

## 1 Identification of the substance / preparation and of the company

<b>Product identifier</b>	<b>perma FLEX 125 / perma FLEX 60</b>
<b>Use</b>	Lubrication system
<b>Identified use</b>	none
<b>Company</b>	perma-tec GmbH & Co.KG
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<b>Address enquiries to</b>	
<b>Emergency phone Company</b>	+49 (0) 9704-609-0 (Mo-Th 8:00-16:30, Fr 8:00-12:00)
<b>Technical information</b>	info@perma-tec.de
<b>Safety Data Sheet</b>	sdb@chemiebuero.de

## 2 Hazards identification

### Emergency Overview

<b>Appearance, Odor:</b>	capsule
	DANGER OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. MAY BE FATAL IF SWALLOWED VERY TOXIC TO AQUATIC ORGANISMS; MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT CAUSES EYE AND SKIN IRRITATION. CAUSES RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. CONTACT WITH ACID LIBERATES (RELEASES) POISONOUS GAS

### OSHA Regulatory Status

This product is defined as an "article" based on OSHA definition of an article. Therefore, this product is exempt from requirements of the hazard communication standard, 29 CFR1910.1200, hence a MSDS is not required and the sheets are supplied as a service. This MSDS contains valuable information critical to the safe handling and proper use of the product.

### Potential health effects

The contained dangerous materials are not freely available with foreseeable use.

### Potential environmental effects

The contained dangerous materials are not freely available with foreseeable use.

## 3 Composition / Information on ingredients

The product in question is a Article.

Range [%]	Substance
20 - <30	magnesium perchlorate CAS: 10034-81-8
10 - <15	Sodium azide CAS: 26628-22-8
0,1 - <0,25	Nickel sulphate CAS: 7786-81-4

### Comment on component parts

The concentrations of the ingredients are valid for gas generation cell. They are not for the complete system.  
The structural design prevents release of the hazardous media contained therein when the unit is used for its intended purpose.  
Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.  
For the wording of the listed risk phrases refer to section 16.

#### 4 First aid measures

<b>Description of first aid measures</b>	Adhere to personal protective measures when giving first aid.
<b>Inhalation</b>	Consult a doctor immediately. Remove the victim into fresh air and keep him calm.
<b>Skin contact</b>	In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.
<b>Ingestion</b>	Consult a doctor immediately. Induce the patient to vomit of his own accord only if fully conscious. Rinse out mouth and give plenty of water to drink.
<b>Indication of any immediate medical attention and special treatment needed</b>	Treat symptomatically.  Forward this sheet to the doctor.

#### 5 Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Water spray jet. Carbon dioxide. Dry powder.
<b>Extinguishing media that must not be used</b>	none
<b>Special exposure hazards arising from the substance or preparation itself or combustion products</b>	Unknown risk of formation of toxic pyrolysis products.  Nitrogen oxides (NOx). Hydrogen chloride (HCl).
<b>Special protective equipment for firefighters</b>	Use self-contained breathing apparatus.  Wear full protective suit.
<b>Additional information</b>	Cool containers at risk with water spray jet. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

#### 6 Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Use personal protective equipment.  Use breathing apparatus if exposed to vapours/dust/aerosol. Keep people away and stay on the upwind side. Lock off contaminated area.
<b>Environmental precautions</b>	not applicable
<b>Methods and material for containment and cleaning up</b>	Take up mechanically.  Dispose of absorbed material in accordance with the regulations. Take up residues with absorbent material (e.g. sand, sawdust, generalpurpose binder, diatomaceous earth).

#### 7 Handling and storage

<b>Precautions for safe handling</b>	No special measures necessary if used correctly.
<b>Requirements for storage rooms and vessels</b>	No special measures necessary.
<b>Advice on storage compatibility</b>	Do not store with combustible materials.
<b>Further information on storage conditions</b>	Protect from heat/overheating. Keep container tightly closed.

## 8 Exposure controls / personal protection

**Additional advice on system design** Ensure adequate ventilation on workstation.

### Ingredients with occupational exposure limits to be monitored (US)

Range [%]	Substance
10 - < 20	Sodium azide CAS: 26628-22-8, EINECS/ELINCS: 247-852-1, EU-INDEX: 011-004-00-7 Long-term exposure: 0,2 mg/m <sup>3</sup> , OSHA
0,1 - < 1	Nickel sulphate CAS: 7786-81-4, EINECS/ELINCS: 232-104-9, EU-INDEX: 028-009-00-5, ECB-Nr.: 01-2119439361-44-xxxx Long-term exposure: 1 mg/m <sup>3</sup> , OSHA PEL

### Ingredients with occupational exposure limits to be monitored (EU)

Range [%]	Substance / EC LIMIT VALUES
10 - < 20	Sodium azide CAS: 26628-22-8, EINECS/ELINCS: 247-852-1, EU-INDEX: 011-004-00-7 Eight hours: 0,1 mg/m <sup>3</sup> , H Short-term (15-minute): 0,3 mg/m <sup>3</sup>

### Respiratory protection

If ventilation insufficient, wear respiratory protection.

### Hand protection

The details concerned are recommendations. Please contact the glove supplier for further information.

In splash contact

Butyl rubber, >480 min (EN 374).

### Eye protection

not applicable

### Skin protection

not applicable

### General protective measures

Measures are only valid for damaged cells.

Avoid contact with eyes.

Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier.

### Hygiene measures

Wash hands before breaks and after work.

### Delimitation and monitoring of the environmental exposition

not determined

## 9 Physical and chemical properties

Form	capsule
pH-value	8,3 - 8,8
pH-value [1%]	not determined
Boiling point [°C]	not determined
Flash point [°C]	not applicable
Flammability [°C]	not determined
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	miscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	not applicable
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not determined
Decomposition temperature	not determined

## 10 Stability and reactivity

<b>Reactivity</b>	See section 10.3.
<b>Chemical stability</b>	Stable under normal ambient conditions (ambient temperature).
<b>Possibility of hazardous reactions</b>	Reactions with acids and strong oxidizing agents.
<b>Conditions to avoid</b>	Strong heating.
<b>Incompatible materials</b>	No informations available.
<b>Hazardous decomposition products</b>	No hazardous decomposition products known.

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity

Range [%]	Substance
10 - <15	Sodium azide, CAS: 26628-22-8
	LD50, oral, Rat: 27 mg/kg bw (RTECS).
	LD50, dermal, Rabbit: 20 mg/kg bw (RTECS).
0,1 - <0,25	Nickel sulphate, CAS: 7786-81-4
	LD50, oral, Rat: 275 - 325 mg/kg (IUCLID).

<b>Acute oral toxicity</b>	not determined
<b>Acute dermal toxicity</b>	not determined
<b>Acute inhalational toxicity</b>	not determined
<b>Serious eye damage/irritation</b>	not determined
<b>Skin corrosion/irritation</b>	not determined
<b>Respiratory or skin sensitisation</b>	not determined
<b>Specific target organ toxicity — single exposure</b>	not determined
<b>Specific target organ toxicity — repeated exposure</b>	not determined
<b>Mutagenicity</b>	not determined
<b>Reproduction toxicity</b>	not determined
<b>Carcinogenicity</b>	not determined
<b>General remarks</b>	Toxicological data of complete product are not available. The product was classified on the basis of the calculation procedure of the preparation directive.

## 12 Ecological information

### Toxicity

Range [%]	Substance
10 - <15	Sodium azide, CAS: 26628-22-8
	EC50, (48h), Daphnia pulex: 4,2 mg/l (ECOTOX).
	LC50, (96h), Lepomis macrochirus: 0,7 mg/l (ECOTOX).
0,1 - <0,25	Nickel sulphate, CAS: 7786-81-4
	NOEC, (48h), Daphnia magna: 9,48 mg/l (IUCLID).
	EC50, (48h), Daphnia magna: 1 mg/l (IUCLID).
	LC50, (24h), Brachidanio rerio: > 100 mg/l (IUCLID).
	LC50, Daphnia magna: 0,18 mg/l (Lit). M = 1

<b>Fish toxicity</b>	not determined
<b>Daphnia toxicity</b>	not determined
<b>Behaviour in environment compartments</b>	not determined
<b>Behaviour in sewage plant</b>	not applicable
<b>Bacteria toxicity</b>	not determined
<b>Biological degradability</b>	not applicable
<b>COD</b>	not determined
<b>BOD 5</b>	not determined
<b>Other adverse effects</b>	Ecological data of complete product are not available.

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### 13 Disposal considerations

<b>Product</b>	Dispose of as hazardous waste. For recycling, consult manufacturer.
<b>Contaminated packaging</b>	Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product.
<b>RCRA Hazard Class (40CFR 261)</b>	Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

### 14 Transport information

<b>Road transport in accordance with ADR</b>	UN 3363 Dangerous Goods in apparatus (No dangerous goods, according ADR in accordance to 1.1.3.1. b))
- Classification Code	M11
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code)
<b>Marine transport in accordance with IMDG</b>	UN 3363 Dangerous Goods in apparatus 9 -
- EMS	F-A, S-P
- Label	
- IMDG LQ	SV301
<b>Air transport in accordance with IATA</b>	UN 3363 Dangerous goods in apparatus 9
- Label	
<b>DOT Road Shipment Information (49 CFR)</b>	UN/NA 3363 Dangerous Goods in Apparatus 9

## 15 Regulatory information

### US Regulations

#### National regulations

29 CFR 1910.1200, ANSI Z400.1-2010, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65

- SARA, 302

One or some ingredient(s) are listed under this regulation.

- SARA, 311

not determined

- SARA, 313

This product contain one ingredient regulated under this list(40 CFR part 372.65): Sodium azide (CAS 26628-22-8)

This product contain one ingredient regulated under this list(40 CFR part 372.65): Sulfuric acid, nickel salt

- CA Proposition 65

This product contains nickel compounds known to the State of California to cause cancer.

- TSCA

All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.

- FDA

No informations available.

#### American Conference of Governmental Industrial Hygienists - ACGIH

One or some ingredient(s) are listed under this regulation.

#### International Agency for Research on Cancer IARC

Not determinated.

#### National Toxicology Program - NTP

Not Determinated.

#### Transport-regulations

DOT-Classification, ADR (2011); IMDG-Code (2011, 35. Amdt.); IATA-DGR (2011).

### EC Regulations

1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC

#### Labelling

This product is an article and therefore it does not require labelling according to EC directives/GefStoffV.

#### Hazard symbols



Very toxic



Oxidizing



Dangerous for the environment

#### Contains:

Sodium azide

Nickel sulphate

#### R-phrases

R 8: Contact with combustible material may cause fire.

R 28: Very toxic if swallowed.

R 32: Contact with acids liberates very toxic gas.

R 43: May cause sensitisation by skin contact.

R 36/37/38: Irritating to eyes, respiratory system and skin.

R 48/20: Harmful - danger of serious damage to health by prolonged exposure through inhalation.

R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### S-phrases

S 28.2: After contact with skin, wash immediately with plenty of water and soap.

S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60: This material and its container must be disposed of as hazardous waste.

S 61: Avoid release to the environment. Refer to special instructions, safety data sheets.

S 53: Avoid exposure - obtain special instructions before use.

#### Special labelling

not applicable

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**16 Other informations****Observe employment restrictions for people** yes

Customs Tariff not determined

**HMIS Ratings**

<b>HEALTH</b>	<b>1</b>	1 - Slight Hazard
<b>FLAMMABILITY</b>	<b>1</b>	1 - Slight Hazard
<b>REACTIVITY</b>	<b>2</b>	2 - Moderate Hazard
<b>PERSONAL PROTECTION</b>	<b>X</b>	X - Personal protection rating to be supplied by user depending on use conditions

**NFPA Ratings**

TOP, FLAMMABILITY: 1 - Slight Hazard

LEFT, HEALTH: 1 - Slight Hazard RIGHT, REACTIVITY: 2 - Moderate Hazard

BOTTOM, SPECIAL NOTICE:

**Modified position**

none

**Key / Legende:**

ACGIH = American Conference of Governmental Industrial Hygienists; CAS = Chemical Abstracts Service; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DOT = Department of Transportation; EINCES = European Inventory of Existing Commercial Chemical Substances; EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit; TSCA = Toxic Substances Control Act

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