

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

RAVENOL Bremsenreiniger

Article No.:

1360030

UFI:

V3DK-2A1F-5CCG-0X9D

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

Use of the substance/mixture:

Reiniger

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH

Technik / QS

Jöllenbecker Str. 2

33824 Werther

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Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 40

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

E-mail (competent person): technik@ravenol.de

1.4. Emergency telephone number

Abt. Technik (Produktsicherheit), 24h: Giftnotruf Berlin 24-hour emergency number 030 30686700.  
Advice in German and English. +49 700 24 112 112 (Contract ID: RAV) , +49 5203 9719 0 (Mo-Do 7.30 Uhr - 16.30 Uhr, Fr 7.30 Uhr - 13.15 Uhr) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids ( <i>Flam. Liq. 2</i> )	H225: Highly flammable liquid and vapour.	On basis of test data.
Aspiration hazard ( <i>Asp. Tox. 1</i> )	H304: May be fatal if swallowed and enters airways.	Calculation method.
STOT-single exposure ( <i>STOT SE 3</i> )	H336: May cause drowsiness or dizziness.	Calculation method.
Hazardous to the aquatic environment ( <i>Aquatic Chronic 2</i> )	H411: Toxic to aquatic life with long lasting effects.	Calculation method.

2.2. Label elements

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

Hazard pictograms:



**GHS02**  
Flame



**GHS07**  
Exclamation mark



**GHS08**  
Health hazard



**GHS09**  
Environment

Signal word: Danger



Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

### Hazard components for labelling:

Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics

#### hazard statements for physical hazards

H225	Highly flammable liquid and vapour.
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#### hazard statements for health hazards

H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.

#### Hazard statements for environmental hazards

H411	Toxic to aquatic life with long lasting effects.
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#### Supplemental hazard information

EUH066	Repeated exposure may cause skin dryness or cracking.
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#### Precautionary Statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.

#### Precautionary Statements Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

#### Precautionary Statements Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/Emergency telephone number.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/Emergency telephone number if you feel unwell.
P331	Do NOT induce vomiting.
P370 + P378	In case of fire: Use Carbon dioxide (CO2), Extinguishing powder, Water spray jet to extinguish.

#### Precautionary Statements Storage

P403 + P235	Store in a well-ventilated place. Keep cool.
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#### Precautionary Statements Disposal

P501	Dispose of contents/container to an appropriate recycling or disposal facility.
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### 2.3. Other hazards

#### Other adverse effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

#### Additional information:

Regulation (EC) No. 648/2004 (Detergents regulation): Contains: aliphatic hydrocarbons >= 30 %

#### Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 68290-06-9 EC No.: 920-750-0	Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics Aquatic Chronic 2, Asp. Tox. 1, Flam. Liq. 2, STOT SE 3 <b>Danger</b> H225-H304-H336-H411	90 - < 100 Wt %

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information:**

No special measures are necessary.

**Following inhalation:**

Provide fresh air. In case of respiratory tract irritation, consult a physician.

**In case of skin contact:**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately.

**After eye contact:**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

**After ingestion:**

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

**Self-protection of the first aider:**

First aider: Pay attention to self-protection!

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

May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Repeated exposure may cause skin dryness or cracking.

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

No information available.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media:**

Sand  
Dry extinguishing powder  
Carbon dioxide (CO<sub>2</sub>)  
Never use water.

**Unsuitable extinguishing media:**

Full water jet

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

In case of fire may be liberated: Gases/vapours, toxic  
Vapours can form explosive mixtures with air.

**Hazardous combustion products:**

Nitrogen oxides (NO<sub>x</sub>) Carbon monoxide Carbon dioxide (CO<sub>2</sub>)

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

### 5.4. Additional information

Co-ordinate fire-fighting measures to the fire surroundings.  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Use water spray jet to protect personnel and to cool endangered containers.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

**Personal precautions:**

Use personal protection equipment.

**Emergency procedures:**

Remove all sources of ignition. Remove persons to safety. Provide adequate ventilation.

#### 6.1.2. For emergency responders

**Personal protection equipment:**

Use appropriate respiratory protection.



Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

## 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers).

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

### For containment:

Prevent spread over a wide area (e.g. by containment or oil barriers).

### For cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Do not rinse down with water.

### Other information:

Treat the recovered material as prescribed in the section on waste disposal.

## 6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

## 6.5. Additional information

Clear spills immediately.

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

### Protective measures

#### Advices on safe handling:

Keep container tightly closed in a cool, well-ventilated place. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Avoid: generation/formation of aerosols

#### Fire prevent measures:

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

#### Environmental precautions:

See section 8.

### Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing.

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

### Technical measures and storage conditions:

Provide adequate ventilation.

### Packaging materials:

Keep/Store only in original container.

### Requirements for storage rooms and vessels:

Keep/Store only in original container. Keep container tightly closed in a cool place.

### Hints on storage assembly:

not required

### Storage class: 3 - Flammable liquids

### Further information on storage conditions:

Keep only in the original container in a cool, well-ventilated place. Keep container tightly closed.

## 7.3. Specific end use(s)

### Recommendation:

Observe technical data sheet. Cleaning agent

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### 8.1.1. Occupational exposure limit values

No data available

### 8.1.2. Biological limit values

No data available



Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

### 8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyc lics <2% aromatics CAS No.: 68290-06-9	608 mg/m <sup>3</sup>	① DNEL worker ② inhalative, long-term, systemic
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyc lics <2% aromatics CAS No.: 68290-06-9	699 mg/kg	① DNEL worker ② dermal, long-term, systemic
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyc lics <2% aromatics CAS No.: 68290-06-9	699 mg/kg	① DNEL worker ② oral, long-term, systemic

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

#### 8.2.2. Personal protection equipment



##### Eye/face protection:

During transfer: Eye glasses with side protection  
DIN-/EN-Norms: DIN EN 166

##### Skin protection:

Hand protection

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Breakthrough times and swelling properties of the material must be taken into consideration.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,4 mm

Permeation time (maximum wear time): 480 min

Tested protective gloves must be worn: EN ISO 374

Body protection: Protective clothing

##### Respiratory protection:

Work in well-ventilated zones or use proper respiratory protection. To follow: AGW (DE)

#### 8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

## SECTION 9: Physical and chemical properties

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

#### Appearance

**Physical state:** Liquid

**Colour:** colourless

**Odour:** characteristic

#### Safety relevant basis data

parameter		at °C	Method	Remark
pH	<i>not applicable</i>			
Melting point	<i>not determined</i>			
Freezing point	<i>No data available</i>			
Initial boiling point and boiling range	100 - 140 °C			
Decomposition temperature	<i>No data available</i>			
Flash point	-1 °C			
Evaporation rate	<i>No data available</i>			
Auto-ignition temperature				The product / the preparation is not self-igniting.



Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

parameter		at °C	Method	Remark
Upper/lower flammability or explosive limits	0.8 – 6.5 Vol-%			
Vapour pressure	45 hPa	20 °C		
Vapour density	No data available			
Density	730 kg/m³	20 °C		
Bulk density	not applicable			
Water solubility	Immiscible			
Partition coefficient: n-octanol/water	not applicable			
Dynamic viscosity	not applicable			
Kinematic viscosity	20.5 mm²/s	40 °C		
Lösemittelgehalt	< 100 %	20 °C		organic solvents

## 9.2. Other information

Water content (%): 0, Solid content (%): 0

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No known hazardous reactions.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

### 10.4. Conditions to avoid

No special measures are necessary.

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
68290-06-9	Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics	<b>LD<sub>50</sub> oral:</b> 5,000 mg/kg (Rat) <b>LD<sub>50</sub> dermal:</b> 3,000 mg/kg (Rabbit) <b>LC<sub>50</sub> Acute inhalation toxicity (vapour):</b> 23 mg/l 4 h

#### Acute oral toxicity:

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

#### Acute dermal toxicity:

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

#### Acute inhalation toxicity:

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

#### Skin corrosion/irritation:

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

#### Serious eye damage/irritation:

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

#### Respiratory or skin sensitisation:

No sensitizing effects known.

#### Germ cell mutagenicity:

No indications of human germ cell mutagenicity exist.



Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

**Carcinogenicity:**

No indication of human carcinogenicity.

**Reproductive toxicity:**

No indications of human reproductive toxicity exist.

**STOT-single exposure:**

May cause drowsiness or dizziness.

**STOT-repeated exposure:**

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

**Aspiration hazard:**

For viscosity data, see section 9. May be fatal if swallowed and enters airways.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Assessment/classification:**

Toxic to aquatic life with long lasting effects.

**Additional ecotoxicological information:**

Do not allow uncontrolled discharge of product into the environment.

### 12.2. Persistence and degradability

**Biodegradation:**

No further relevant information available.

### 12.3. Bioaccumulative potential

**Partition coefficient: n-octanol/water:**

not applicable

**Accumulation / Evaluation:**

No further relevant information available.

### 12.4. Mobility in soil

No further relevant information available.

### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

**Waste treatment options**

**Appropriate disposal / Product:**

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

**Appropriate disposal / Package:**

Non-contaminated packages may be recycled.

### 13.2. Additional information








The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

## SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN-No.</b>			
UN 3295	UN 3295	UN 3295	UN 3295



Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.2. UN proper shipping name</b>			
HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics )	HYDROCARBONS, LIQUID, N.O.S.
<b>14.3. Transport hazard class(es)</b>			
 3	 3	 3	 3
<b>14.4. Packing group</b>			
II	II	II	II
<b>14.5. Environmental hazards</b>			
		 MARINE POLLUTANT	No
<b>14.6. Special precautions for user</b>			
<b>Special provisions:</b> <b>Limited quantity (LQ):</b> 1L <b>Excepted Quantities (EQ):</b> <b>Hazard identification number (Kemler No.):</b> 33 <b>Classification code:</b> F1 <b>tunnel restriction code:</b> (D/E) <b>Remark:</b>	<b>Special provisions:</b> <b>Limited quantity (LQ):</b> 1L <b>Excepted Quantities (EQ):</b> <b>Classification code:</b> F1 <b>Remark:</b>	<b>Special provisions:</b> <b>Limited quantity (LQ):</b> 1L <b>Excepted Quantities (EQ):</b> <b>EmS-No.:</b> F-E, S-D <b>Remark:</b>	<b>Special provisions:</b> <b>Excepted Quantities (EQ):</b> <b>Remark:</b>

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
 No transport as bulk according to IBC Code.

## SECTION 15: Regulatory information

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

#### 15.1.1. EU legislation

##### Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:

- P5c Flammable liquids of Categories 2 or 3, not covered by P5a and P5b
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

#### 15.1.2. National regulations

##### [DE] National regulations

##### Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).





Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

## Störfallverordnung

### for substances contained in the product:

Hazard categories:

- P5c Flammable liquids of Categories 2 or 3, not covered by P5a and P5b
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

## Betriebssicherheitsverordnung (BetrSichV)

leichtentzündlich

## Technische Anleitung Luft (TA-Luft)

### Klasse 1:

TA-Luft Class NK

### Anteil 1:

100 %

## Water hazard class (WGK)

### WGK:

1 - schwach wassergefährdend

### Source:

Self-classification (mixture; calculation rule).

### Remark:

Analogous classification:

## Technische Regeln für Gefahrstoffe

TRGS 500

TRGS 510

## Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Informationen (BGI) 868

Berufsgenossenschaftliche Regeln (BGR) 189, 190, 192, 195

## 15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

## SECTION 16: Other information

### \* 16.1. Indication of changes

3.2.	Mixtures
16.1.	Indication of changes

### 16.2. Abbreviations and acronyms

See overview table at [www.euphrac.eu](http://www.euphrac.eu)

### 16.3. Key literature references and sources for data

67/548/EEC - Dangerous Substances Directive

1999/45/EEC - Dangerous Preparations Directive

EC 1907/2006 - REACH Regulation

1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006

Regulation (EC) No 1907/2006 (REACH), Annex II

European Chemicals Agency (ECHA), C & L classification and labeling inventory

European Chemicals Agency (ECHA), ECHA CHEM Registered substances

OECD The Global Portal to Information on Chemical Substances (ChemPortal)

Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances

Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)



Revision date: 10 Feb 2020 Version: 5 Print date: 10 Feb 2020

#### 16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids ( <i>Flam. Liq. 2</i> )	H225: Highly flammable liquid and vapour.	On basis of test data.
Aspiration hazard ( <i>Asp. Tox. 1</i> )	H304: May be fatal if swallowed and enters airways.	Calculation method.
STOT-single exposure ( <i>STOT SE 3</i> )	H336: May cause drowsiness or dizziness.	Calculation method.
Hazardous to the aquatic environment ( <i>Aquatic Chronic 2</i> )	H411: Toxic to aquatic life with long lasting effects.	Calculation method.

#### 16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

#### 16.6. Training advice

No data available

#### 16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

\* Data changed compared with the previous version