

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

1.1. Product identifier

DRAKO-SOL

CAS No.: -
EC No.: -
INDEX No.: -
REACH No.: -

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

Relevant identified uses: Lubricant, lubricants and release products

Uses advised against: Other Process or activity:

1.3. Details of the supplier of the safety data sheet

Manufacturer

PFEIFER DRAKO
Drahtseilwerk GmbH & Co. KG
Rheinstrasse 19-23
D 45478 Mülheim an der Ruhr

Telephone: +49 (0) 208 429 010
Telefax: +49 (0) 208 429 01 66

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

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National contact

Information telephone:

Information telefax:

E-mail (competent person):

Website:

Dept. responsible for information:

PFEIFER DRAKO Drahtseilwerk GmbH & Co. KG

1.4. Emergency telephone number

Informationszentrale gegen Vergiftungen Bonn

Telephone: +49 (0) 228 19 240 bzw. +49 (0) 228
287 332 11

Zentrum für Kinderheilkunde des Universität Bonn, Adenauerallee 119 D-53113 Bonn

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008:

Flam. Aero. 1; H222 , Pres. Gas - Compr. or Liqu.; H280 , Aquatic Chronic. 3; H412

2.2. Label elements

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

Hazard pictograms:



Signal word:

GHS02,GHS04

Hazard statements:

Danger

222 Extremely flammable aerosol.

280 Contains gas under pressure; may explode if heated.

412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

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

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

251 Do not pierce or burn, even after use.

273 Avoid release to the environment.

410+403 Protect from sunlight. Store in a well-ventilated place.

410+412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

501 Dispose of contents/container to .?.

2.3. Other hazards

See attached safety data sheets and/or usage instructions.

SECTION 3: Composition / information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Mixture of short-chain hydrocarbons.

Composition/information on ingredients

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008(CLP):
Butane	203-448-7	106-97-8	601-004-00-0		10 - 25 weight-%	Flam. Gas 1; H220
Propane	200-827-9	74-98-6	601-003-00-5		10 - 25 weight-%	Flam. Gas 1; H220
Hydrocarbons					2,5 - 10 weight-%	Asp. Tox. 1; H304 -; EUH066
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts		68649-42-3			< 1 weight-%	Skin Corr. 1B; H314 Aquatic Chronic. 2; H411
Sulfonates					< 2,5 weight-%	Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315

Substance with a common (EC) occupational exposure limit value

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008(CLP):
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(Full text of R-, H- and EUH-phrases: see section 16.)

Additional information

none

SECTION 4: First aid measures

4.1. Description of first aid measures

- General information:** In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).
- Following inhalation:** Move victim to fresh air. Put victim at rest and keep warm. In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately get medical attention.
- Following skin contact:** No special measures are necessary. In cases of frostbite rinse with ample water. Do not remove clothing. In case of skin irritation, seek medical treatment.
- After eye contact:** In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
- After ingestion:** Rinse mouth immediately and drink large quantities of water. Seek medical attention if problems persist.

Self-protection of the first aider: No special measures are necessary.

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

- Symptoms:** drowsiness. Disorientation. Headache. vomiting.
- Nature of Hazard:** Anaesthetic state. Depression of the central nervous system.

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

- Notes for the doctor:** Provide fresh air.
- Special treatment:** Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media:** Carbon dioxide (CO₂). Dry extinguishing powder.
- Unsuitable extinguishing media:** High power water jet.

5.2. Special hazards arising from the substance or mixture

Pyrolysis products, toxic. Vapours may form explosive mixtures with air. Danger of bursting container.

5.3. Advice for firefighters

General information

Use water spray/stream to protect personnel and to cool endangered containers.

Special protective equipment for firefighters:

In case of fire: Wear self-contained breathing apparatus.

Additional information

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

Provide adequate ventilation. Remove all sources of ignition. Guide people to safety. Wear personal protection equipment.

6.2. Environmental precautions

Do not empty into drains or the aquatic environment. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the assimilated material according to the section on waste disposal. Avoid generation of dust. Clear contaminated area thoroughly. Wash with generous amount of water.

6.4. Reference to other sections

See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Use only in well-ventilated areas. Keep away from sources of ignition - No smoking. Do not breathe gas/fumes/vapour/spray.

Technical measures

Provide for sufficient ventilation and punctiform suction at critical points.

Precautions against fire and explosion

Take precautionary measures against static discharges.

Additional information

Vapours may form explosive mixtures with air. Highly flammable. explosive

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Ensure adequate ventilation of the storage area.

Packaging materials

Keep/Store only in original container.

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place. Do not keep the container sealed.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Storage class: 2 B Pressurized small gas containers (aerosol containers).

Further information on storage conditions

Protect against: heat. UV-radiation/sunlight.

7.3. Specific end use(s)

Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

occupational exposure limit value

Substance:	CAS-No.:	Source:	Occupational exposure limit value:	Limitation of exposure peaks:	Remark:
Butane	106-97-8	TRGS 900 (butane 01/06)	1000 ppm or 1800 mg/m ³	4 (II)	DFG

Propane	74-98-6	TRGS 900 (propane 01/06)	1000 ppm or 2400 mg/m ³	4 (II)	DFG
Hydrocarbons		TRGS 900 (C9- C15 aliphatics 12/07)	600 mg/m ³	2 (II)	AGS

Substance with a common (EC) occupational exposure limit value

Substance:	CAS-No.:	Source:	Occupational exposure limit value:	Limitation of exposure peaks:	Remark:
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DNEL-/PNEC-values

DNEL value

Substance:	CAS-No.:	DNEL/DMEL	Industry	Professional	consumer
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PNEC Value

Substance:	CAS-No.:	PNEC	Worker, industry	Worker, professional	consumer
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Risk management measures according to used control banding approach

none

Additional information

AGS: Committee on Hazardous Substances

DFG: Senate Commission for the Investigation of Health Hazards DFG (MAK Commission)

8.2. Exposure controls

Occupational exposure controls

Provide for sufficient ventilation and punctiform suction at critical points. Technical measures and the application of adequate working methods take priority over the use of personal protection equipment.

General protection and hygiene measures

Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and at the end of work. Apply skin care products after work. Wash contaminated clothing prior to re-use.

Personal protection equipment

Only wear fitting, comfortable and clean protective clothing.

Respiratory protection

Respiratory protection required in case of: insufficient ventilation. Suitable respiratory protective equipment: gas filtering equipment (EN 141).

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): DIN EN 374

Eye/face protection

Tightly sealed safety glasses.

Body protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes). Only wear fitting, comfortable and clean protective clothing. Barrier creams are not substitutes for body protection.

Environmental exposure controls

refer to chapter 7. No further action is necessary.

Consumer exposure controls

refer to chapter 7. No further action is necessary.

Exposure Scenario

none

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Aerosol
Colour: light brown
Odour: characteristic like: hydrocarbons.
Odour threshold: No data available

Safety relevant basis data

parameter	unit	remark
Density: at 15 °C:	0,897 g/cm³	(Liquid)
Bulk density:		not applicable
pH:		not applicable
Melting point/freezing point:		No data available
Initial boiling point and boiling range:	-44 °C	
Flash point:	-97 °C	
Flammability (solid, gas):		No data available
Explosivity:		Explosive.
Lower explosion limit:	1,5 Vol-%	
Upper explosion limit:	10,9 Vol-%	
Ignition temperature:		No data available
Decomposition temperature:		No data available
Oxidizing potential:		No data available
Vapour pressure: at 20 °C:	8300 hPa	
Vapour density:		No data available
Evaporation rate:		No data available
Water solubility:		practically insoluble
Fat solubility:		No data available
Soluble in:	:	not applicable
Partition coefficient: n-octanol/water:		No data available
Viscosity:		No data available
Solvent separation test:		No data available
Solvent content:	59 %	

9.2. Other information

none

SECTION 10: Stability and reactivity

10.1. Reactivity

none

10.2. Chemical stability

none

10.3. Possibility of hazardous reactions

none

10.4. Conditions to avoid

heat. Light.

10.5. Incompatible materials

Oxidizing agents. Reducing agents.

10.6. Hazardous decomposition products

Pyrolysis products, toxic.

Additional information

none

SECTION 11: Toxicological information

11.1. Information on toxicological effects

There are no data available on the mixture itself.

Acute toxicity

Substance:	CAS-No.:	Toxicological information
Butane	106-97-8	Acute toxicity, inhalant LC50: 658 mg/l/4 h (Rat.)
Hydrocarbons		Acute toxicity, oral LD50: > 5000 mg/kg (Rat.) Acute toxicity, dermal LD50: > 3160 mg/kg (Rabbit.) Acute toxicity, inhalant LC50: > 12 mg/l/4 h (Rat.)
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	Acute toxicity, oral LD50: 4358 mg/kg (Rat.)

Specific symptoms in laboratory animals

none

Irritation and etching

Irritant effect on the skin

Not an irritant.

Irritant effect on the eye

Not an irritant.

Irritant effect on the respiratory tract

Not an irritant.

Additional information

not corrosive

Sensitization

no danger of sensitization.

Repeated dose toxicity (subacute, subchronic, chronic)

No information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No indications of human carcinogenicity exist.

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

No indications of human reproductive toxicity exist.

General remarks

There are no data available on the preparation/mixture itself.

Practical experience/human evidence

none

Other observations

none

Other information

none

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Ecotoxicity

Substance:	CAS-No.:	Ecotoxicity
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	Acute toxicity EC50: 1-10 mg/kg [Daphnia magna].

12.2. Persistence and degradability

Not easily bio-degradable (according to OECD-criteria).

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

There are no data available on the mixture itself.

12.6. Other adverse effects

No information available.

Further ecological information

Do not empty into drains or the aquatic environment. Do not allow to enter into soil/subsoil.

Further details

none

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal/Product

Waste disposal according to EC Directives 75/442/EEC and 91/689/EEC on waste and hazardous waste in their latest versions.

Appropriate disposal / Package

Cleaned containers may be recycled. Handle contaminated packaging in the same way as the substance itself.

List of proposed waste codes/waste designations in accordance with EWC

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Waste code product: 14 06 03 - other solvents and solvent mixtures

Waste code packaging: 15 01 10 - packaging containing residues of or contaminated by dangerous substances

remark

Waste disposal according to official state regulations.

SECTION 14: Transport information

14.1. UN number

UN No.: 1950

14.2. UN proper shipping name

Official directive for the transport
AEROSOLS, FLAMMABLE
DRAKO-SOL

Proper Shipping name
AEROSOLS, FLAMMABLE
DRAKO-SOL

14.3. Transport hazard class(es)

Hazard label(s): 2.1

Classification code: 5F



14.4. Packing group

Packing group: -

14.5. Environmental hazards

Environmental hazards:

14.6. Special precautions for user

Land transport (ADR/RID)

Remark: Special provisions: 190, 327, 625
Limited quantity (LQ): LQ2/E0
Tunnel restriction code: 2 (D)

Transport category:	Tunnel restriction code:
Special provisions:	Limited quantity (LQ):

Sea transport (IMDG)

Special Provisions: Keep away from food, drink and animal feedingstuffs.

Remark: Limited quantity (LQ): LQ2/E0

EmS-No: - MFAG: - Marine pollutant: No

Special provisions: Limited quantity (LQ):

Air transport (ICAO-TI / IATA-DGR)

Remark: Limited quantity (LQ): LQ2/E0

Limited quantity (LQ):

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

Remark:

SECTION 15: Regulatory information

Labeling

Hazardous component(s) for labelling

Butane; Propane; Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts

Special labelling of particular preparations

none

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

EU legislation

Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).

Volatile organic compounds (VOC) in percentage by weight:

Regulation (EC) No 2037/2000 concerning materials, which cause damage to the ozone layer.

none

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

none

National regulations

Observe in addition any national regulations!

Restrictions of occupation

none

Storage class

2 B Pressurized small gas containers (aerosol containers).

Water hazard class (WGK)

1 weak water pollutant (WGK 1)

Other regulations, restrictions and prohibition regulations

none

15.2. Chemical Safety Assessment

For this preparation a chemical safety assessment has been carried out:

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

SECTION 16: Other information

Relevant H- and EUH-phrases (Number and full text)

Hazard statements

EU_066 Repeated exposure may cause skin dryness or cracking.
220 Extremely flammable gas.
304 May be fatal if swallowed and enters airways.
314 Causes severe skin burns and eye damage.
315 Causes skin irritation.
319 Causes serious eye irritation.
335 May cause respiratory irritation.
411 Toxic to aquatic life with long lasting effects.

Training advice

none

Recommended restrictions of use

refer to chapter 1.

Further remarks

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.

Documentation of changes

none

Key literature references and sources for data

Data arise from reference works and literature.

Abbreviations and acronyms

none
