

Safety data sheet according SS 586 : Part 3

Date of issue: 21.02.2025

Version number 1

Revision: 21.02.2025

1 Identification

Product identifier**Trade name:** Typ 1053 - Spezial-Hochdrucköl / Special High Pressure Oil**Other means of identification****Article number:** 18000006**Relevant identified uses of the substance or mixture and uses advised against****Product category** PC24 Lubricants, greases, release products**Application of the substance / the mixture** Additional component**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Kistler Instrumente AG

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8408 Winterthur, Schweiz

Further information obtainable from:

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info@kistler.com, www.kistler.com

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* 2 Hazards identification

Classification of the substance or mixture

GHS08 health hazard

Repr. 1B H360 May damage fertility or the unborn child.

Label elements**GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).**Hazard pictograms** GHS08**Signal word** Danger**Hazard-determining components of labelling:**

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Hazard statements

May damage fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.

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vPvB: Not applicable.

* 3 Composition/information on ingredients

Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 30989-05-0	Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate ⚠ Repr. 2, H361; ⚠ Acute Tox. 4, H302	5-25%
CAS: 110-97-4	1,1'-iminodipropan-2-ol ⚠ Eye Irrit. 2, H319	0.5-5%
CAS: 111-77-3	2-(2-methoxyethoxy)ethanol ⚠ Repr. 1B, H360; Flammable liquids 4, H227	0-1%

Additional information: For the wording of the listed hazard phrases refer to section 16.

* 4 First-aid measures

Description of first aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing:

If symptoms persist consult doctor.

Do not induce vomiting! Rinse mouth and drink plenty of water.

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

* 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

* 7 Handling and storage

Precautions for safe handling Open and handle receptacle with care.

Information about fire - and explosion protection: Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep container tightly sealed.

Specific end use(s) No further relevant information available.

* 8 Exposure controls/personal protection

Control parameters

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs

CAS: 30989-05-0 Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Oral	DNEL (long-term systemic effects)	1.5 mg/kg/day (human)
Dermal	DNEL (long-term systemic effects)	1.5 mg/kg/day (human)
Inhalative	DNEL (long-term systemic effects)	14.8 mg/m ³ (human)
	DNEL (long-term systemic effects)	2.6 mg/m ³ (human)

Additional information: The lists valid during the making were used as basis.

Exposure controls

Appropriate engineering controls No further data; see section 7.

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Respiratory protection: Not required.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

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.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:

Butyl rubber, BR

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Eye protection: Goggles recommended during refilling**Body protection:** Protective work clothing

* 9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Physical state	Liquid
Colour:	Yellow/orange
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not applicable.
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	>260 °C
Flash point:	>100 °C
Evaporation rate	Not determined.
Flammability	Not applicable.
Explosion limits:	
Lower:	0.7 Vol %
Upper:	22 Vol %
Vapour pressure at 20 °C:	0 hPa
Vapour pressure:	
Vapour density	Not determined.
Density at 20 °C:	0.98 g/cm ³
Relative density	Not determined.
Solubility in / Miscibility with water:	Fully miscible.
Partition coefficient: n-octanol/water:	Not determined.
Auto-ignition temperature:	>400 °C
Decomposition temperature:	Not determined.
Viscosity:	
Kinematic:	Not determined.
Dynamic:	Not determined.
Particle characteristics	Not applicable.

Other information

Appearance:

Form: Liquid

Important information on protection of health and environment, and on safety.

Ignition temperature: Product is not selfigniting.

Explosive properties: In general, product does not present an explosion hazard.

* 10 Stability and reactivity

Reactivity No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

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Hazardous decomposition products: No dangerous decomposition products known.

* 11 Toxicological information

Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification:

CAS: 30989-05-0 Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Oral	LD50	2000 mg/kg (rat)
	LC50 / 24h	222.2-1010 mg/l (fish)

CAS: 111-77-3 2-(2-methoxyethoxy)ethanol

Oral	LD50	5500 mg/kg (rat)
Dermal	LD50	6540 mg/kg (rabbit)

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

No CMR effects known.

Repr. 1B

* 12 Ecological information

Toxicity

Aquatic toxicity:

CAS: 30989-05-0 Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

EC50 / 48h	211.2-960 mg/l (aquatic invertebrates)
EC50/ 72h	224.4-1020 mg/l (aquatic algae and cyanobacteria)
	222.2-1010 mg/l (fish)
EC50 / 24	211.2-960 mg/l (aquatic invertebrates)
LC50 / 96h	222.2-1010 mg/l (fish)
LC50/48h	222.2-1010 mg/l (fish)
NOEC/ 72h	224.4-1020 mg/l (aquatic algae and cyanobacteria)

Persistence and degradability No further relevant information available.

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

Other information: Do not discharge into drains, surface waters or groundwater.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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13 Disposal considerations

Waste treatment methods
Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

14 Transport information

UN-Number ADR, IMDG, IATA	Void
UN proper shipping name ADR, ADN, IMDG, IATA	Void
Transport hazard class(es) ADR, ADN, IMDG, IATA Class	Void
Packing group ADR, IMDG, IATA	Void
Environmental hazards: Marine pollutant:	No
Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Special precautions for user	Not applicable.
UN "Model Regulation":	Void

15 Regulatory information

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

GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms GHS08

Signal word Danger

Hazard-determining components of labelling:

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Hazard statements

May damage fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

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Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

* 16 Other information

The information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H227 Combustible liquid.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

H361 Suspected of damaging fertility or the unborn child.

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flammable liquids 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

Repr. 2: Reproductive toxicity – Category 2

* **Data compared to the previous version altered.**