

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

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

1.1 Product identifier

Product name : perma High temp. / Extreme pressure grease SF05

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

Use of the Sub-
stance/Mixture : Grease

Recommended restrictions
on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

perma-tec GmbH & Co. KG
Hammelburger Str. 21
97717 EUERDORF
GERMANY
Tel: +49 9704 609-0
Fax: +49 9704 609-50
www.perma-tec.com

E-mail address of person
responsible for the SDS : msds@perma-tec.com

National contact :

1.4 Emergency telephone number

+49 9704 609-99 (Mo-Do 08:00-16:30, Fr 08:00-12:00)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version 3.0.1 Revision Date: 22.12.2021 Date of last issue: 20.06.2019
Date of first issue: 30.10.2013

Print Date:
22.12.2021

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Additional Labelling

EUH210 Safety data sheet available on request.

EUH208 Contains Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol. **May produce an allergic reaction.**

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mineral oil.
Synthetic hydrocarbon oil
polyurea
solid lubricant

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration limits M-Factor Notes	Concentration (% w/w)
reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14)	1266545-64-5 430-930-6 615-035-00-2 01-0000017717-62-0001 01-0000017717-62-0000 01-0000017717-62-0002	Aquatic Chronic4; H413		>= 2.5 - < 10
Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol	Not Assigned 946-010-7 01-2120770934-44-XXXX	Skin Sens.1; H317		>= 0.1 - < 1
Substances with a workplace exposure limit :				
Graphite	7782-42-5			>= 1 - < 10

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version 3.0.1 Revision Date: 22.12.2021 Date of last issue: 20.06.2019 Print Date: 22.12.2021
Date of first issue: 30.10.2013

	231-955-3			
molybdenum disulphide	1317-33-5 215-263-9			>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash off immediately with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
If eye irritation persists, consult a specialist.
- If swallowed : Move the victim to fresh air.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Allergic appearance
- Risks : May cause an allergic skin reaction.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Fire may cause evolution of:
Carbon oxides
Metal oxides
Nitrogen oxides (NO_x)
Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

Further information : Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).
Do not breathe vapours, aerosols.
Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water courses.
Local authorities should be advised if significant spillages cannot be contained.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean up promptly by sweeping or vacuum.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Wash hands and face before breaks and immediately after handling the product.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
Do not ingest.
Do not repack.
These safety instructions also apply to empty packaging which may still contain product residues.
Keep container closed when not in use.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.

7.3 Specific end use(s)

Specific use(s) : Specific instructions for handling, not required.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version 3.0.1 Revision Date: 22.12.2021 Date of last issue: 20.06.2019 Print Date: 22.12.2021
Date of first issue: 30.10.2013

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Graphite	7782-42-5	TWA (inhalable dust)	10 mg/m ³	GB EH40 (2011-12-01)
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
		TWA (Respirable dust)	4 mg/m ³	GB EH40 (2011-12-01)
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version 3.0.1 Revision Date: 22.12.2021 Date of last issue: 20.06.2019
Date of first issue: 30.10.2013

Print Date:
22.12.2021

molybdenum di-sulphide	1317-33-5	TWA	10 mg/m ³ (Molybdenum)	GB EH40 (2005-04-06)
		STEL	20 mg/m ³ (Molybdenum)	GB EH40 (2005-04-06)

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Residual oils (petroleum), hydrotreated; Baseoil — unspecified	Workers	Inhalation	Long-term systemic effects	2.7 mg/m ³
	Workers	Inhalation	Acute systemic effects	5.6 mg/m ³
	Workers	Skin contact	Long-term systemic effects	1 mg/kg
Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol	Workers	Dermal	Long-term systemic effects	8.33 mg/kg bw/day

8.2 Exposure controls

Engineering measures

none

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber
Protective index : Class 1

Remarks : Wear protective gloves. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type P

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version 3.0.1 Revision Date: 22.12.2021 Date of last issue: 20.06.2019
Date of first issue: 30.10.2013

Print Date:
22.12.2021

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	paste
Colour	:	black
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Combustible Solids
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	< 0.001 hPa (20 °C)
Relative vapour density	:	No data available
Density	:	0.92 g/cm ³ (20 °C)
Bulk density	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

Viscosity
Viscosity, dynamic : No data available
Viscosity, kinematic : No data available
Explosive properties : Not explosive
Oxidizing properties : No data available

9.2 Other information

Sublimation point : No data available
Self-ignition : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No conditions to be specially mentioned.

10.5 Incompatible materials

Materials to avoid : No materials to be especially mentioned.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Symptoms: Redness, Local irritation

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: Directive 67/548/EEC, Annex V, B.1.
GLP: yes

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Graphite:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 2,000 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

molybdenum disulphide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rat): > 16,000 mg/kg

Skin corrosion/irritation

Product:

Remarks: This information is not available.

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Species: reconstructed human epidermis (RhE)
Assessment: No skin irritation
Result: No skin irritation

Graphite:

Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation

molybdenum disulphide:

Assessment: No skin irritation
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Remarks: This information is not available.

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

Species: Rabbit
Assessment: No eye irritation
Method: OECD Test Guideline 405
Result: No eye irritation
GLP: yes

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Species: Rabbit
Assessment: No eye irritation
Result: No eye irritation

Graphite:

Species: Rabbit
Assessment: No eye irritation
Method: OECD Test Guideline 405
Result: No eye irritation

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

molybdenum disulphide:

Assessment: No eye irritation
Result: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: This information is not available.

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

Test Type: Maximisation Test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Assessment: May cause sensitisation by skin contact.
Result: May cause sensitisation by skin contact.

Graphite:

Species: Mouse
Method: OECD Test Guideline 429
Result: negative

molybdenum disulphide:

Assessment: Does not cause skin sensitisation.
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Result: negative

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Graphite:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Method: OECD Test Guideline 471
Result: negative

: Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative

: Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

molybdenum disulphide:

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Product:

Remarks: No data available

Components:

molybdenum disulphide:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

Graphite:

Effects on fertility : Species: Rat
Application Route: Oral

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

General Toxicity F1: NOAEL: 813 mg/kg body weight
Method: OECD Test Guideline 422

STOT - single exposure

Components:

molybdenum disulphide:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

molybdenum disulphide:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks: This information is not available.

Components:

Graphite:

Species: Rat
NOAEL: 813 mg/kg
Application Route: Oral
Method: OECD Test Guideline 422

Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 412

Aspiration toxicity

Product:

This information is not available.

Further information

Product:

Remarks: Information given is based on data on the components and the toxicology of similar products.

Components:

molybdenum disulphide:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

Remarks: Information given is based on data on the components and the toxicology of similar products.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to microorganisms :
Remarks: No data available

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (Bacteria): > 1,000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Graphite:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

molybdenum disulphide:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

Biodegradability : Test Type: Primary biodegradation
Inoculum: activated sludge
Result: Not rapidly biodegradable
Biodegradation: 10 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Biodegradability : Result: Not rapidly biodegradable

Graphite:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Components:

reaction product of diphenylmethanediisocyanate, octylamine and oleylamine (molar ratio 1:1.86:0.14):

Partition coefficient: n-octanol/water : log Pow: > 6

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Bioaccumulation : Bioconcentration factor (BCF): < 100

Partition coefficient: n-octanol/water : log Pow: 9.01

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : No information on ecology is available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not dispose of with domestic refuse.
Dispose of as hazardous waste in compliance with local and national regulations.

Waste codes should be assigned by the user based on the application for which the product was used.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.
Dispose of waste product or used containers according to local regulations.

The following Waste Codes are only suggestions:

SECTION 14: Transport information

14.1 UN number

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

ADR : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

IATA (Cargo) : Not regulated as a dangerous good

14.6 Special precautions for user

No special precautions required.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 0.49 %

15.2 Chemical safety assessment

This information is not available.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

SECTION 16: Other information

Full text of H-Statements

H317 : May cause an allergic skin reaction.
H413 : May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

This safety data sheet applies only to products originally packed and labelled by perma-tec. The information contained therein may not be reproduced or modified without the express written permission of perma-tec. Any forwarding of this document is only permitted to the extent required by law. Any further, in particular public, dissemination of our safety data sheets (e.g. as a document for download from the Internet) is not permitted without the

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - en



perma High temp. / Extreme pressure grease SF05

Version	Revision Date:	Date of last issue: 20.06.2019	Print Date:
3.0.1	22.12.2021	Date of first issue: 30.10.2013	22.12.2021

express written consent of perma-tec provides its cus-tomers with amended safety data sheets as prescribed by law. The customer is responsible for passing on safety data sheets and any amendments contained therein to its own customers, em-ployees and other users of the product. perma-tec provides no guarantee that safety data sheets received by users from third parties are up-to-date. All information and instruc-tions in this safety data sheet have been compiled to the best of our knowledge and are based on the information available to us on the day of publication. The information provided is intended to describe the product in relation to the required safety measures; it is neither an assurance of characteristics nor a guarantee of the product's suitability for particular applications and does not justify any contractual legal relationship. The existence of a safety data sheet for a particular ju-risdiction does not necessarily mean that import or use within that jurisdiction is legally permitted. If you have any questions, please contact your responsible sales contact or authorised trading partner of perma-tec.