



RAVENOL Rostlöser mit MoS2 Spray



ART.-NR. 1360009

400 ml | 1360009-400

RAVENOL Rostlöser mit MoS2 enthält feinst dispergierten MOS2-Festschmierstoff für hervorragende Eigenschaften.

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RAVENOL Rostlöser mit MoS2 ist bestens für sämtliche mechanische Reparaturen geeignet.

RAVENOL Rostlöser mit MoS2 lockert und löst festgefressene Schraubenverbindungen, verdrängt Wasser von Zündkontakten und elektrischen Anlagen, verhindert Quietsch- und Knarrgeräusche, extrem kriechfähig.

RAVENOL Rostlöser mit MoS2 ist z.B. einsetzbar:

- wo bewegliche Teile leichtgängig und korrosionsfrei gehalten werden müssen: Scharniere, Blöcke, Winden, Seil-, Ketten- und Bowdenzüge, Schlösser u.v.a.m..
- wo kurzfristig vor Korrosion durch Wasser geschützt werden muß: alle Metallteile an Maschinen, Apparate, Kraftfahrzeugen und Booten sowie bei Waffen, Werkzeugen, Rasenmähern, Motorsensen u.a.m..
- wo Wasser und Feuchtigkeit Betriebsstörungen verursachen, z.B. bei elektrischen Anlagen (Zündverteiltern u.a.) verwendet als Kontaktspray.
- wo Festgerostetes gängig gemacht werden soll.

Anwendungshinweis

RAVENOL Rostlöser mit MoS2 vor Gebrauch kurz aufschütteln. Die zu behandelnden Teile gezielt aus ca.15 – 20 cm Abstand einsprühen und kurze Zeit einwirken lassen. Frei von chlorierten Lösungsmitteln.

Eigenschaften

RAVENOL Rostlöser mit MoS2 Spray bietet:

- Durch feinst dispergierten MoS2-Festschmierstoff hervorragende Eigenschaften
- Lockert und löst festgefressene Schraubenverbindungen
- Sehr gute Wasserverdrängung an Zündkontakten und elektrischen Anlagen
- Extrem kriechfähig
- Schützt Metallteile vor Korrosion
- Verhindert Quietsch- und Knarrgeräusche.



Eigenschaften	Einheit	Daten	Prüfung nach
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Alle Angaben entsprechen nach bestem Wissen dem derzeitigen Stand der Erkenntnisse und unserer Entwicklung. Änderungen bleiben vorbehalten. Alle Bezugnahme auf DIN-Normen dienen nur der Warenbeschreibung und stellen keine Garantie dar. Bei vorliegenden Problemfällen technische Beratung anfordern.

Stand: 02. September 2020



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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 Rostlöser mit MoS2

Article No.:

1360009

Additional information:

Giftnotruf Berlin 030 30686 790 Consulting in German and English

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

Use of the substance/mixture:

Technical Spray

1.3. Details of the supplier of the safety data sheet

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

Ravensberger Schmierstoffvertrieb GmbH

Jöllenbecker Str. 2

33824 Werther

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Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 48

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

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

1.4. Emergency telephone number

Abt. Produktsicherheit, 24h: +49 700 24 112 112 (Company ID: RAV) (outside USA/Canada) 011 49 700 24 112 112 (Company ID: RAV) (inside USA/Canada), +49 5203 9719 0 (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
Aerosols (<i>Aerosol 1</i>)	H222: Extremely flammable aerosol.	

2.2. Label elements

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

Hazard pictograms:



GHS02

Flame

Signal word: Danger

hazard statements for physical hazards	
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Supplemental Hazard information (EU)	
EUH066	Repeated exposure may cause skin dryness or cracking.



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Precautionary statements

P102 Keep out of reach of children.

Precautionary statements Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

Precautionary statements Storage

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Precautionary statements Disposal

P501.2 Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Additional information:

Labelling for contents according to regulation (EC) No. 648/2004: >= 30% aliphatic hydrocarbons

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 64742-48-9 EC No.: 918-481-9 REACH No.: 01-2119457273-39	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics Asp. Tox. 1 H304-EUH066	50 - < 60 Vol-%
CAS No.: 75-28-5 EC No.: 200-857-2 REACH No.: 01-2119485395-27	isobutane Flam. Gas 1, Liquef. Gas H220-H280	25 - < 50 Vol-%
CAS No.: 74-98-6 EC No.: 200-827-9 REACH No.: 01-2119486944-21	propane Flam. Gas 1, Liquef. Gas H220-H280	3 - < 5 Vol-%
CAS No.: 106-97-8 EC No.: 203-448-7 REACH No.: 01-2119474691-32	butane Flam. Gas 1, Liquef. Gas H220-H280	1 - < 3 Vol-%

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

First aider: Pay attention to self-protection! Remove persons to safety.

Never give anything by mouth to an unconscious person or a person with cramps.

Following inhalation:

Provide fresh air. Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

In case of skin contact:

In case of skin contact, wash immediately with large quantities of water/polyethylene glycol 400 (Roticlean). Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

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:

Rinse mouth immediately and drink plenty of water. Observe risk of aspiration if vomiting occurs.



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

The following symptoms may occur: Headache, Dizziness, Nausea, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide (CO₂)
Extinguishing powder
Foam

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours can form explosive mixtures with air.

Hazardous combustion products:

Nitrogen oxides (NO_x)
Carbon monoxide
Carbon dioxide (CO₂)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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. Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

6.1.2. For emergency responders

Personal protection equipment:

Use appropriate respiratory protection.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion.

6.3. Methods and material for containment and cleaning up

For containment:

Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids

For cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

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
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information

No data available



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SECTION 7: Handling and storage

* 7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Pressurised container: May burst if heated. Do not pierce or burn, even after use. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Do not breathe gas/vapour/aerosol.

Fire prevent measures:

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

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.

Avoid contact with eyes. Avoid contact with skin.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on storage assembly:

Do not store together with:

Material, oxygen-rich, oxidizing

Pyrophoric or self-heating substances

Storage class: 2B - Aerosol dispensers and lighters

Further information on storage conditions:

Protect against: Frost, UV-radiation/sunlight

maximum storage temperature: 50 °C

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

* 8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
DFG (DE)	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics CAS No.: 64742-48-9	① 50 ppm (350 mg/m ³) ② 100 ppm (700 mg/m ³)
TRGS 900 (DE)	isobutane CAS No.: 75-28-5	① 1,000 ppm (2,400 mg/m ³) ② 4,000 ppm (9,600 mg/m ³)
TRGS 900 (DE)	propane CAS No.: 74-98-6	① 1,000 ppm (1,800 mg/m ³) ② 4,000 ppm (7,200 mg/m ³)
TRGS 900 (DE)	butane CAS No.: 106-97-8	① 1,000 ppm (2,400 mg/m ³) ② 4,000 ppm (9,600 mg/m ³)

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

No data available



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* **8.2. Exposure controls**

8.2.1. Appropriate engineering controls

See section 7. Additional information on plant design:

If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Do not breathe gas/vapour/aerosol.

8.2.2. Personal protection equipment

Eye/face protection:

Eye/face protection

Skin protection:

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. 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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: > 0,4 mm

Breakthrough time (maximum wearing time): 480 min

Body protection: Wear suitable protective clothing.

Respiratory protection:

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Suitable respiratory protection apparatus: Combination filtering device (EN 14387)

Filtering device with filter or ventilator filtering device of type: AX

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Other protection measures:

Draw up and observe skin protection programme. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

8.2.3. Environmental exposure controls

No data available

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

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

Appearance

Physical state: Aerosol

Colour: colourless

Odour: characteristic

Safety relevant basis data

parameter		at °C	Method	Remark
pH	not determined			
Melting point	not determined			
Freezing point	not determined			
Initial boiling point and boiling range	> 100 °C			
Decomposition temperature (°C):	not determined			
Flash point	-80 °C			
Evaporation rate	not determined			
Ignition temperature in °C	not determined			
Upper/lower flammability or explosive limits	1 - 11 Vol-%			
Vapour pressure	not determined			
Vapour density	not determined			
Relative density	785 kg/m ³	20 °C		
Bulk density	not determined			



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parameter		at °C	Method	Remark
Water solubility (g/L)	The study does not need to be conducted because the substance is known to be insoluble in water.			
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	6.9 mm ² /s	40 °C		

9.2. Other information

The information relates to the active ingredient.

SECTION 10: Stability and reactivity

10.1. Reactivity

Ignition hazard. Flammable

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Do not expose to temperatures exceeding 50 °C/122 °F. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Carbon dioxide, Carbon monoxide, carbon black, aldehydes. Health hazard

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

* 11.1. Information on toxicological effects

Acute oral toxicity:

Pamatojoties uz pieejamajiem datiem, klasifikācijas kritēriji nav izpildīti.

Acute dermal toxicity:

No information available for acute dermal and inhalative toxicity.

Acute inhalation toxicity:

No information available for acute dermal and inhalative toxicity.

Skin corrosion/irritation:

Repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation:

No information available.

Respiratory or skin sensitisation:

Pamatojoties uz pieejamajiem datiem, klasifikācijas kritēriji nav izpildīti.

Germ cell mutagenicity:

No indications of human germ cell mutagenicity exist.

Carcinogenicity:

No indication of human carcinogenicity.

Reproductive toxicity:

No indications of human reproductive toxicity exist.

STOT-single exposure:

Pamatojoties uz pieejamajiem datiem, klasifikācijas kritēriji nav izpildīti.

STOT-repeated exposure:

Pamatojoties uz pieejamajiem datiem, klasifikācijas kritēriji nav izpildīti.



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Aspiration hazard:

Pamatojoties uz pieejamajiem datiem, klasifikācijas kritēriji nav izpildīti.

Additional information:

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

* **12.2. Persistence and degradability**

CAS No.	Substance name	Biodegradation	Remark
64742-48-9	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyc lics, < 2 % aromatics	No	

Abiotic degradation:

The product has not been tested.

Additional information:

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

* **12.3. Bioaccumulative potential**

Bioconcentration factor (BCF):

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
64742-48-9	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyc lics, < 2 % aromatics	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

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

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code packaging:

15 01 04	Metallic packaging
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Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

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 traf f (ADN)	Sea transport (IMDG)	Air transport (ICAO- TI / IATA-DGR)
14.1. UN-No.			
UN 1950	UN 1950	UN 1950	UN 1950



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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.2. UN proper shipping name			
AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS
14.3. Transport hazard class(es)			
 2.1	 2.1	 2.1	 2.1
14.4. Packing group			
No data available			
14.5. Environmental hazards			
No	No	No	No
14.6. Special precautions for user			
Special provisions: Limited quantity (LQ): The Limited Quantity specifies the inner packaging size. Packages may not exceed 30 kg gross mass. 1L Hazard identification number (Kemler No.): Classification code: F tunnel restriction code: (D) Remark:	Special provisions: Limited quantity (LQ): The Limited Quantity specifies the inner packaging size. Packages may not exceed 30 kg gross mass. 1L Classification code: F Remark:	Special provisions: Limited quantity (LQ): The Limited Quantity specifies the inner packaging size. Packages may not exceed 30 kg gross mass. 1L EmS-No.: F-D; S-U Remark:	Special provisions: Limited quantity (LQ): Remark:
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			
not applicable			

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

entry 28: Hydrocarbons, C10-C13, n-alkanes, iso-alkanes, cyclenes, aromatics <2%

Other regulations (EU):

Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline): EU/CH 99

Volatile organic compounds (VOC) content in percent by weight: No information available.

VOC-CH: No information available.

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (WGK)

WGK:

2 - deutlich wassergefährdend

Description:

hazardous to water (WGK 2)



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Remark:

Self-classification (mixture; calculation rule).

15.2. Chemical Safety Assessment

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

15.3. Additional information

No data available

SECTION 16: Other information

* **16.1. Indication of changes**

2.1.	Classification of the substance or mixture
2.2.	Label elements
3.2.	Mixtures
4.3.	Indication of any immediate medical attention and special treatment needed
7.1.	Precautions for safe handling
8.1.	Control parameters
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
11.1.	Information on toxicological effects
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
14.5.	Environmental hazards
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes

16.2. Abbreviations and acronyms

See overview table at 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)

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
Aerosols (<i>Aerosol 1</i>)	H222: Extremely flammable aerosol.	

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

Hazard statements	
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.

16.6. Training advice

No data available



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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