

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

**Name of product** RIEGLER Edelstahl-Pflegespray  
Code-Nr. R3280/400 / ID-Nr. 114567

**1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Recommended intended purpose(s)**

Technical Aerosols

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

**Manufacturer/distributor** RIEGLER & Co. KG  
Schützenstr. 27, D-72574 Bad Urach  
Phone : +49 (0) 7125/9497-0, Fax : +49 (0) 7125/9497-97  
E-Mail : zedok@riegler.de  
Internet : www.riegler.de

**Advice** Abteilung eDocumentation  
Phone : +49 (0) 7125/9497-0  
Fax : +49 (0) 7125/9497-97  
E-mail (competent person):  
zedok@riegler.de

**1.4. Emergency telephone number**

**Emergency advice** Giftnotrufzentrale Bonn  
Phone : +49(0)228-19 240

**! SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****! Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]**

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Aerosol 1	H222, H229	
Acute Tox. 4	H302	
Skin Irrit. 2	H315	
Eye Irrit. 2	H319	
STOT SE 3	H336	
Asp. Tox. 1		- H304 (Aerosol: not applicable)
Aquatic Chronic 2	H411	

**Hazard Statements**

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

**2.2. Label elements**

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

GHS02



GHS07



GHS09

**! Signal word**

Danger

**Hazard Statements**

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

P102	Keep out of reach of children.
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.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P331	Do NOT induce vomiting.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501	Dispose of contents/container to hazardous or special waste collection point.

**Hazardous ingredients for labeling**

2-butoxyethanol, Naphtha (petroleum), hydrotreated light, Naphtha (petroleum), hydrotreated heavy

**Special rules for supplemental label elements for certain mixtures**

Contains (R)-(+)-Limonene . May produce an allergic reaction.

**2.3. Other hazards**

Product has an anesthetic effect.

**Information pertaining to special dangers for human and environment**

In extensive use, formation of flammable / explosive vapour-air mixture is possible.

**Results of PBT and vPvB assessment**

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

**SECTION 3: Composition/ information on ingredients**
**3.1. Substances**

not applicable

**3.2. Mixtures**
**Description**

Mixture of oils, solvents and propellant.

**Hazardous ingredients**

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
64-17-5	200-578-6	ethanol	10 < 25	Flam. Liq. 2, H225
67-63-0	200-661-7	propan-2-ol	0,1 < 1	Flam. Liq. 2, H225 / Eye Irrit. 2, H319 / STOT SE 3, H336
111-76-2	203-905-0	2-butoxyethanol	10 < 25	Acute Tox. 4, H332 / Acute Tox. 4, H312 / Acute Tox. 4, H302 / Eye Irrit. 2, H319 / Skin Irrit. 2, H315
5989-27-5	227-813-5	(R)-p-mentha-1,8-diene	0,25 < 1	Flam. Liq. 3, H226 / Skin Irrit. 2, H315 / Skin Sens. 1, H317 / Aquatic Acute 1, H400 M=1 / Aquatic Chronic 1, H410 M=1
64742-48-9	919-857-5	Naphtha (petroleum), hydrotreated heavy	10 < 25	Flam. Liq. 3, H226 / Asp. Tox. 1, H304 / STOT SE 3, H336 / , EUH066
74-98-6	200-827-9	propane	10 < 25	Flam. Gas 1, H220 / Press. Gas, H280
106-97-8	203-448-7	Butan (1,3 Butadiene <0,1%)	10 < 25	Flam. Gas 1, H220 / Press. Gas, H280
64742-49-0	921-024-6	Naphtha (petroleum), hydrotreated light	10 < 25	Flam. Liq. 2, H225 / Asp. Tox. 1, H304 / Aquatic Chronic 2, H411 / Skin Irrit. 2, H315 / STOT SE 3, H336

**REACH**

CAS No	Name	REACH registration number
64-17-5	ethanol	01-2119457610-43
67-63-0	propan-2-ol	01-2119457558-25
111-76-2	2-butoxyethanol	01-2119475108-36
5989-27-5	(R)-p-mentha-1,8-diene	01-2119529223-47
64742-48-9	Naphtha (petroleum), hydrotreated heavy	01-2119463258--33
74-98-6	propane	01-2119486944-21
106-97-8	Butan (1,3 Butadiene <0,1%)	01-2119474691-32
64742-49-0	Naphtha (petroleum), hydrotreated light	01-2119475514-35

**Labelling for contents according to regulation (EC) No 648/2004, annex VII**

less than 5 % scents (D-LIMONENE)

30 % and more aliphatic hydrocarbons

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**General information**

Remove contaminated soaked clothing immediately.

**In case of inhalation**

Ensure of fresh air.

In the event of symptoms refer for medical treatment.

**In case of skin contact**

In case of contact with skin wash off with water.

Consult a doctor if skin irritation persists.

**In case of eye contact**

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

**In case of ingestion**

Do not induce vomiting.  
Medical treatment.

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

No information available.

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

No information available.

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**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Alcohol-resistant foam  
Dry powder  
Carbon dioxide  
water mist

**Unsuitable extinguishing media**

Full water jet

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

Danger of bursting  
In case of fire formation of dangerous gases possible.

**5.3. Advice for firefighters****Special protective equipment for fire-fighters**

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus.  
Do not inhale explosion and/or combustion gases.

**Additional information**

Cool endangered containers with water spray jet.  
Collect contaminated firefighting water separately, must not be discharged into the drains.

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

Ensure adequate ventilation.  
Use personal protective clothing.  
Keep away sources of ignition.  
Use breathing apparatus if exposed to vapours/dust/aerosol.

**6.2. Environmental precautions**

Inform pollution control authorities if product gets into the sewerage systems or open waters.  
Do not discharge into the drains or bodies of water..  
Do not discharge into the drains/surface waters/groundwater.

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

Do not distribute with water.  
Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).  
After taking up the material dispose according to regulation.

**6.4. Reference to other sections**

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

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

Do not spray into flames or any incandescent material.

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

Open and handle container with care!

**General protective measures**

Avoid contact with eyes and skin

Do not inhale gases/vapours/aerosols.

Ensure sufficient ventilation.

**Hygiene measures**

At work do not eat, drink, smoke or take drugs.

Remove soiled or soaked clothing immediately.

Work in rooms with good ventilation.

Wash hands before breaks and after work.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking

Do not spray on a naked flame or any incandescent material.

Pressurized container.

Do not pierce or burn even after use.

Protect from heat and sunlight.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep in closed original container.

Adhere to administrative regulations relating to storage of compressed gas cylinders / containers.

**Advice on storage compatibility**

Do not store together with animal feedstuffs.

Do not store together with food.

**Further information on storage conditions**

Keep container tightly closed.

Protect from direct solar radiation.

Storage temperature may not exceed 50°C (=122°F).

Store container at cool and aired place.

Container should not be gas-tight closed.

**7.3. Specific end use(s)****Recommendation(s) for intended use**

See section 1.2

**! SECTION 8: Exposure controls/personal protection****8.1. Control parameters****! Ingredients with occupational exposure limits to be monitored**

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
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**Ingredients with occupational exposure limits to be monitored (continued)**

CAS No	Name	Code	[mg/m <sup>3</sup> ]	[ppm]	Remark
106-97-8	Butane	8 hours	1450	600	EH40/2005
		Short-term	1810	750	
111-76-2	2-butoxyethanol	8 hours		25	EH40/2005
		Short-term		50	
64-17-5	ethanol	8 hours	1920	1000	EH40/2005
67-63-0	propan-2-ol	8 hours	999	400	EH40/2005
		Short-term	1250	500	

**Indicative occupational exposure limit values (91/322/EEC, 2000/39/EC, 2006/15/EC or 2009/161/EU)**

CAS No	Name	Code	[mg/m <sup>3</sup> ]	[ppm]	Remark
111-76-2	2-butoxyethanol	8 hours	98	20	skin
		Short-term	246	50	

**DNEL-/PNEC-values**
**DNEL worker**

CAS No	Substance name	Value	Code	Remark
64-17-5	ethanol	950 mg/m <sup>3</sup>	DNEL acute inhalative (systemic)	
		1900 mg/m <sup>3</sup>	DNEL acute inhalative (local)	
		343 mg/kg	DNEL long-term dermal (systemic)	
64742-48-9	Naphtha (petroleum), hydrotreated heavy	208 mg/kg bw/day	DNEL long-term dermal (systemic)	
		871 mg/m <sup>3</sup>	DNEL long-term inhalative (systemic)	
64742-49-0	Naphtha (petroleum), hydrotreated light	773 mg/kg	DNEL long-term dermal (systemic)	
		2038 mg/m <sup>3</sup>	DNEL long-term inhalative (systemic)	
67-63-0	propan-2-ol	888 mg/kg bw/day	DNEL long-term dermal (systemic)	
		500 mg/m <sup>3</sup>	DNEL long-term inhalative (systemic)	

**! Additional advice**

The statutory local and national regulations have to be observed.

**8.2. Exposure controls**
**Respiratory protection**

If ventilation insufficient, wear respiratory protection.

Short-term: filter apparatus, filter AX/P2, otherwise environment-independent breathing apparatus.

**Hand protection**

In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Chemical protective gloves must be chosen carefully in view of their design and depending on the dependence on the concentration and amounts of dangerous goods used in the specific working tasks.

Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: NBR (Nitrile rubber), >= 0,5 mm, >= 240 min

**Eye protection**

tightly fitting goggles

**Other protection measures**

protective clothing

**Appropriate engineering controls**

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**
**Appearance**

aerosol

**Colour**

colourless, clear

**Odour**

solvent-like

**Odour threshold**

not determined

**Important health, safety and environmental information**

	Value	Temperature	at	Method	Remark
<b>pH value</b>	not determined				
<b>boiling point</b>	-44 °C				
<b>melting point</b>	not applicable				
<b>Flash point</b>	not applicable				Aerosol
<b>Vapourisation rate</b>	not applicable				
<b>Flammable (solid)</b>	not applicable				
<b>Flammability (gas)</b>	not applicable				
<b>Ignition temperature</b>	> 200 °C				estimate
<b>Self ignition temperature</b>					The product is not self-igniting.
<b>Lower explosion limit</b>	0,6 Vol-%				
<b>Upper explosion limit</b>	15 Vol-%				
<b>Vapour pressure</b>	8300 hPa	20 °C			
<b>Relative density</b>	0,69 g/ml	20 °C			
<b>Vapour density</b>	not determined				
<b>Solubility in water</b>					No or low immiscibility
<b>Solubility/other</b>	not determined				
<b>Partition coefficient n-octanol/water (log P O/W)</b>	not determined				
<b>Decomposition temperature</b>	not determined				

	Value	Temperature	at	Method	Remark
<b>Viscosity dynamic</b>	not determined				
<b>Viscosity kinematic</b>	not determined				
<b>Solvent content</b>	95,2 %				

**Oxidising properties**

No information available.

**Explosive properties**

The product is considered non-explosive ; nevertheless explosive vapour/air mixtures can be generated .

**9.2. Other information**

No information available.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

Keep away from heat.

Formation of explosive gas/air mixtures.

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

Carbon monoxide and carbon dioxide.

**Thermal decomposition**

Remark No decomposition if used as directed.

**! SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity/Irritation/Sensitization**

	Value/Validation	Species	Method	Remark
<b>LD50 acute oral</b>	300 mg/kg	rabbit		CAS: 111-76-2
<b>LD50 acute dermal</b>	> 2000 mg/kg	rabbit		CAS: 111-76-2
<b>LC50 acute inhalation</b>	> 25 mg/l (4 h)	rat		EG: 921-024-6
<b>Skin irritation</b>	irritant			



	Value/Validation	Species	Method	Remark
<b>Eye irritation</b>	irritant			
<b>Skin sensitization</b>	non-sensitizing			

**Subacute Toxicity - Carcinogenicity**

	Value	Species	Method	Validation
<b>Mutagenicity</b>				No experimental information on genotoxicity in vitro available.
<b>Reproduction-Toxicity</b>				No indications of toxic effects were observed in reproduction studies in animals.
<b>Carcinogenicity</b>				No indications of carcinogenic effects are available from long-term trials.

**Specific target organ toxicity (single exposure)**

May cause drowsiness or dizziness.

**! Experiences made from practice**

Vapours may cause dizziness, headaches and tiredness  
 Sensitization through skin contact possible.  
 Irritates mucous membranes.  
 Irritates eyes and skin.

**Additional information**

The product is to be handled with the caution usual with chemicals.  
 Other hazardous properties may not be excluded.  
 The product has not been tested. The information is derived from the properties of the individual components.

**SECTION 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicological effects**

	Value	Species	Method	Validation
<b>Fish</b>	LL/EL/IL50 11,4 mg/l (96 h)	Oncorhynchus mykiss		EG: 921-024-6
<b>Daphnia</b>	LL/EL/IL50 3 mg/l (48 h)	Daphnia magna		EG: 921-024-6
<b>Algae</b>	LL/EL/IL50 30 - 100 mg/l (72 h)	Pseudokirchneriella subcapitata		EG: 921-024-6

**12.2. Persistence and degradability**

	Elimination rate	Method of analysis	Method	Validation
<b>Biological degradability</b>				readily degradable

**12.3. Bioaccumulative potential**

The product has not been tested. Because of the product's consistency and low solubility in water bioavailability is not likely.

**12.4. Mobility in soil**

No information available.

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

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

**12.6. Other adverse effects**

**General regulation**

Toxic to aquatic life, fishes and plankton.  
 Toxic to aquatic life with long lasting effects.  
 Even in the event of low quantities penetration into the underground drinking water is contaminated.  
 Do not allow uncontrolled leakage of product into the environment.  
 Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.  
 The ecotoxic effect of the product has not been tested. The information on this is given on the basis of details in the literature.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Waste code No.	Name of waste
07 01 04*	other organic solvents, washing liquids and mother liquors
20 01 99	other fractions not otherwise specified

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

**Recommendations for the product**

Remove in accordance with local official regulations.  
 Dispose of as hazardous waste.

**Recommendations for packaging**

Dispose of according to the local waste regulations.

**General information**

For proper waste disposal a complete emptying of the tin is necessary.  
 Assignment to a waste code number / waste identification according to the EWC is to be carried out on a sector or process-specific basis.

**SECTION 14: Transport information**

	ADR/RID	IMDG	IATA-DGR
<b>14.1. UN number</b>	1950	1950	1950
<b>14.2. UN proper shipping name</b>	AEROSOLS (Naphtha (petroleum), hydrotreated light)	AEROSOLS (Naphtha (petroleum), hydrotreated light)	Aerosols, flammable (Naphtha (petroleum), hydrotreated light)
<b>14.3. Transport hazard class(es)</b>	2.1	2.1	2.1
<b>14.4. Packing group</b>	-	-	-
<b>14.5. Environmental hazards</b>	Yes	Yes	Yes

**14.6. Special precautions for user**

No information available.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

not applicable

**Land and inland navigation transport ADR/RID**

Hazard label(s) 2.1  
tunnel restriction code D  
Classification code 5F  
transport in "limited quantities" according to 3.4 ADR is possible

**Marine transport IMDG**

MARINE POLLUTANT

**! SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****VOC standard**

<b>VOC content</b>	95,16 %
<b>VOC value</b>	659,5 g/L

**15.2. Chemical Safety Assessment**

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

**SECTION 16: Other information****Recommended uses and restrictions**

National and local regulations concerning chemicals shall be observed.

**Further information**

Each user is responsible for the implementation of the national special regulations.

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Please observe the following disclaimer! --- Our safety data sheets have been compiled according to effective EU-directives, WITHOUT taking into account the special national directives concerning the handling of hazardous substances.

Danish MAL-code: 5-3

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 8.4

EUH066	Repeated exposure may cause skin dryness or cracking.
H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.