

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

### 1.1. Product identifier

Sealing material S5720

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

#### Use of the substance/mixture

Sealing material

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

Company name: Rolf Kuhn GmbH  
Street: Jägersgrund 10  
Place: D-57339 Erndtebrück  
Telephone: +49 2753 5945-0  
Telefax: +49 2753 5945-21  
Contact person: Jörg Six  
e-mail: joerg.six@rolfkuhngmbh.com (Contact for technical information)  
Internet: www.kuhn-brandschutz.com

### 1.4. Emergency telephone

**number:** +49 (0) 6132 / 84463 (GBK GmbH)  
Responsible for the safety data sheet: GBK GmbH, Ingelheim,  
sds@gbk-ingelheim.de

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Indications of danger: F - Highly flammable, Xn - Harmful, Xi - Irritant

R phrases:

Highly flammable.

Irritating to eyes and respiratory system.

Limited evidence of a carcinogenic effect.

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Flammable liquid: Flam. Liq. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause respiratory irritation.

Suspected of causing cancer.

### 2.2. Label elements

#### Hazardous components which must be listed on the label

Tetrahydrofuran

Signal word:

Danger

Pictograms:

GHS02-GHS07-GHS08



#### Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

## Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing mist/vapor/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

## Special labelling of certain mixtures

EUH019 May form explosive peroxides.

### 2.3. Other hazards

In use, may form flammable/explosive vapour-air mixture.

This product can become statically charged which can lead to an explosive electrical discharge.

Vapours may cause drowsiness and dizziness.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
203-726-8	Tetrahydrofuran	< 80 %
109-99-9	Carc. Cat. 3, F - Highly flammable, Xi - Irritant R11-19-40-36/37	
603-025-00-0	Flam. Liq. 2, Carc. 2, Eye Irrit. 2, STOT SE 3; H225 H351 H319 H335 EUH019	
01-2119444314-46		
203-631-1	cyclohexanone	< 5 %
108-94-1	Xn - Harmful R10-20	
606-010-00-7	Flam. Liq. 3, Acute Tox. 4; H226 H332	
01-2119453616-35		

Full text of R-, H- and EUH-phrases: see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated soaked clothing immediately.

If you feel unwell, seek medical advice.

Wash body carefully (bath or shower).

#### After inhalation

Move to fresh air in case of accidental inhalation of vapours.

In the event of symptoms refer for medical treatment.

If threatening unconsciousness, position and transport in recovery position.

#### After contact with skin

Wash off immediately and for a long time with plenty of water.

Consult a doctor if skin irritation persists.

### After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Seek medical treatment by eye specialist.

### After ingestion

Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person. Summon a doctor immediately. Induce vomiting only upon the advice of a physician.

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

Causes serious eye irritation. May cause respiratory irritation. Components of the products may be absorbed into the body through the skin (skin absorption). Repeated exposure may cause skin dryness or cracking. Possible symptoms: headache, drowsiness, dizziness, and skin irritation. Liver damage is possible.

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

Attention. Beware, danger of aspiration.

---

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Foam, carbon dioxide (CO<sub>2</sub>), dry chemical, water-spray.

#### Unsuitable extinguishing media

Full water jet.

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

Fire may produce: Carbon monoxide and carbon dioxide, Irritant gases/vapours.

### 5.3. Advice for firefighters

Use breathing apparatus with independent air supply.

Protective suit.

### Additional information

Vapours are heavier than air and spread along ground.

The vapour/air mixture is explosive, even in empty, uncleaned receptacles.

Cool containers at risk with water spray jet.

Collect contaminated firefighting water separately, must not be discharged into the drains.

---

## SECTION 6: Accidental release measures

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

In case of vapour formation use respirator. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Keep away sources of ignition. Keep people away and stay on the upwind side.

### 6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Shovel into suitable container for disposal. Shop towels contaminated with solvents can auto ignite. Provide for safe disposal of wastes. Cloths contaminated with product should not be kept in trouser pockets.

### 6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).

Information for disposal see section 13.

---

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Ensure adequate ventilation. When using do not eat, drink or smoke. Avoid contact with skin, eyes and clothing. Do not breathe vapours. Avoid admission of air/oxygen (formation of peroxide).

#### Advice on protection against fire and explosion

Keep product and empty container away from heat and sources of ignition. Do not smoke. Take precautionary measures against static discharges. In use, may form flammable/explosive vapour-air mixture. This product can become statically charged which can lead to an explosive electrical

discharge.

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

### Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place. Pay attention to anti-explosion rules. Keep only in original container.

### Advice on storage compatibility

Incompatible with oxidizing agents.

### Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

Protect from heat and direct solar radiation. Protect from light.

## 7.3. Specific end use(s)

Sealing material

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
108-94-1	Cyclohexanone	10	41		TWA (8 h)	WEL
		20	82		STEL (15 min)	WEL
109-99-9	Tetrahydrofuran	50	150		TWA (8 h)	WEL
		100	300		STEL (15 min)	WEL

#### Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
108-94-1	Cyclohexanone	cyclohexanol	2 mmol/mol	urine	Post shift

### 8.2. Exposure controls

#### Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

#### Protective and hygiene measures

Do not inhale vapours. When using do not eat, drink or smoke. Avoid contact with eyes, skin or mucous membrane. Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

#### Eye/face protection

Eye wash bottle with pure water (EN 15154).

Safety goggles with side protection (EN 166).

#### Hand protection

Protective gloves (EN 374).

Neoprene gloves. (recommended: minimum protection index 2, corresponding to a permeation rate > 30 minutes according to EN 374)

Follow the recommendations of the glove manufacturer for breakthrough properties especially for workplace conditions involving mechanical stress and contact duration. Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

#### Skin protection

Long sleeved clothing (EN 368).

#### Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

---

## SECTION 9: Physical and chemical properties

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

Physical state:	Viscous
Colour:	Colourless / Black
Odour:	Ethereal

### **Changes in the physical state**

Initial boiling point and boiling range:	65,5 °C	*)
Flash point:	- 21 °C	*)
Lower explosion limits:	1,5 vol. %	*)
Upper explosion limits:	12 vol. %	*)
Vapour pressure: (at 20 °C)	170 hPa	*)
Density (at 20 °C):	< 1 g/cm <sup>3</sup>	
Water solubility: (at 20 °C)	Miscible	
Ignition temperature:	212 °C	*)
Explosive properties	Development of peroxides on exposure to light. Protect from light.	
Flow time: (at 20 °C)	45 s	6 DIN 53211

### 9.2. Other information

\*) Information for solvent

---

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No decomposition if stored and applied as directed.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Reactions with oxidizing agents. Reactions with alkalis.

Reacts with air to form peroxides.

### 10.4. Conditions to avoid

In use formation of flammable/explosive vapour-air mixtures possible.

Heating can release vapours which can be ignited.

### 10.5. Incompatible materials

oxidizing agents

### 10.6. Hazardous decomposition products

Irritant gases/vapours, Flammable gases/vapours, Carbon monoxide and carbon dioxide.

---

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### **Toxicokinetics, metabolism and distribution**

No toxicological data available.

#### **Acute toxicity**

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

**Acute toxicity**

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
108-94-1	cyclohexanone				
	inhalative vapour	ATE	11 mg/l		
	inhalative aerosol	ATE	1,5 mg/l		

**Irritation and corrosivity**

Causes serious eye irritation.

**Sensitising effects**

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

**STOT-single exposure**

May cause respiratory irritation. (Tetrahydrofuran)

**Severe effects after repeated or prolonged exposure**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing cancer. (Tetrahydrofuran)

**Aspiration hazard**

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

**Practical experience**

**Other observations**

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. Effects of breathing high concentrations of vapour may include: Headache, dizziness, weakness, unconsciousness.

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecological data are not available.

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential**

No data available.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
108-94-1	cyclohexanone	0,81

**12.4. Mobility in soil**

No data available.

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

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

**12.6. Other adverse effects**

Low hazard to waters.

**Further information**

Do not flush into surface water or sanitary sewer system.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Advice on disposal**

Waste disposal according to local regulations.

**Waste disposal number of waste from residues/unused products**

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances  
Classified as hazardous waste.

### Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

## SECTION 14: Transport information

### Land transport (ADR/RID)

**14.1. UN number:** UN 2056  
**14.2. UN proper shipping name:** TETRAHYDROFURAN, mixture  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Classification code: F1  
Limited quantity: 1 L / 30  
Transport category: 2  
Hazard No: 33  
Tunnel restriction code: D/E

### Inland waterways transport (ADN)

**14.1. UN number:** UN 2056  
**14.2. UN proper shipping name:** TETRAHYDROFURAN, mixture  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Classification code: F1  
Limited quantity: 1 L / 30 kg

### Marine transport (IMDG)

**14.1. UN number:** UN 2056  
**14.2. UN proper shipping name:** TETRAHYDROFURAN, MIXTURE  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Marine pollutant: No  
Limited quantity: 1 L / 30 kg  
EmS: F-E, S-D

### Air transport (ICAO)

**14.1. UN number:** UN 2056

**14.2. UN proper shipping name:** TETRAHYDROFURAN, MIXTURE

**14.3. Transport hazard class(es):** 3

**14.4. Packing group:** II

Hazard label: 3



Limited quantity Passenger: Y341 / 1 L

IATA-packing instructions - Passenger: 353

IATA-max. quantity - Passenger: 5 L

IATA-packing instructions - Cargo: 364

IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

Handle in accordance with good industrial hygiene and safety practice.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

The transport takes place only in approved and appropriate packaging.

---

**SECTION 15: Regulatory information**

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

**EU regulatory information**

2004/42/EC (VOC): < 80%

**National regulatory information**

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing. Observe employment restrictions for women of child-bearing age.

Water contaminating class (D): 1 - slightly water contaminating

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

---

**SECTION 16: Other information**

**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

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

DOT = Department of Transportation

TDG = Transport of Dangerous Goods

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

vPvB = Very Persistent and very Bio-accumulative



LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

**Relevant R-phrases (Number and full text)**

- 10 Flammable.
- 11 Highly flammable.
- 19 May form explosive peroxides.
- 20 Harmful by inhalation.
- 36/37 Irritating to eyes and respiratory system.
- 40 Limited evidence of a carcinogenic effect.

**Relevant H- and EUH-phrases (Number and full text)**

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- EUH019 May form explosive peroxides.

**Further Information**

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)