

## perma High temp. / Extreme pressure grease SF05

Version 1.3

Revision Date 23.08.2017

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### 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 Substance/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  
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GERMANY  
Tel: +49 9704 609-0  
Fax: +49 9704 609-50  
info@perma-tec.com

E-mail address : msds@perma-tec.com  
Responsible/issuing person

National contact : H-T-L perma UK  
Lakeside House  
1 Furzeground Way  
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UXBRIDGE UB11 1BD  
MIDDLESEX  
UNITED KINGDOM  
Phone: +44 20 8622 3076  
Fax: +44 20 8622 3200  
www.perma-tec.com

#### 1.4 Emergency telephone number

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

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### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

#### 2.2 Label elements

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### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

### Additional Labelling:

EUH210 Safety data sheet available on request.

### 2.3 Other hazards

## 3. Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : solid lubricant  
polyurea  
Mineral oil.

### Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Polyurea	1266545-64-5 / 01-0000017717-62-0001 / / 01-0000017717-62-0000 / 01-0000017717-62-0002	Aquatic Chronic 4; H413	$\geq 2.5 - < 10$
Substances with a workplace exposure limit :			
Graphite	7782-42-5 231-955-3		$\geq 1 - < 10$
molybdenum disulphide	1317-33-5 215-263-9		$\geq 1 - < 10$

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 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 breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.  
In case of contact, immediately flush skin with plenty of water.
- 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.

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Do not induce vomiting without medical advice.

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

Symptoms : No information available.

Risks : None known.

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

Treatment : No information available.

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## 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 firefighting : Fire may cause evolution of:  
Carbon oxides  
Metal oxides  
Nitrogen oxides (NO<sub>x</sub>)  
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. In the case of respirable dust and/or fumes, use self-contained breathing apparatus. Exposure to decomposition products may be a hazard to health.

Further information : Standard procedure for chemical fires.

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## 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). Avoid breathing dust. 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.

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Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and materials 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.

**7. Handling and storage**

**7.1 Precautions for safe handling**

Advice on safe handling : For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Wash hands and face before breaks and immediately after handling the product.

**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)**

: Consult the technical guidelines for the use of this substance/mixture.

**8. Exposure controls/personal protection**

**8.1 Control parameters**

Components	CAS-No.	Value type	Control parameters	Update	Basis
Graphite	7782-42-5	TWA	10 mg/m <sup>3</sup>	2011-12-01	GB EH40
Further information:	15: 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 MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust 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 <sup>-3</sup> 8-hour TWA of inhalable dust or 4 mg.m <sup>-3</sup> 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. 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				

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	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 MDHS14/3. 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 should be used				
Graphite	7782-42-5	TWA	4 mg/m3	2011-12-01	GB EH40
Further information:	15: 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 MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust 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 above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. 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 MDHS14/3. 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 should be used				
molybdenum disulphide	1317-33-5	TWA	10 mg/m3	2005-04-06	GB EH40
Further information:	Molybdenum				
molybdenum disulphide	1317-33-5	STEL	20 mg/m3	2005-04-06	GB EH40
Further information:	Molybdenum				

**8.2 Exposure controls**

**Engineering measures**

Maintain air concentrations below occupational exposure standards.

**Personal protective equipment**

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

Hand protection : For prolonged or repeated contact use protective gloves.  
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC 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.  
In case of contact through splashing:

: Nitrile rubber  
Protective index Class 1

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- Eye protection : Tightly fitting safety goggles
- Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.
- 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.

### Environmental exposure controls

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

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Form : 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
- Lower explosion limit : No data available
- Upper explosion limit : No data available
- Vapour pressure : < 0.001 hPa, 20 °C
- Relative vapour density : No data available
- Density : 0.92 g/cm<sup>3</sup>, 20 °C
- Water solubility : insoluble
- Solubility in other solvents : No data available
- Partition coefficient: n-octanol/water : No data available
- Auto-ignition temperature : No data available
- Ignition temperature : No data available

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Thermal decomposition	: No data available
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
Bulk density	: No data available

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## 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

Hazardous decomposition products : No decomposition if stored and applied as directed.

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## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Product

Acute inhalation toxicity	: This information is not available.
Skin corrosion/irritation	: This information is not available.
Serious eye damage/eye irritation	: This information is not available.
Respiratory or skin sensitisation	: This information is not available.
Germ cell mutagenicity	
Genotoxicity in vitro	: No data available
Genotoxicity in vivo	: No data available

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Carcinogenicity	: No data available
Reproductive toxicity	: No data available
Teratogenicity	: No data available
Repeated dose toxicity	: This information is not available.
Aspiration toxicity	: This information is not available.
Further information	: Information given is based on data on the components and the toxicology of similar products.

**Components:**

**Polyurea :**

Acute oral toxicity	: LD50: > 2,000 mg/kg, Rat, Directive 67/548/EEC, Annex V, B.1., GLP: yes
Acute dermal toxicity	: LD50: > 2,000 mg/kg, Rat, OECD Test Guideline 402, GLP: yes
Skin corrosion/irritation	: Rabbit, Result: No skin irritation, Classification: No skin irritation, OECD Test Guideline 404, GLP: yes
Serious eye damage/eye irritation	: Rabbit, Result: No eye irritation, Classification: No eye irritation, OECD Test Guideline 405, GLP: yes
Respiratory or skin sensitisation	: Maximisation Test, Guinea pig, Result: Does not cause skin sensitisation., OECD Test Guideline 406, GLP: yes
Germ cell mutagenicity	
Genotoxicity in vitro	: Chromosome aberration test in vitro, Result: negative

**Graphite :**

Acute oral toxicity	: LD50: > 2,000 mg/kg, Rat, OECD Test Guideline 423, The substance or mixture has no acute oral toxicity
Skin corrosion/irritation	: Rabbit, Result: No skin irritation, Classification: No skin irritation, OECD Test Guideline 404, GLP: yes
Serious eye damage/eye irritation	: Rabbit, Result: No eye irritation, Classification: No eye irritation, OECD Test Guideline 405, GLP: yes
Respiratory or skin sensitisation	: Mouse, Result: Does not cause skin sensitisation., Classification: Does not cause skin sensitisation., OECD Test Guideline 429, GLP: yes
STOT - single exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	: No aspiration toxicity classification



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## 12. Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish	:	No data available
Toxicity to daphnia and other aquatic invertebrates	:	No data available
Toxicity to algae	:	No data available
Toxicity to bacteria	:	No data available

#### Components:

##### **Polyurea :**

Toxicity to fish	:	LC50: > 100 mg/l, 96 h, Danio rerio (zebra fish), static test, OECD Test Guideline 203, GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50: > 100 mg/l, 48 h, Daphnia magna (Water flea), Immobilization, OECD Test Guideline 202, GLP: yes
Toxicity to algae	:	EC50: > 100 mg/l, 72 h, Desmodesmus subspicatus (green algae), Growth inhibition, OECD Test Guideline 201, GLP: yes
Toxicity to bacteria	:	EC50: > 1,000 mg/l, 3 h, Bacteria, Respiration inhibition, OECD 209, GLP: yes

##### **Graphite :**

Toxicity to fish	:	LC50: > 100 mg/l, 96 h, Danio rerio (zebra fish), OECD Test Guideline 203, GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50: > 100 mg/l, 48 h, Daphnia magna (Water flea), OECD Test Guideline 202, GLP: yes
Toxicity to algae	:	EC50: > 100 mg/l, 72 h, Pseudokirchneriella subcapitata (green algae), OECD Test Guideline 201, GLP: yes

### 12.2 Persistence and degradability

#### Product:

Biodegradability	:	No data available
Physico-chemical removability	:	No data available

#### Components:

##### **Polyurea :**

Biodegradability	:	Primary biodegradation, 10 %, Result: Not rapidly
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biodegradable, Exposure time: 28 d, activated sludge, OECD 301 F, GLP: yes

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : 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).

### 12.4 Mobility in soil

#### Product:

Mobility : No data available  
Distribution among environmental compartments : 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.

#### Components:

##### Graphite :

Assessment : Non-classified vPvB substance, Non-classified PBT substance

### 12.6 Other adverse effects

#### Product:

Additional ecological information : No information on ecology is available.

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## 13. Disposal considerations

### 13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.  
: Waste codes should be assigned by the user based on the application for which the product was used.

Contaminated packaging : Empty containers can be landfilled, when in accordance with the local regulations.

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## 14. Transport information

### 14.1 UN number

ADR

Not dangerous goods

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**IMDG**  
Not dangerous goods  
**IATA**  
Not dangerous goods

**14.2 Proper shipping name**

**ADR**  
Not dangerous goods  
**IMDG**  
Not dangerous goods  
**IATA**  
Not dangerous goods

**14.3 Transport hazard class**

**ADR**  
Not dangerous goods  
**IMDG**  
Not dangerous goods  
**IATA**  
Not dangerous goods

**14.4 Packing group**

**ADR**  
Not dangerous goods  
**IMDG**  
Not dangerous goods  
**IATA**  
Not dangerous goods

**14.5 Environmental hazards**

**ADR**  
Not dangerous goods  
**IMDG**  
Not dangerous goods  
**IATA**  
Not dangerous goods

**14.6 Special precautions for user**

No special precautions required.

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

Remarks : Not applicable for product as supplied.

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**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).

Major Accident Hazard : 96/82/EC Update:

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Legislation Not applicable

: 2012/18/EU Update:  
Not applicable

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) : Not applicable

### 15.2 Chemical safety assessment

This information is not available.

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## 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H413 May cause long lasting harmful effects to aquatic life.

### Further information

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