

DIFFU - THERM® Magnetic-Particle-Suspension MPS - S (Aerosol)
Identification of the substance/mixture and of the company/undertaking:
Product identifier
Trade name: Magnet-Particle-Suspension black (oil based)

Article number: MPS - S

Relevant identified uses of the substance or mixture and uses advised against
Application of the substance / the preparation

As Magnetic-Particle-Suspension at the Magnetic particle inspection by acc. to EN ISO 9934-1 (DIN 54 132) for finding surface cracks.

Details of the supplier of the safety data sheet
Manufacturer/Supplier

Helmut Klumpf

Technische Chemie KG

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Emergency telephone number: a.m. or next Emergency phone:

2. Hazards identification
Classification of the substance or mixture

Flammable Aerosol, Category 1

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.


Hazard pictograms GHS02
Signal word Danger
Hazard statements

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P271 Use only outdoors or in a well-ventilated area.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

3. Composition/information on ingredients
Chemical characterization: Substances
Identification number(s):
Chemical characterization: Aerosol

Components:	Name of chemical	weight %
CAS: 90622-58-5 EINECS: 920-901-0	aliphatic hydrocarbons, C11-C13, isoalkane, < 2% aromatic GHS08 Asp. Tox .1, EUH066, H304	30 - 80
CAS: 106-97-8 EINECS: 203-448-7	n-Butane GHS02 Flam. Gas 1, H220; GHS04	5 - 20
CAS: 74-98-6 EINECS: 200-827-9	propane GHS02 Flam. Gas 1, H220; GHS04	5 - 20

4. First aid measures
Description of first aid measures
General information

Take affected persons out of danger area and instruct to lie down.

Personal protection for the First Aider.

Instantly remove any clothing soiled by the product.

After inhalation

Remove the person from the danger zone under proper respiratory protection . If breathing is irregular or stopped, give artificial respiration. Comfortable for the patients and provide medical help.

Seek medical treatment in case of complaints.

After skin contact

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.



After eye contact

Rinse opened eye for at least 15 minutes under running water. Get medical attention if irritation occurs.

After swallowing In case of persistent symptoms consult doctor.

Information for doctor

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

Indication of any immediate medical attention and special treatment needed

If ingested, material may be aspirated into the lungs and cause chemical pneumonia. Treat appropriately.

5. Fire fighting measures

Suitable extinguishing material:

ABC powder, alcohol-resistant foam, carbon dioxide.

Extinguishing material that must not be used for safety reasons:

Full water jet.

Special exposure hazards extinguishing from the substance or preparation itself, combustible products or resulting gases:

None

Special protective equipment for fire fighters:

None

Additional information's:

Cool containers at risk with water spray jet.

Danger for bursting of aerosols when heated for more than 50°C.

Aerosols that burst in fire can be mightily shot away.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes and skin.

All persons whose presence is not necessary, remove from exposure.

Close leaks, if possible without personal risk to take.

In case of formation of gases / vapours / aerosols are breathing.

Do not breathe Gas / fumes / vapour / spray.

Environmental precautions:

Do not allow to enter drainage system, surface or ground water.

Prevent from spreading (e.g. by damming-in or oil barriers).

Do not allow to enter the ground/soil.

Methods and material for containment and cleaning up:

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

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

Send for recovery or disposal in suitable containers.

Larger amounts should be pumped into containers.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

7. Handling and storage

Handling:

Advice on safe handling:

Provide good room ventilation even at ground level (vapours are heavier than air).

Advice on protection against fire and explosion:

Keep away from sources of ignition.

Do not smoke.

Take precautionary measures against static discharges.

Storage:

Requirements for storage rooms and vessels:

Filled aerosols must not be exposed to:

1. Heating of more than 50°C by sun beams or other heat sources.

2. Storage in gates, passages, wells of staircases, buildings, floors, and lofts.

Keep container in a well-ventilated place.

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Advice on storage compatibility:

Do not store together with oxidizing agents.

Further information on storage conditions:

Keep container in a well-ventilated place.

Classification acc. to prescription:

Aerosols (Aerosol containers) (TRG 300)

Ordinance on Industrial Safety and Health

TRGS 510.

Storage class: 2B

8. Exposure controls/personal protection

Additional advice on system design:

No other information's, see point 7.

Components with critical values that require monitoring at the workplace:	
aliphatic hydrocarbons, C11-C13, Isoalkane, < 2% aromatics (30 - 80%)	
TRGS 900	Long-term value: 600 mg/m ³
106-97-8 butane (10 - 20%)	
WEL	2.400 mg/m ³ , 1.000 ml/m ³ ; 4(II); DFG
74-98-6 propane (10 - 20%)	
WEL	1.800 mg/m ³ , 1.000 ml/m ³ ; 4(II); DFG

Personal protective equipment**General protective and hygienic measures**

Do not eat, drink or smoke while working.

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.

Wash hands during breaks and at the end of the work.

Do not inhale gases / fumes / aerosols.

Breathing equipment:

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Half-face filter respirator Type A.

Protection of hands:

suitable protective gloves.

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

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.

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.

Eye protection:

Safety glasses. Tightly sealed safety glasses.

Body protection: Protective work clothing.

9. Physical and chemical properties

General Information

Form: Aerosol

Colour: Colourless/black

Smell: Weak, characteristic

Data relevant for safety:

(Product without power gas)

Boiling range: 170 - 250 °C

Flash point: > 61 °C

Ignition temperature: > 200 °C

Explosive properties: The Product is not explosive, but may form flammable/explosive vapour-air mixture.

Explosion limits Lower e.l.: 0,6 Vol.%

Upper e.l.: 7 Vol.%

Vapour pressure (20°C): 0,4 hPa

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Density (20°C):	0,7 - 0,85 g/cm ³
Solubility in water (20°C):	Not determined.
Viscosity (25°C):	1,3 - 2,5 mm ² /s

10. Stability and reactivity

Reactivity

Chemical stability The material is stable under normal conditions.

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

Possibility of hazardous reactions Hazardous polymerization will not occur.

Conditions to avoid

Avoid shock, friction, heat, sparks, open flame and other ignition sources. Prevent electrostatic charging.

Incompatible materials: Reacts with strong oxidizing agents.

Hazardous decomposition products: This product does not decompose at ambient temperatures.

11. Toxicological information

The classification of risk is based on knowledge of the toxicity of the components contained in this product.

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:		
Oral	LD50	> 5.000 mg/kg (rat)
Dermal	LD50	> 5.000 mg/kg (rab)
Inhaled	LC50	> 5.000 mg/l (rat)

Primary irritant effect:

on the skin:

Irritation possible

Data available. Test results or other study results do not meet the criteria for classification.

on the eye:

weak irritant effect

Data available. Test results or other study results do not meet the criteria for classification.

Irritation of the respiratory system

Can be fatal if swallowed and enters into the airways. Based on physico-chemical properties of the material.

Sensitization: No sensitizing effect known.

12. Ecological information

Toxicity

Aquatic toxicity:

Material - Not expected to be harmful to aquatic organisms.

Material - Expected to aquatic organisms probably show no chronic toxicity.

Persistence and degradability The product is not easily, but potentially (inherently) degradable.

Other information: This substance is highly volatile and evaporates quickly into the air when it is released.

Behaviour in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil Probably will not take place on the distribution of sediment and wastewater solids.

Additional ecological information:

General notes:

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

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

Results of PBT and vPvB assessment

The product is neither a PBT or vPvB substance, nor still contains PBT or vPvB substances.

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects No further relevant information available.

13. Disposal considerations

Waste treatment methods

Recommendation

The product is suitable for burning in an enclosed, controlled burner suitable for fuel value or disposal by supervised incineration at very high temperatures at which it does not come to the formation of undesired inflammatory products.

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

Disposal must be made according the local authority regulations.

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European waste catalogue -

Uncleaned packaging's:

Recommendation:

Empty contaminated packaging's thoroughly. They can be recycled after thorough and proper cleaning.
Packaging's that cannot be cleaned are to be disposed of in the same manner as the product.

14. Transport information

Land transport

UN-No.: 1950 Identification: DRUCKGASPACKUNGEN flammable
Class: 2 Package Group: -- Tunnel restriction code: D
Classifications code: 5 F shipment category: 2
Labelling of the Package: UN 1950 AEROSOLE Label-no.: 2.1
Packing instruction: P 003, MP 9 Limited Quantities Only: 1L (Package ≤ 30 kg)

Marine transport IMDG/GGVSee

UN-No.: 1950 Class: 2.1 Package Group: --
EMS-No.: F-D, S-U Label-no.: -- Marine Pollutant: -- Label: --
Proper Shipping Name: Aerosols (Limited Quantities Only) (Package ≤ 30 kg)

Air transport ICAO-TI and IATA-DGR

Class/Division: 2.1 UN/ID-No.: 1950
Package Group: --, Label: 2.1
Packing inst. Passenger aircraft: 203/Y203 Max. net/Package: 75 kg/30 kg
Packing inst. Cargo aircraft: 203 Max. net/Package: 150 kg
Proper Shipping Name: Aerosols, flammable

15. Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

Relevant phrases

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
EUH066 Repeated exposure may cause skin dryness or cracking.

National regulations

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

Chemical safety assessment: A Chemical Safety Assessment has been carried out.

16. Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally contractual relationship.

Department issuing data specification sheet:

Contact: Helmut. Klumpf Technische Chemie KG

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent