AC Article Categories  
 acc., acc. to according, according to  
 ACGIH American Conference of Governmental Industrial Hygienists  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOEL Acceptable Operator Exposure Level  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)  
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)  
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)  
 BCF Bioconcentration factor  
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)  
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)  
 BMGV Biological monitoring guidance value (EH40, UK)  
 BOD Biochemical oxygen demand  
 BSEF Bromine Science and Environmental Forum  
 bw body weight  
 CAS Chemical Abstracts Service  
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques  
 CIPAC Collaborative International Pesticides Analytical Council  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 COD Chemical oxygen demand  
 CTFA Cosmetic, Toiletry, and Fragrance Association  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 DT50 Dwell Time - 50% reduction of start concentration  
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EC European Community  
 ECHA European Chemicals Agency  
 EEA European Economic Area  
 EEC European Economic Community  
 EINECS European Inventory of Existing Commercial Chemical Substances  
 ELINCS European List of Notified Chemical Substances  
 EN European Norms  
 EPA United States Environmental Protection Agency (United States of America)  
 ERC Environmental Release Categories  
 ES Exposure scenario  
 etc. et cetera  
 EU European Union  
 EWC European Waste Catalogue  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC Intermediate Bulk Container  
 IBC (Code) International Bulk Chemical (Code)  
 IC Inhibitory concentration  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database

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LC lethal concentration  
 LC50 lethal concentration 50 percent kill  
 LCLo lowest published lethal concentration  
 LD Lethal Dose of a chemical  
 LD50 Lethal Dose, 50% kill  
 LDLo Lethal Dose Low  
 LMBG Lebensmittel- und Bedarfsgegenständegesetz (= Foodstuffs and Commodities Law)  
 LOAEL Lowest Observed Adverse Effect Level  
 LOEC Lowest Observed Effect Concentration  
 LOEL Lowest Observed Effect Level  
 LQ Limited Quantities  
 MARPOL International Convention for the Prevention of Marine Pollution from Ships  
 n.a. not applicable  
 n.av. not available  
 n.c. not checked  
 n.d.a. no data available  
 NIOSH National Institute of Occupational Safety and Health (United States of America)  
 NOAEC No Observed Adverse Effective Concentration  
 NOAEL No Observed Adverse Effect Level  
 NOEC No Observed Effect Concentration  
 NOEL No Observed Effect Level  
 ODP Ozone Depletion Potential  
 OECD Organisation for Economic Co-operation and Development  
 org. organic  
 PAH polycyclic aromatic hydrocarbon  
 PC product category (= Chemical product category)  
 PE Polyethylene  
 PNEC Predicted No Effect Concentration  
 POCP Photochemical ozone creation potential  
 ppm parts per million  
 PROC Process category  
 PTFE Polytetrafluorethylene  
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
 RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
 SADT Self-Accelerating Decomposition Temperature  
 SAR Structure Activity Relationship  
 SU Sector of use  
 SVHC Substances of Very High Concern  
 Tel. Telephone  
 ThOD Theoretical oxygen demand  
 TOC Total organic carbon  
 TRGS Technische Regeln für Gefahrstoffe (= Technical Regulations for Hazardous Substances)  
 VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
 VOC Volatile organic compounds  
 vPvB very persistent and very bioaccumulative  
 WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
 WHO World Health Organization

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.

These statements were made by:

**Chemical Check GmbH, Wöbbeler Straße 2-4, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90**

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