



## Voluntary safety information based on the Safety Data Sheet in accordance with Annex II of Regulation (EC) No 1907/2006

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V002.0

BERGQUIST SIL PAD TSP K1300 known as Sil-Pad K-10

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### SECTION 1: Identification of the article and of the company/undertaking

#### 1.1. Product identifier

BERGQUIST SIL PAD TSP K1300 known as Sil-Pad K-10

#### 1.2. Relevant identified uses of the article and uses advised against

Intended use:  
Thermal Interface Material

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

Henkel Ltd  
Adhesives  
Wood Lane End  
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

### SECTION 2: Hazards identification

#### 2.1. Classification of the article

##### Classification (CLP):

Substances and preparations marketed in a specific form or within specific containers need not to be classified according to the REACH Regulation Article 3 (3).

#### 2.2. Label elements

##### Label elements (CLP):

Substances and preparations marketed in a specific form or within specific containers need not to be classified according to the REACH Regulation Article 3 (3).

#### 2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration  $\geq 0,1\%$  and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in concentration  $\geq$  the concentration limit that are assessed to be a PBT, vPvB or ED.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### General chemical description:

Manufactured item - article

##### Declaration of the ingredients according to CLP (EC) No 1272/2008:

Voluntary Information: Only Substances of Very High Concern and Skin Sensitising substances will be disclosed in this section.

##### Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
3-aminopropyltriethoxysilane 919-30-2 213-048-4 01-2119480479-24	0,1- < 1 %	Skin Sens. 1B, H317 Skin Corr. 1B, H314 Acute Tox. 4, Oral, H302		

For full text of the H - statements and other abbreviations see section 16 "Other information".  
Substances without classification may have community workplace exposure limits available.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

Inhalation:  
not relevant.

Skin contact:  
Rinse with running water and soap.  
Obtain medical attention if irritation persists.

Eye contact:  
Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:  
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

No data available.

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

See section: Description of first aid measures

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media:

water, carbon dioxide, foam, powder

**Extinguishing media which must not be used for safety reasons:**

High pressure waterjet

**5.2. Special hazards arising from the article**

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Additional information:**

In case of fire, keep containers cool with water spray.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

**6.2. Environmental precautions**

Do not empty into drains / surface water / ground water.

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

Dispose of contaminated material as waste according to Section 13.

Scrape up as much material as possible.

Sweep up spilled material. Avoid creating dust.

Store in a partly filled, closed container until disposal.

**6.4. Reference to other sections**

See advice in section 8

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

**7.2. Conditions for safe storage, including any incompatibilities**

Ensure good ventilation/extraction.

Keep container tightly sealed.

Refer to Technical Data Sheet

**7.3. Specific end use(s)**

Thermal Interface Material

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Great Britain

None

#### Occupational Exposure Limits

Valid for  
Ireland

None

#### Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
3-Aminopropyltriethoxysilane 919-30-2	aqua (marine water)		0,05 mg/l				
3-Aminopropyltriethoxysilane 919-30-2	sediment (marine water)				0,18 mg/kg		
3-Aminopropyltriethoxysilane 919-30-2	Soil				0,069 mg/kg		
3-Aminopropyltriethoxysilane 919-30-2	sewage treatment plant (STP)		0,81 mg/l				
3-Aminopropyltriethoxysilane 919-30-2	aqua (freshwater)		0,5 mg/l				
3-Aminopropyltriethoxysilane 919-30-2	sediment (freshwater)				1,8 mg/kg		

#### Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
3-Aminopropyltriethoxysilane 919-30-2	General population	oral	Long term exposure - systemic effects		1 mg/kg	
3-Aminopropyltriethoxysilane 919-30-2	General population	inhalation	Long term exposure - systemic effects		3,5 mg/m3	
3-Aminopropyltriethoxysilane 919-30-2	General population	dermal	Long term exposure - systemic effects		1 mg/kg	
3-Aminopropyltriethoxysilane 919-30-2	Workers	inhalation	Long term exposure - systemic effects		14 mg/m3	
3-Aminopropyltriethoxysilane 919-30-2	Workers	dermal	Long term exposure - systemic effects		2 mg/kg	

#### Biological Exposure Indices:

None

### 8.2. Exposure controls:

Engineering controls:  
Ensure good ventilation/extraction.

**Respiratory protection:**

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Dust mask, P2 particle filter.

**Hand protection:**

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq 0.4$  mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq 0.4$  mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

**Eye protection:**

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

**Skin protection:**

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

**Advices to personal protection equipment:**

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

## SECTION 9: Physical and chemical properties

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

Physical state	solid
Delivery form	solid
Colour	beige
Odor	Slight
Melting point	Not available.
Solidification temperature	Not applicable, Product is a solid.
Initial boiling point	> 200 °C (> 392 °F)
Flammability	The product is not flammable.
Explosive limits	Currently under determination
Flash point	Not applicable, Product is a solid.
Auto-ignition temperature	Not applicable, Product is a solid.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	Currently under determination
Viscosity (kinematic)	Not applicable, Product is a solid.
Solubility (qualitative)	Currently under determination
Partition coefficient: n-octanol/water	Currently under determination
Vapour pressure	Not available.
Density	Currently under determination
Relative vapour density:	Not available.
Particle characteristics	Not applicable
	Product is not powder.

### 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None if used properly.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

Stable under normal conditions of storage and use.

### 10.5. Incompatible materials

None if used properly.

### 10.6. Hazardous decomposition products

None if used for intended purpose.

## SECTION 11: Toxicological information

### General toxicological information:

To the best of our knowledge no harmful effects are to be expected if the product is handled and used properly.

### 1.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity:

Hazardous substances CAS-No.	Value type	Value	Species	Method
3-aminopropyltriethoxysilane 919-30-2	LD50	1.457 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

#### Acute dermal toxicity:

Hazardous substances CAS-No.	Value type	Value	Species	Method
3-aminopropyltriethoxysilane 919-30-2	LD50	4.076 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

#### Acute inhalative toxicity:

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	LC50	> 7,35 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

#### Skin corrosion/irritation:

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	corrosive	1 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	highly irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)

**Respiratory or skin sensitization:**

Hazardous substances CAS-No.	Result	Test type	Species	Method
3-aminopropyltriethoxysilane 919-30-2	Sub-Category 1B (sensitising)	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

**Germ cell mutagenicity:**

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
3-aminopropyltriethoxysilane 919-30-2	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
3-aminopropyltriethoxysilane 919-30-2	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
3-aminopropyltriethoxysilane 919-30-2	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

**Carcinogenicity**

No data available.

**Reproductive toxicity:**

No data available.

**STOT-single exposure:**

No data available.

**STOT-repeated exposure::**

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
3-aminopropyltriethoxysilane 919-30-2	NOAEL 200 mg/kg	oral: gavage	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable

**SECTION 12: Ecological information****General ecological information:**

Do not empty into drains / surface water / ground water.

**12.1. Toxicity****Toxicity (Fish):**

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	LC50	> 934 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)

**Toxicity (Daphnia):**

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	EC50	331 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

**Chronic toxicity to aquatic invertebrates**

No data available.

**Toxicity (Algae):**

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	EC50	> 1.000 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
3-aminopropyltriethoxysilane 919-30-2	NOEC	1,3 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

**Toxicity to microorganisms**

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
3-aminopropyltriethoxysilane 919-30-2	EC10	13 mg/l	5 h	not specified	other guideline:

**12.2. Persistence and degradability**

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
3-aminopropyltriethoxysilane 919-30-2	not readily biodegradable.	aerobic	67 %	28 d	EU Method C.4-A (Determination of the "Ready" Biodegradability Dissolved Organic Carbon (DOC) Die-Away Test)

**12.3. Bioaccumulative potential**

No data available.

**12.4. Mobility in soil**



No data available.

#### 12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
3-aminopropyltriethoxysilane 919-30-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

#### 12.6. Endocrine disrupting properties

not applicable

#### 12.7. Other adverse effects

No data available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product disposal:

Do not empty into drains / surface water / ground water.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

### SECTION 14: Transport information

#### 14.1. UN number

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.7. Maritime transport in bulk according to IMO instruments

not applicable

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the article

VOC content  
(2010/75/EC) < 1 %

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**SECTION 16: Other information**

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

**Further information:**

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This information is based on our current level of knowledge and relates to the article in the state in which it is delivered. It is intended to describe our articles from the point of view of safety requirements and is not intended to guarantee any particular properties.

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