



Ultrasonics.Steam.Ultraclean.

Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 25.10.2017

revision 25.10.2017 (GB) Version 2.0

SPIROL

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

1.1. Product identifier

Name of product SPIROL
Name of substance octane (isomers) [2,2,4-trimethylpentane]
EC No 208-759-1
REACH registration number 01-2119457965-22
CAS No 540-84-1

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

Identified uses

Sector of uses [SU]

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Uses advised against

Remark

Do not use for injecting or spraying.

Recommended intended purpose(s)

Solvent for degreasing and cleaning of metallic precision parts (watches etc.).

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor Elma Schmidbauer GmbH
Gottlieb-Daimler-Str. 17, D-78224 Singen (Htwl.)
Phone +49 7731 882-0, Fax +49 7731 882-266
E-Mail info@elma-ultrasonic.com
Internet www.elma-ultrasonic.com

Advice Chemie/Labor: Email: chemlab@elma-ultrasonic.com

1.4. Emergency telephone number

Emergency advice Vergiftungs-Informations-Zentrale Freiburg
(Sprache/Language: D, GB)
Phone +49 761 19240

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
Flam. Liq. 2	H225	On basis of test data.
Skin Irrit. 2	H315	On basis of test data.
STOT SE 3	H336	Expert judgement and weight of evidence determination.
Asp. Tox. 1	H304	Expert judgement and weight of evidence determination.
Aquatic Acute 1	H400	On basis of test data.
Aquatic Chronic 1	H410	On basis of test data.

Hazard Statements

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.



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H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Additional hints

Listed substance (Regulation (EC) No 1272/2008, Annex VI, part 3).

2.2. Label elements

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



GHS02



GHS07



GHS08



GHS09

Signal word

Danger

Hazard Statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H410	Very 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.
P261	Avoid breathing mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304 + P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P331	Do NOT induce vomiting.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Hazardous ingredients for labeling

octane (isomers)

2.3. Other hazards

Acute Tox. 5 (inhalation) H333: May be harmful if inhaled.

Information pertaining to special dangers for human and environment

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

Results of PBT and vPvB assessment

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



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SECTION 3: Composition/ information on ingredients

3.1. Substances

Description

Mixture of C8-isoparaffinic hydrocarbons.

CAS No 540-84-1

octane (isomers) [2,2,4-trimethylpentane]

EC No 208-759-1

REACH registration number 01-2119457965-22

3.2. Mixtures

not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

Take affected person into fresh air.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off immediately with plenty of 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.

Call for a doctor immediately.

If swallowed seek medical advice immediately and show the doctor packing or label.

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

Physician's information / possible symptoms

Dizziness

Physician's information / possible dangers

Risk of pulmonary oedema

Risk of pneumonia

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

Treatment (Advice to doctor)

Continue to monitor for pneumonia and pulmonary oedema.

Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam

Dry fire-extinguishing substance

Dry powder

Water spray jet

Unsuitable extinguishing media

Full water jet



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5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released:

Carbon monoxide (CO)

Flammable vapor-air-mixture are more heavy than air. Inflammation over far distance is possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Do not inhale explosion and/or combustion gases.

Additional information

Cool endangered containers with water spray jet.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ensure adequate ventilation.

Use personal protection.

Keep away sources of ignition.

Pay attention to extension of gas especially at ground (heavier than air) and in direction of the wind.

For emergency responders

Ensure adequate ventilation.

Remove persons to safety.

Keep people away and stay on the upwind side.

Use personal protective clothing.

Use personal protection.

Keep away sources of ignition.

Use breathing apparatus if exposed to vapours/dust/aerosol.

Pay attention to extension of gas especially at ground (heavier than air) and in direction of the wind.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Send in suitable containers for recovery or disposal.

Take up with absorbent material (e.g. oil binder).

6.4. Reference to other sections

Informations for safe handling see chapter 7.

Informations for personal protective equipment see chapter 8.

Informations for disposal see chapter 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

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

Use solvent-resistant equipment.

Keep limited supplies at workplace.

General protective measures

Avoid contact with eyes and skin

Do not inhale gases/vapours/aerosols.



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Hygiene measures

Provide washing facilities at place of work.
Keep away from food and drink.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking
Vapours can form an explosive mixture with air.
Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in closed original container.

Advice on storage compatibility

Do not store together with oxidizing agents.

Further information on storage conditions

Keep locked up, out of reach of children
Protect from heat and direct solar radiation.
Keep container dry, tightly closed and store at cool and aired place.
Keep under lock and key or accessible only to specialists or people authorized by them.
Keep in a cool place, heat causes increase in pressure and risk of bursting.

Information on storage stability

Storage time: 24 months.

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

DNEL-/PNEC-values

DNEL worker

CAS No	Substance name	Value	Code	Remark
540-84-1	octane (isomers) [2,2,4-trimethylpentane]	773 mg/kg bw/day	DNEL long-term dermal (systemic)	
		2035 mg/m ³	DNEL long-term inhalative (systemic)	

PNEC

CAS No	Substance name	Value	Code	Remark
540-84-1	octane (isomers) [2,2,4-trimethylpentane]			No data available

Additional advice

8.2. Exposure controls

Hand protection

Gloves (solvent-resistant)
Glove material specification [make/type, thickness, permeation time/life]: NBR, 0,35mm, >=8h.
Glove material specification [make/type, thickness, permeation time/life]: FKM, 0,4mm, >=8h.

Eye protection

tightly fitting goggles



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Limitation and surveillance of the environment

Avoid penetration into the subsoil/soil.

Do not discharge into the drains/surface waters/groundwater.

Appropriate engineering controls

Technical exhaustion if there is a long-term exposition

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

liquid

Colour

colourless

Odour

characteristic

Odour threshold

not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value					not applicable
boiling range	98 - 102 °C			DIN 51751	
melting point	-103 °C				
Flash point	-14 °C			DIN 51755	
Flammable (solid)	not relevant				
Flammability (gas)	not relevant				
Ignition temperature	420 °C			DIN 51794	
Self ignition temperature					not spontaneously flammable
Lower explosion limit	0,7 Vol-%				
Upper explosion limit	7,5 Vol-%				
Vapour pressure	53 hPa	20 °C			
Relative density	0,697 - 0,71 g/cm ³	15 °C		DIN 51757	
Vapour density	3,9				
Solubility in water		20 °C			insoluble
Solubility/other					soluble in hydrocarbons
Partition coefficient n-octanol/water (log P O/W)	ca. 4,5				
Decomposition temperature	> 100 °C				



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	Value	Temperature	at	Method	Remark
Viscosity kinematic	0,572 mm ² /s	38 °C		DIN 51550	
Viscosity dynamic	0,51 mPa*s	22 °C			
Solvent content	100 %				
Vapourisation rate	not determined				
Oxidising properties	no				
Explosive properties	Not classified as explosive. Vapours can form an explosive mixture with air.				
9.2. Other information	No further relevant informations available. Vapours are heavier than air.				

SECTION 10: Stability and reactivity

10.1. Reactivity

No further hazardous reactions known if used as directed.

Vapours can form an explosive mixture with air.

10.2. Chemical stability

Stable at ambient temperature.

10.3. Possibility of hazardous reactions

Reactions with oxidising agents.

10.4. Conditions to avoid

Heat and direct solar radiation.

Evolution of highly flammable gases/vapours.

10.5. Incompatible materials

Substances to avoid

Reactions with oxidising agents.

10.6. Hazardous decomposition products

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
LD50 acute oral	> 5000 mg/kg	rat		
LD50 acute dermal	> 2000 mg/kg	rabbit		



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	Value/Validation	Species	Method	Remark
LC50 acute inhalation	> 33,5 mg/l (4 h)	rat		
Skin irritation	irritant			
Eye irritation	low irritant			
Skin sensitization	non-sensitizing			

Specific target organ toxicity (single exposure)

Narcotic effect: STOT SE 3 H336: May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

The mixture is not classified as specific target organ toxicant (repeated exposure).

Aspiration hazard

Aspiration hazard: Asp. Tox. 1 H304: May be fatal if swallowed and enters airways.

Toxicity test (Additional information)

The mixture is not classified as mutagen / not classified as carcinogen / not classified as reproductive toxicant.

Experiences made from practice

Has a degreasing effect on the skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 0,1 - 1 mg/l			
Daphnia	EC50 0,4 mg/l (48 h)	Daphnia magna		
Algae	EC50 2,9 mg/l			

12.2. Persistence and degradability

Physico-chemical degradability 100 % Activated charcoal adsorption

12.3. Bioaccumulative potential

octane (isomers): Has the potential to bioaccumulate.

12.4. Mobility in soil

not 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 further relevant informations available.

Additional ecological information

	Value	Method	Remark
AOX	The product does not contain any organically bound halogens according to the recipe.		

General regulation

Acute aquatic environmental hazards: Aquatic Acute 1 H400: Very toxic to aquatic life.

Chronic aquatic environmental hazards: Aquatic Chronic 1 H410: Very toxic to aquatic life with long lasting effects.



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Do not allow uncontrolled leakage of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.	Name of waste
14 06 03*	other solvents and solvent mixtures

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

Recommendations for the product

Material recycling possible.
Incinerate in suitable incineration plant, but care for official regulations.

Recommendations for packaging

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

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	UN 3295	UN 3295	UN 3295
14.2. UN proper shipping name	HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es)	3	3	3
14.4. Packing group	II	II	II
14.5. Environmental hazards	Yes	Yes	Yes

14.6. Special precautions for user
no

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not relevant

Land and inland navigation transport ADR/RID

Hazard label(s) 3
tunnel restriction code D/E
Environmentally Hazardous: not require labeling according to ADR 3.3 SP 375 for containers up to 5 litre.

Marine transport IMDG

MARINE POLLUTANT
Marine pollutant (Environmentally Hazardous): not require labeling according to IMDG-Code 37-14, 2.10.2.7 for containers up to 5 litre.

Air transport ICAO/IATA-DGR

Environmentally Hazardous: not require labeling according to IATA 56th edition, A197 for containers up to 5 litre.

Transport/further information

Regulations concerning free quantities are to be observed.



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SECTION 15: Regulatory information

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

Authorizations

not relevant

Application restrictions

Regulation (EC) No 1907/2006 (REACH), Annex XVII No 3 + 40 - not relevant if used as directed.

Other regulations (EU)

Regulation (EC) No 648/2004 (Detergents regulation).

Directive 2012/18/EU, Annex I: P5c + E1.

VOC standard

VOC content 100 %

15.2. Chemical Safety Assessment

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

SECTION 16: Other information

Recommended uses and restrictions

National and local regulations concerning chemicals shall be observed.

Further information

These data are given according to our actual knowledge about this product. This data sheet does not correspond to an assurance by virtue of a contract for properties of the product.

Sources of key data used

European Chemicals Agency, <http://echa.europa.eu/>.

Informations from our suppliers.