

Identification of the substance/mixture and of the company/undertaking:**Product identifier**

Trade name: Magnet-Particle-Suspension fluorescence (oil based)

Article number: MPS - F2

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**

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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 labelled according to the CLP regulation.

**Hazard pictograms** GHS02**Signal word** Danger**Hazard statements**

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

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

P251 Pressurized container: 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: 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 / vapors / aerosols are breathing.

Do not breathe Gas / fumes / vapor / 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.

DIFFU - THERM[®] Magnetic-Particle-Suspension MPS - F2 (Aerosol)
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:		
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/brown

Smell: Weak, characteristic

Data relevant for safety:

(Product without power gas)

Boiling point: 232 °C

Flash point: > 200 °C

Ignition temperature: > 300 °C

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

Explosion limits Lower e.l.: 1,8 Vol.% (179,5 °C, 18,8 hPa)

Upper e.l.: 2,4 Vol.% (209,7 °C, 24,6 hPa)

Vapour pressure (20°C): 89 hPa

DIFFU - THERM® Magnetic-Particle-Suspension MPS - F2 (Aerosol)

Density (20°C):	0,93 g/cm ³
Solubility in water (20°C):	emulsifiable
Viscosity (25°C):	17 - 21 mPa.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**Information on toxicological effects**Acute toxicity:

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation.

Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Respiratory/Skin sensitization

Assessment of sensitization:

The chemical structure does not suggest a sensitizing effect.

12. Ecological information**Toxicity**

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Readily biodegradable (according to OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential:

Does not significantly accumulate in organisms.

Mobility in soil (and other compartments if available)

Assessment transport between environmental compartments:

The substance will slowly evaporate into the atmosphere from the water surface.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bio accumulative/toxic) and vPvB (very persistent/very bio accumulative). Self classification

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. Do not release untreated into natural waters.

13. Disposal considerations**Waste treatment methods**

Must be disposed of or incinerated in accordance with local regulations.

A waste code in accordance with the European waste catalog (EWC) cannot be specified, due to dependence on the usage.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.



14. Transport information

Land transport

UN-Nr.: 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-Nr.: 1950
Package Group: --, Label: 2.1
Packing inst. Passenger aircraft: 203/Y203 Max. netto/Package: 75 kg/30 kg
Packing inst. Cargo aircraft: 203 Max. netto/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.

Hazard pictograms GHS02

Signal word Danger

Hazard statements

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.

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 valid contractual relationship.

Department issuing data specification sheet:

Contact: Helmut. Klumpf Technische Chemie KG

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative