

**KERAFOL Keramische Folien GmbH**  
92676 Eschenbach

Date printed 15.07.2016, Revision 01.07.2015

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

### 1.1 Product identifier

**KERATHERM® TYP KP 92 - Silikonhaltig (Thermal Grease KP 92)**

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

#### 1.2.1 Relevant uses

Heated paste

#### 1.2.2 Uses advised against

None known.

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

**Company** KERAFOL Keramische Folien GmbH  
Koppe-Platz 1  
92676 Eschenbach / GERMANY  
Phone +49 (0) 9645 88-300  
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#### Address enquiries to

**Technical information** [info@kerafol.com](mailto:info@kerafol.com)

**Safety Data Sheet** [sdb@chemiebuero.de](mailto:sdb@chemiebuero.de)

### 1.4 Emergency telephone number

**Advisory body** +49 (0)89-19240 (24h) (english)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Aquatic Acute 1: H400 Very toxic to aquatic life.  
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

The product is classified and required to be labelled in accordance with EC-Directives

#### Hazard pictograms



#### Signal word

WARNING

#### Hazard statements

H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P273 Avoid release to the environment.  
P391 Collect spillage.  
P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

### 2.3 Other hazards

#### Human health dangers

Frequent persistent contact with the skin can cause skin irritation.

#### Environmental hazards

Does not contain any PBT or vPvB substances.

#### Other hazards

Further hazards were not determined with the current level of knowledge.

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### SECTION 3: Composition / Information on ingredients

#### Product-type:

The product is a mixture.

Range [%]	Substance
60 - <90	Zinc
	CAS: 7440-66-6, EINECS/ELINCS: 231-175-3, EU-INDEX: 030-002-00-7
	GHS/CLP: Aquatic Acute 1: H400 - Aquatic Chronic 1: H410
1 - <10	Aluminium
	CAS: 7429-90-5, EINECS/ELINCS: 231-072-3, EU-INDEX: 013-002-00-1, Reg-No.: 01-2119529243-45-XXXX
	GHS/CLP: Flam. Sol. 2: H228

#### Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.  
For full text of H-statements: see SECTION 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General information

Take off contaminated clothing and wash before reuse.

##### Inhalation

Ensure supply of fresh air.  
In the event of symptoms seek medical treatment.

##### Skin contact

When in contact with the skin, clean with soap and water.  
Consult a doctor if skin irritation persists.

##### Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

##### Ingestion

Seek medical advice immediately.

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

None known.

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

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Foam.  
Dry powder.  
Water spray jet.  
Carbon dioxide.

##### Extinguishing media that must not be used

Full water jet.

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

Risk of formation of toxic pyrolysis products.

#### 5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

### SECTION 6: Accidental release measures

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

High risk of slipping due to leakage/spillage of product.

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## 6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

## 6.3 Methods and material for containment and cleaning up

Take up mechanically.

Dispose of absorbed material in accordance within the regulations.

## 6.4 Reference to other sections

See SECTION 8+13

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

The normal safety precautions for handling chemicals must be observed.  
Use only in well-ventilated areas.

Wash hands before breaks and after work.

Use barrier skin cream.

Do not eat, drink, smoke or take drugs at work.

Take off contaminated clothing and wash before reuse.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Prevent penetration into the ground.

Do not store together with food and animal food/diet.

Do not store together with acids and alkalies.

Keep container tightly closed.

Protect from heat/overheating.

## 7.3 Specific end use(s)

See product use, SECTION 1.2

# SECTION 8: Exposure controls / personal protection

## 8.1 Control parameters

### Ingredients with occupational exposure limits to be monitored (GB)

Substance
Aluminium
CAS: 7429-90-5, EINECS/ELINCS: 231-072-3, EU-INDEX: 013-002-00-1, Reg-No.: 01-2119529243-45-XXXX
Long-term exposure: 10 mg/m <sup>3</sup> , inhalable dust (respirable dust: 4 mg/m <sup>3</sup> )

### DNEL

Substance
Aluminium, CAS: 7429-90-5
Industrial, inhalative, Long-term - systemic effects: 3,72 mg/m <sup>3</sup> .
Industrial, inhalative, Long-term - local effects: 3,72 mg/m <sup>3</sup> .
general population, oral, Long-term - systemic effects: 7,9 mg/kg bw/day.

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## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Safety glasses. (EN 166:2001)
<b>Hand protection</b>	0,7mm Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
<b>Skin protection</b>	Protective clothing.
<b>Other</b>	Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
<b>Respiratory protection</b>	Not required under normal conditions.
<b>Thermal hazards</b>	not determined
<b>Delimitation and monitoring of the environmental exposition</b>	Comply with applicable environmental regulations limiting discharge to air, water and soil.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	pasty
<b>Color</b>	grey black
<b>Odor</b>	characteristic
<b>Odour threshold</b>	not applicable
<b>pH-value</b>	not applicable
<b>pH-value [1%]</b>	not applicable
<b>Boiling point [°C]</b>	not applicable
<b>Flash point [°C]</b>	> 250
<b>Flammability (solid, gas) [°C]</b>	> 430 not applicable
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Oxidising properties</b>	no
<b>Vapour pressure/gas pressure [kPa]</b>	not determined
<b>Density [g/ml]</b>	1,3 - 3,3 (20 °C / 68,0 °F)
<b>Bulk density [kg/m³]</b>	not applicable
<b>Solubility in water</b>	insoluble
<b>Partition coefficient [n-octanol/water]</b>	not applicable
<b>Viscosity</b>	not applicable
<b>Relative vapour density determined in air</b>	not determined
<b>Evaporation speed</b>	not determined
<b>Melting point [°C]</b>	not determined
<b>Autoignition temperature [°C]</b>	> 430
<b>Decomposition temperature [°C]</b>	> 200

### 9.2 Other information

none

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See SECTION 10.3.

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## 10.2 Chemical stability

The product is stable under standard conditions.

## 10.3 Possibility of hazardous reactions

If product is heated above decomposition temperature toxic vapours may be released.

Reactions with strong oxidizing agents.

Reactions with alkalis, amines and strong acids.

The reactions take place with the formation of hydrogen.

## 10.4 Conditions to avoid

See SECTION 7

## 10.5 Incompatible materials

See SECTION 10.3.

## 10.6 Hazardous decomposition products

Hydrogen

In the case of heating (150-180°C) following modest (decomposition) products may occur:

Formaldehyde.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product
ATE-mix, inhalative, > 20 mg/l 4h.
ATE-mix, dermal, > 2000 mg/kg.
ATE-mix, oral, > 2000 mg/kg.
Substance
Aluminium, CAS: 7429-90-5
LD50, oral, Rat: > 15900 mg/kg bw.

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

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

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

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

#### General remarks

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
Aluminium, CAS: 7429-90-5
NOEC, (96h), <i>Lepomis macrochirus</i> : > 50 mg/l.

### 12.2 Persistence and degradability

<b>Behaviour in environment compartments</b>	not determined
<b>Behaviour in sewage plant</b>	not determined
<b>Biological degradability</b>	not determined

### 12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

### 12.4 Mobility in soil

not determined

### 12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

### 12.6 Other adverse effects

None known.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

#### Product

In according to RoHS!  
Disposal in an incineration plant in accordance with the regulations of the local authorities.

**Waste no. (recommended)** 070216\*

#### Contaminated packaging

Uncontaminated packaging may be taken for recycling.

**Waste no. (recommended)** 150110\*  
150102

## SECTION 14: Transport information

### 14.1 UN number

**Transport by land according to ADR/RID** 3082

**Inland navigation (ADN)** 3082

**Marine transport in accordance with IMDG** 3082

**Air transport in accordance with IATA** 3082

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#### 14.2 UN proper shipping name

Transport by land according to ADR/RID Environmentally hazardous substance, liquid, n.o.s. (contains Zinc)

- Classification Code M6

- Label



- ADR LQ 5 I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 3 (E)

Inland navigation (ADN)

Environmentally hazardous substance, liquid, n.o.s. (contains Zinc)

- Classification Code M6

- Label



Marine transport in accordance with IMDG

Environmentally hazardous substance, liquid, n.o.s. (contains Zinc)

- EMS

F-A, S-F

- Label



- IMDG LQ

5 I

Air transport in accordance with IATA

Environmentally hazardous substance, liquid, n.o.s. (contains Zinc)

- Label



#### 14.3 Transport hazard class(es)

Transport by land according to ADR/RID 9

Inland navigation (ADN) 9

Marine transport in accordance with IMDG 9

Air transport in accordance with IATA 9

#### 14.4 Packing group

Transport by land according to ADR/RID III

Inland navigation (ADN) III

Marine transport in accordance with IMDG III

Air transport in accordance with IATA III

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#### 14.5 Environmental hazards

Transport by land according to ADR/RID yes

Inland navigation (ADN) yes

Marine transport in accordance with IMDG MARINE POLLUTANT

Air transport in accordance with IATA yes

#### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

#### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not determined

### SECTION 15: Regulatory information

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

**EEC-REGULATIONS** 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC; (EU) 2015/830

**TRANSPORT-REGULATIONS** DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2016).

**NATIONAL REGULATIONS (GB):** EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4

- Observe employment restrictions for people no

- VOC (1999/13/CE) 0 %

#### 15.2 Chemical safety assessment

not applicable

### SECTION 16: Other information

#### 16.1 Hazard statements (SECTION 03)

H410 Very toxic to aquatic life with long lasting effects.  
H400 Very toxic to aquatic life.  
H228 Flammable solid.



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## 16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging  
DMEL = Derived Minimum Effect Level  
DNEL = Derived No Effect Level  
EC50 = Median effective concentration  
ECB = European Chemicals Bureau  
EEC = European Economic Community  
EINECS = European Inventory of Existing Commercial Chemical Substances  
ELINCS = European List of Notified Chemical Substances  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IC50 = Inhibition concentration, 50%  
IMDG = International Maritime Code for Dangerous Goods  
IUCLID = International Uniform Chemical Information Database  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
TLV®/TWA = Threshold limit value – time-weighted average  
TLV®/STEL = Threshold limit value – short-time exposure limit  
VOC = Volatile Organic Compounds  
vPvB = very Persistent and very Bioaccumulative

## 16.3 Other information

### Classification procedure

Aquatic Acute 1: H400 Very toxic to aquatic life. (Calculation method)  
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (Calculation method)

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**Modified position**

SECTION 2 been added: P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

SECTION 2 been added: P273 Avoid release to the environment.

SECTION 2 been added: environment

SECTION 2 been added: Aquatic Chronic 1

SECTION 2 been added: P391 Collect spillage.

SECTION 2 been added: H410 Very toxic to aquatic life with long lasting effects.

SECTION 4 been added: If eye irritation persists: Get medical advice/attention.

SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 4 been added: In the event of symptoms seek medical treatment.

SECTION 4 been added: Ensure supply of fresh air.

SECTION 4 been added: Take off contaminated clothing and wash before reuse.

SECTION 7 been added: Do not eat, drink, smoke or take drugs at work.

SECTION 7 been added: Use only in well-ventilated areas.

SECTION 7 been added: Take off contaminated clothing and wash before reuse.

SECTION 7 been added: Prevent penetration into the ground.

SECTION 7 been added: Do not store together with food and animal food/diet.

SECTION 7 been added: Do not store together with acids and alkalies.

SECTION 7 been added: The normal safety precautions for handling chemicals must be observed.

SECTION 8 been added: Not required under normal conditions.

SECTION 8 been added: Protective clothing.

SECTION 8 been added: Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

SECTION 8 been added: Comply with applicable environmental regulations limiting discharge to air, water and soil.



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