

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

1.1 Product identifier

Trade name

Silol FG

Registration number (REACH)

not relevant (mixture)

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

Relevant identified uses

Industrial use
Professional use

Uses advised against

Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

Ingersoll-Rand Trading GmbH
Max-Planck Ring 27
46049 Oberhausen
Germany

Telephone: +49(0)208 999-4177

e-mail: info@ghhrand.com

Website: www.ingersollrand.com/ghhrandtransport

e-mail (competent person)

info@ghhrand.com (Daniel Kistner)

1.4 Emergency telephone number

Emergency information service

+49(0)208 999-4180 (Daniel Kistner)

Poison centre		
Country	Name	Telephone
Germany	Giftnotruf der Charité - Universitätsmedizin Berlin	+49 30 30 686 700 (24/7)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Section	Hazard class	Category	Hazard class and category	Hazard statement
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of H-phrases: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses. The mixture contains a substance that was identified as a PBT (persistent, bioaccumulative and toxic).

2.2 Label elements

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

- signal word Not required.

- pictograms

GHS09



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- hazard statements

H411 Toxic to aquatic life with long lasting effects.

- precautionary statements

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment

Contains a PBT-substance at a concentration of $\geq 0,1\%$. (Section 3)

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

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

Not relevant (mixture).

3.2 Mixtures

The product does not contain (other) ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	CAS No 68411-46-1 EC No 270-128-1 REACH Reg. No 01-2119491299-23-xxxx	< 1	Repr. 2 / H361f Aquatic Chronic 3 / H412		
O,O,O-triphenyl phosphorothioate	CAS No 597-82-0 EC No 209-909-9 REACH Reg. No 01-2119979545-21-xxxx	< 1	Aquatic Chronic 1 / H410		PBT

Notes

PBT: The substance was identified as a PBT (persistent, bioaccumulative and toxic)

Name of substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
O,O,O-triphenyl phosphorothioate	CAS No 597-82-0 EC No 209-909-9	-	M-factor (chronic) = 10	-	

Remarks

All the percentages given are percentages by weight unless stated otherwise. For full text of H-phrases: see SECTION 16.

SECTION 4: First aid measures**4.1 Description of first aid measures**

General notes

Do not leave affected person unattended. Remove victim out of the danger area. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

Following skin contact

Take off contaminated clothing. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the poison centre.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media

Water spray; Dry extinguishing powder; Carbon dioxide (CO₂);
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

During fire hazardous fumes/smoke could be produced. Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Self-contained breathing apparatus (EN 133). Standard protective clothing for firefighters.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel

Remove persons to safety. Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has

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entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder, sawdust).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- flammability hazards

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

- incompatible substances or mixtures

Keep away from alkalis, oxidising substances, acids.

Control of effects

Protect against external exposure, such as

Heat. High temperatures. UV-radiation/sunlight. Static discharges.

Consideration of other advice

Store in a well-ventilated place. Keep container tightly closed.

- packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

National limit values

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Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
DE	O,O,O-Triphenylmonothiophosphat	597-82-0	MAK		20		40	i	DFG
DE	O,O,O-triphenyl phosphorothioate	597-82-0	AGW		20		40	i	TRGS 900

Notation

i inhalable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
O,O,O-triphenyl phosphorothioate	597-82-0	DNEL	1,39 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
O,O,O-triphenyl phosphorothioate	597-82-0	DNEL	0,4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
O,O,O-triphenyl phosphorothioate	597-82-0	DNEL	0,34 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
O,O,O-triphenyl phosphorothioate	597-82-0	DNEL	0,2 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
O,O,O-triphenyl phosphorothioate	597-82-0	DNEL	0,2 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	DNEL	0,31 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	DNEL	0,44 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	DNEL	0,08 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	DNEL	0,22 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	DNEL	0,05 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

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Relevant PNECs of components						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
O,O,O-triphenyl phosphorothioate	597-82-0	PNEC	0,17 µg/l	aquatic organisms	freshwater	short-term (single instance)
O,O,O-triphenyl phosphorothioate	597-82-0	PNEC	0,017 µg/l	aquatic organisms	marine water	short-term (single instance)
O,O,O-triphenyl phosphorothioate	597-82-0	PNEC	33,9 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
O,O,O-triphenyl phosphorothioate	597-82-0	PNEC	3,39 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
O,O,O-triphenyl phosphorothioate	597-82-0	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
O,O,O-triphenyl phosphorothioate	597-82-0	PNEC	2,46 mg/kg	terrestrial organisms	soil	short-term (single instance)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	PNEC	0,51 mg/l	aquatic organisms	water	intermittent release
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	PNEC	0,034 mg/l	aquatic organisms	freshwater	short-term (single instance)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	PNEC	0,003 mg/l	aquatic organisms	marine water	short-term (single instance)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	PNEC	0,446 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	PNEC	0,045 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	PNEC	17,6 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation. Provide eyewash stations and safety showers at the workplace.

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection (EN 166).

Skin protection



Protective clothing (EN 340 & EN ISO 13688).

Hand protection



Wear suitable gloves. Check leak-tightness/impermeability prior to use. 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. Chemical protection gloves are suitable, which are tested according to EN 374. ATTENTION: Wearing moisture-proof gloves (occlusion) for longer than 4 hours is defined as a risk in Germany. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- breakthrough time of the glove material

Use gloves with a minimum breakthrough time of the glove material: >10 minutes (permeation: level 1).

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Full face mask/half mask/quarter mask (EN 136/140). Breathing apparatus only in case of aerosol or mist formation.

Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	light yellow
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	LEL: UEL: not determined
Flash point	275 °C (ASTM D92)
Auto-ignition temperature	not determined
Decomposition temperature	no data available
pH (value)	not determined
Kinematic viscosity	103,3 mm ² /s at 40 °C (ASTM D 445)

Solubility

Water solubility	insoluble
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Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	not determined
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Density and/or relative density

Density	0,86 g/cm³ at 15,6 °C (ASTM D 1298)
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity
10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Oxidisers.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information
11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)
Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity of components					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
O,O,O-triphenyl phosphorothioate	597-82-0	oral	LD50	>10.000 mg/kg	rat
O,O,O-triphenyl phosphorothioate	597-82-0	dermal	LD50	>2.000 mg/kg	rat
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	oral	LD50	>5.000 mg/kg	rat
Benzenamine, N-phenyl-, reaction	68411-46-1	dermal	LD50	>2.000 mg/kg	rat

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Acute toxicity of components					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
products with 2,4,4-trimethylpentene					

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards
Endocrine disrupting properties

 Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

Other information

There is no additional information.

SECTION 12: Ecological information
12.1 Toxicity

Acc. to 1272/2008/EC: Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
O,O,O-triphenyl phosphorothioate	597-82-0	LL50	$>100 \text{ mg/l}$	fish	96 h
O,O,O-triphenyl phosphorothioate	597-82-0	EC50	$>100 \text{ mg/l}$	aquatic invertebrates	48 h
O,O,O-triphenyl phosphorothioate	597-82-0	EL50	$>100 \text{ mg/l}$	algae	72 h
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	LC50	$>100 \text{ mg/l}$	fish	96 h
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	EC50	51 mg/l	aquatic invertebrates	48 h
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethyl-	68411-46-1	ErC50	$>100 \text{ mg/l}$	algae	72 h

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Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
pentene					
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethyl-pentene	68411-46-1	NOEC	10 mg/l	aquatic invertebrates	48 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
O,O,O-triphenyl phosphorothioate	597-82-0	NOEC	≥7,24 µg/l	aquatic invertebrates	21 d
O,O,O-triphenyl phosphorothioate	597-82-0	LOEC	>7,24 µg/l	aquatic invertebrates	21 d
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethyl-pentene	68411-46-1	EC50	>100 mg/l	aquatic invertebrates	24 h

12.2 Persistence and degradability

Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method
O,O,O-triphenyl phosphorothioate	597-82-0	carbon dioxide generation	17,8 – 19,3 %	29 d	
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	carbon dioxide generation	0 %	28 d	

12.3 Bioaccumulative potential

Bioaccumulative potential of components

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
O,O,O-triphenyl phosphorothioate	597-82-0		5 (pH value: 6,4)	
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethyl-pentene	68411-46-1	411	6,66 (pH value: 6,67, 23 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Contains a PBT-substance at a concentration of ≥ 0,1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations
13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packages

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

List of wastes, Decision 2000/532/EC on the list of waste

- product
13 02 06* synthetic engine, gear and lubricating oils

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	UN 3082
IMDG-Code	UN 3082
ICAO-TI	UN 3082

14.2 UN proper shipping name

ADR/RID/ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ICAO-TI	Environmentally hazardous substance, liquid, n.o.s.
Technical name (Hazardous ingredients)	O,O,O-triphenyl phosphorothioate, Amines, C11-14-branched alkyl, monoheptyl and diheptyl phosphates

14.3 Transport hazard class(es)

ADR/RID/ADN	9
IMDG-Code	9
ICAO-TI	9

14.4 Packing group

ADR/RID/ADN	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards

	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	O,O,O-triphenyl phosphorothioate, Amines, C11-14-branched alkyl, monoheptyl and diheptyl phosphates

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

No data available.

Additional information for each of the UN Model Regulations

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Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information

Classification code M6
Danger label(s) 9, fish and tree



Environmental hazards yes (hazardous to the aquatic environment)
Special provisions (SP) 274, 335, 375, 601, 650
Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L
Transport category (TC) 3
Tunnel restriction code (TRC) -
Hazard identification No 90

International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant yes (hazardous to the aquatic environment) (O,O,O-triphenyl phosphorothioate)
Danger label(s) 9, fish and tree



Special provisions (SP) 274, 335, 375, 969
Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L
EmS F-A, S-F
Stowage category A

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Environmental hazards yes (hazardous to the aquatic environment)
Danger label(s) 9, fish and tree



Special provisions (SP) A97, A158, A197, A215
Excepted quantities (EQ) E1
Limited quantities (LQ) 30 kg

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Relevant provisions of the European Union (EU)

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Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	Restriction	No
Silol FG	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3

Legend

- R3
- Shall not be used in:
 - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ash-trays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
 - Articles not complying with paragraph 1 shall not be placed on the market.
 - Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
 - can be used as fuel in decorative oil lamps for supply to the general public, and
 - present an aspiration hazard and are labelled with H304.
 - Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
 - Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
 - (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
 - (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter fluid may lead to life threatening lung damage";
 - (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

Substance of Very High Concern (SVHC)			
Name acc. to inventory	CAS No	Listed in	Remarks
O,O,O-triphenyl phosphorothioate	597-82-0	Candidate list	PBT A57d

Legend

- Candidate list Substances meeting the criteria referred to in Article 57 and for eventual inclusion in Annex XIV
- PBT A57d Persistent, Bioaccumulative and Toxic (article 57d)

Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
E2	environmental hazards (hazardous to the aquatic environment, cat. 2)	200 500	57)

Notation

- 57) hazardous to the Aquatic Environment in category Chronic 2

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
O,O,O-triphenyl phosphorothioate	Organophosphorous compounds		a)	

Legend

a) Indicative list of the main pollutants

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK 2 obviously hazardous to water
(water hazard class)

Technical instructions on air quality control (Germany)

Number	Group of substances	Class	Conc.	Mass flow	Mass concentration	Notation
5.2.5	organic substances	class I	1 – < 5 wt%	0,1 kg/h	20 mg/m³	3)
5.2.5	organic substances		≥ 25 wt%	0,5 kg/h	50 mg/m³	3)

Notation

3) a total mass flow of 0.50 kg/h or a total mass concentration of 50 mg/m³, each of which to be indicated as total carbon, shall not be exceeded (except organic particulate matter)

Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)

Storage class (LGK) 10 (combustible liquids)

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
2.1	The most important adverse physicochemical, human health and environmental effects: Spillage and fire water can cause pollution of water-courses.	The most important adverse physicochemical, human health and environmental effects: Spillage and fire water can cause pollution of water-courses. The mixture contains a substance that was identified as a PBT (persistent, bioaccumulative and toxic).
2.3	Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.	Results of PBT and vPvB assessment: Contains a PBT-substance at a concentration of $\geq 0,1\%$. (Section 3)
3.2		Mixtures: change in the listing (table)
7.3	Specific end use(s): There is no additional information.	Specific end use(s): See section 1.2.
8.1		Relevant PNECs of components: change in the listing (table)
12.5	Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.	Results of PBT and vPvB assessment: Contains a PBT-substance at a concentration of $\geq 0,1\%$.
15.1	List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list: None of the ingredients are listed.	List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list
15.1		Substance of Very High Concern (SVHC): change in the listing (table)
15.1	Wassergefährdungsklasse, WGK (water hazard class): 1 slightly hazardous to water	Wassergefährdungsklasse, WGK (water hazard class): 2 obviously hazardous to water
15.1		Technical instructions on air quality control (Germany): change in the listing (table)

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
AGW	Workplace exposure limit
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
COD	Chemical oxygen demand
DFG	Deutsche Forschungsgemeinschaft MAK- und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim

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Abbr.	Descriptions of used abbreviations
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
LGK	Lagerklasse (storage class according to TRGS 510, Germany)
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	Reproductive toxicity

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Abbr.	Descriptions of used abbreviations
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
TRGS 900	Arbeitsplatzgrenzwerte (TRGS 900)
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H361f	Suspected of damaging fertility.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.