

RSD Technik GmbH  
79588 Efringen-Kirchen

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## 1 Identification of the substance / preparation and of the company

### 1.1 Product identifier

**Thinner**

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

Dilution

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

<b>Company</b>	RSD Technik GmbH Walter-Wetzel-Str. 2 79588 Efringen-Kirchen / GERMANY Phone: 07628-802-0 Fax: 07628-802-80 Homepage: www.rsdtechnik.de E-mail: info@rsdtechnik.de
<b>Responsible</b>	Schroeder@chemiebuero.de

### 1.4 Emergency phone

+49 (0)761-19240 (24h)

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

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

not applicable

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

F-Xn, R 11-20-38-48/20-63-65-67

### 2.2 Label elements

#### Hazard symbols



Highly flammable



Harmful

#### Contains

Cyclohexanone

Toluene

#### R-phrases

R 11: Highly flammable.

R 20: Harmful by inhalation.

R 38: Irritating to skin.

R 48/20: Harmful - danger of serious damage to health by prolonged exposure through inhalation.

R 63: Possible risk of harm to the unborn child.

R 65: Harmful - may cause lung damage if swallowed.

R 67: Vapours may cause drowsiness and dizziness.

#### S-phrases

S 16: Keep away from sources of ignition - No smoking.

S 29: Do not empty into drains.

S 33: Take precautionary measures against static discharges.

S 36/37: Wear suitable protective clothing and gloves.

S 60: This material and its container must be disposed of as hazardous waste.

S 62: If swallowed, do not induce vomiting. Seek medical advice immediately and show this container or label.

#### Special labelling

not applicable

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### 2.3 Other hazards

<b>Physico-chemical hazards</b>	See chapter 10 and R-phrases. Evolution of highly flammable gases/vapours. Because of the high vapour pressure, containers are liable to burst if temperature rises.
<b>Human health dangers</b>	See chapter 15. Has a degreasing effect on the skin. If swallowed or in the event of vomiting, risk of product entering the lungs.
<b>Environmental hazards</b>	See chapter 12.
<b>Other hazards</b>	Further hazards were not determined with the current level of knowledge.

## 3 Composition / Information on ingredients

### 3.1 Substances

The product in question is a mixture.

### 3.2 Mixtures

Range [%]	Substance
50 - 80	Cyclohexanone CAS: 108-94-1, EINECS/ELINCS: 203-631-1, EU-INDEX: 606-010-00-7 GHS/CLP: Flam. Liq. 3, H226 - Acute Tox. 4, H332 EEC: Xn R10-20
40 - 70	Toluene CAS: 108-88-3, EINECS/ELINCS: 203-625-9, EU-INDEX: 601-021-00-3 GHS/CLP: Flam. Liq. 2, H225 - Repr. 2, H361 - Asp. Tox 1, H304 - STOT RE 2, H373 - Skin Irrit. 2, H315 - STOT SE 3, H336 EEC: F-Xn R11-38-48/20-63-65-67

**Comment on component parts** Substances of Very High Concern - SVHC: substances are not contained or below 0,1%.  
For the wording of the listed risk phrases refer to section 16.

## 4 First aid measures

### 4.1 Description of first aid measures

<b>General information</b>	Change soaked clothing.
<b>Inhalation</b>	Ensure supply of fresh air. In the event of symptoms seek for medical treatment.
<b>Skin contact</b>	In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.
<b>Ingestion</b>	Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Supply with medical care.

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

Irritant effects  
Headache  
Nausea, vomiting.

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

Treat symptomatically.

## 5 Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Carbon dioxide. Water spray jet. Dry powder. Alcohol-resistant foam.
<b>Extinguishing media that must not be used</b>	Full water jet.

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## 5.2 Special hazards arising from the substance or mixture

Unknown risk of formation of toxic pyrolysis products.  
Not combusted hydrocarbons.  
Carbon monoxide (CO).

## 5.3 Advice for firefighters

Use self-contained breathing apparatus.  
Do not inhale explosion and/or combustion gases.  
Cool containers at risk with water spray jet.  
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

## 6 Accidental release measures

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

Keep away from all sources of ignition.  
Ensure adequate ventilation.

### 6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).  
Do not discharge into the drains/surface waters/groundwater.  
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

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

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).  
Dispose of absorbed material in accordance within the regulations.

### 6.4 Reference to other sections

See Chapter 8+13

## 7 Handling and storage

### 7.1 Precautions for safe handling

Use only in well-ventilated areas.  
Provide good room ventilation even at ground level (vapours are heavier than air).  
Use solvent-resistant equipment.  
Avoid spilling or spraying in enclosed areas.  
Keep away from all sources of ignition - Refrain from smoking.  
Take precautionary measures against static discharges.  
Ignitable mixtures can be formed in the empty container.

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

Only use containers that are approved specifically for the substance/product.  
Provide solvent-resistant and impermeable floor.  
Do not store together with oxidizing agents.  
Do not store with combustible materials.  
Protect from heat/overheating.  
Keep in a cool place, heat causes increase in pressure and risk of bursting.  
Keep container tightly closed.  
Keep container in a well-ventilated place.

### 7.3 Specific end use(s)

See product use, Chapter 1.2

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## 8 Exposure controls / personal protection

### 8.1 Control parameters

Ingredients with occupational  
 exposure limits to be monitored  
 (GB)

Range [%]	Substance / WEL: Workplace exposure limit
50 - 80	Cyclohexanone / 10 ppm, 41 mg/m <sup>3</sup> , Sk, BMGV BMGV, SK
40 - 70	Toluene / 50 ppm, 191 mg/m <sup>3</sup> , Sk

### 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Safety glasses.
<b>Hand protection</b>	The details concerned are recommendations. Please contact the glove supplier for further information. Viton, >480 min (EN 374).
<b>Skin protection</b>	Solvent-resistant protective clothing.
<b>Other</b>	It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin. Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier. Do not eat, drink, smoke or take drugs at work. Wash hands before breaks and after work. Use barrier skin cream.
<b>Respiratory protection</b>	Breathing apparatus in the event of high concentrations. Short term: filter apparatus, filter A.
<b>Thermal hazards</b>	not applicable
<b>Delimitation and monitoring of the environmental exposition</b>	See Chapter 6+7.

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## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	liquid
Color	colourless
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	110 - 156
Flash point [°C]	4
Flammability [°C]	430
Lower explosion limit	1,0 Vol.-%
Upper explosion limit	9,4 Vol.-%
Oxidizing properties	no
Vapour pressure [kPa]	2,9
Density [g/ml]	0,907 (20°C)
Bulk density [kg/m³]	not applicable
Solubility in water	virtually insoluble
Partition coefficient [n-octanol/water]	not determined
Viscosity	not determined
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not determined
Decomposition temperature	not applicable

### 9.2 Other information

none

## 10 Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.

### 10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

### 10.3 Possibility of hazardous reactions

Reactions with acids and strong oxidizing agents.  
 Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

### 10.4 Conditions to avoid

See chapter 7.2.

### 10.5 Incompatible materials

See chapter 10.3.

### 10.6 Hazardous decomposition products

Flammable gases/vapours.

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## 11 Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Cyclohexanone, CAS: 108-94-1

LC50, inhalative, Rat: 8000 ppm (4h).

LD50, oral, Mouse: 1400 mg/kg.

Toluene, CAS: 108-88-3

LD50, dermal, Rabbit: 12124 mg/kg.

LD50, oral, Rat: 5300-5910 mg/kg.

LC50, inhalative, Rat: 28,1 mg/l, 4h.

**Serious eye damage/irritation** not determined

**Skin corrosion/irritation** not determined

**Respiratory or skin sensitisation** not determined

**Specific target organ toxicity — single exposure** not determined

**Specific target organ toxicity — repeated exposure** not determined

**Mutagenicity** not determined

**Reproduction toxicity** Repr. Cat. 3

**Carcinogenicity** not determined

**General remarks**

The product was classified on the basis of the calculation procedure of the preparation directive.

## 12 Ecological information

### 12.1 Toxicity

Cyclohexanone, CAS: 108-94-1

EC50, (24h), Daphnia magna: 820 mg/l.

Toluene, CAS: 108-88-3

IC50, (72h), Selenastrum capricornutum: 12 mg/l.

EC50, (48h), Daphnia magna: 11,5 mg/l.

LC50, (96h), Oncorhynchus mykiss: 24 mg/l.

### 12.2 Persistence and degradability

**Behaviour in environment compartments** not determined

**Behaviour in sewage plant** not determined

**Biological degradability** not determined

### 12.3 Bioaccumulative potential

No informations available.

### 12.4 Mobility in soil

No informations available.

### 12.5 Results of PBT and vPvB assessment

No informations available.

### 12.6 Other adverse effects

Ecological data are not available.

Do not discharge product unmonitored into the environment or into the drainage.

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### 13 Disposal considerations

#### 13.1 Waste treatment methods

Coordinate the waste disposal with the national authorities.

##### Product

Dispose of as hazardous waste.

##### Waste no. (recommended)

070704\*

##### Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.  
Uncontaminated packaging may be taken for recycling.

##### Waste no. (recommended)

150110\*

### 14 Transport information

#### 14.1 UN number

See point 14.2 in accordance with UN shipping name

#### 14.2 UN proper shipping name

##### Classification according to ADR

UN 1993 Flammable liquid, n.o.s. (toluene, cyclohexanone) 3 II

##### - Classification Code

F1

##### - Label



##### - ADR LQ

1 I

##### - ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 2 (D/E)

##### Classification according to IMDG

UN 1993 Flammable liquid, n.o.s. (Toluene, cyclohexanone) 3 II

##### - EMS

F-E, S-E

##### - Label



##### - IMDG LQ

1 I

##### Classification according to IATA

UN 1993 Flammable liquid, n.o.s. (Toluene, cyclohexanone) 3 II

##### - Label



#### 14.3 Transport hazard class(es)

See point 14.2 in accordance with UN shipping name

#### 14.4 Packing group

See point 14.2 in accordance with UN shipping name

#### 14.5 Environmental hazards

See point 14.2 in accordance with UN shipping name

#### 14.6 Special precautions for user

Relevant information under points 6 to 8.

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

No informations available.

### 15 Regulatory information

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

##### EEC-REGULATIONS

1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC

##### TRANSPORT-REGULATIONS

DOT-Classification, ADR (2011); IMDG-Code (2011, 35. Amdt.); IATA-DGR (2011).

##### NATIONAL REGULATIONS (GB):

EH40/2005 Workplace exposure limits with amendments October 2007.  
CHIP 3/ CHIP 4

#### 15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

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**16 Other informations****R-phrases (Chapter 03)**

R 11: Highly flammable.  
 R 38: Irritating to skin.  
 R 48/20: Harmful - danger of serious damage to health by prolonged exposure through inhalation.  
 R 63: Possible risk of harm to the unborn child.  
 R 65: Harmful - may cause lung damage if swallowed.  
 R 67: Vapours may cause drowsiness and dizziness.  
 R 10: Flammable.  
 R 20: Harmful by inhalation.

**Hazard statements (Chapter 03)**

H225 Highly flammable liquid and vapour.  
 H361 Suspected of damaging fertility or the unborn child.  
 H304 May be fatal if swallowed and enters airways.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H315 Causes skin irritation.  
 H336 May cause drowsiness or dizziness.  
 H226 Flammable liquid and vapour.  
 H332 Harmful if inhaled.

**Observe employment restrictions for people**

yes

**VOC (1999/13/CE)**

100 %

**Modified position**

Chapter 5 been added: Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

Chapter 5 been added: Do not inhale explosion and/or combustion gases.

Chapter 8 been added: The details concerned are recommendations. Please contact the glove supplier for further information.

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

Chapter 12 been added: Do not discharge product unmonitored into the environment or into the drainage.

Chapter 11 been added: Repr. Cat. 3

Chapter 15 been added: Please note BG leaflet BGI 595: Irritative substances/caustic substances when at work.

Chapter 15 been added:

Chapter 15 been added: 5.2.5.

Chapter 15 been added:

Chapter 2 been added: Evolution of highly flammable gases/vapours.

Chapter 2 been added: Because of the high vapour pressure, containers are liable to burst if temperature rises.

Chapter 2 been added: Has a degreasing effect on the skin.

Chapter 2 been added: If swallowed or in the event of vomiting, risk of product entering the lungs.

Chapter 6 been added: In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

Chapter 7 been added: Do not store with combustible materials.

Disclaimer: This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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