

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 17.06.2015

Revision: 17.06.2015

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

- **1.1 Product identifier**
- **Trade name: MR® 76 S Magnetic powder suspension, black**  
valid for all versions
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**  
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Product category**  
PC14 Metal surface treatment products, including galvanic and electroplating products  
PC9a Coatings and paints, thinners, paint removers  
PC35 Washing and cleaning products (including solvent based products)
- **Process category**  
PROC7 Industrial spraying  
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities  
PROC13 Treatment of articles by dipping and pouring
- **Environmental release category**  
ERC4 Industrial use of processing aids in processes and products, not becoming part of articles
- **Article category AC7** Metal articles
- **Application of the substance / the mixture**  
Testing material for nondestructive surface crack detection
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Hersteller:  
MR® Chemie GmbH  
Nordstr. 61-63  
D-59427 Unna  
Tel. +49 (0)2303/95151-0  
Fax +49 (0)2303/95151-10
- **Further information obtainable from:**  
MR® Chemie GmbH, Development, Tel.: 0049-(0)2303/95151-0, QS@mr-chemie.de
- **1.4 Emergency telephone number:**  
24h- Emergency Contact Phone Number  
For Chemical Emergency, Spill, Leak, Fire, Exposure or Accident  
  
Call Day or Night within USA and Canada: 1 800 424 9300  
Outside USA and Canada: 001 703 527 3887  
In-Country Emergency Number for:  
China: 4001 204937 (Mandarin)  
Hong Kong: 800 968 793 (Cantonese)  
India: 000 800 100 7141 (Hindi)  
South Africa: 0 800 983 611 (English)  
(WISAG FMO Cargo Service GmbH & CO.KG)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**

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

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- **Hazard pictograms**



GHS02

- **Signal word** Danger

- **Hazard-determining components of labelling:**

Distillates (petroleum), hydrotreated light

- **Hazard statements**

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

- **Precautionary statements**

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

P251 Do not pierce or burn, even after use.

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

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

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

Buildup of explosive mixtures possible without sufficient ventilation.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

EINECS: 265-149-8	Distillates (petroleum), hydrotreated light Flam. Liq. 3, H226; Asp. Tox. 1, H304	50-70%
CAS: 74-98-6 EINECS: 200-827-9	propane Flam. Gas 1, H220; Press. Gas C, H280	10-25%
CAS: 106-97-8 EINECS: 203-448-7	butane Flam. Gas 1, H220; Press. Gas C, H280	10-25%

- **Propellant:** Propane-Butane

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:**

Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:**  
If skin irritation continues, consult a doctor.  
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Not relevant - aerosol can.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor:**  
Grease with skin-cream to restore fat film in order to prevent skin inflammation.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 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 disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**  
Do not spray onto a naked flame or any incandescent material.  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, e.g. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

#### · **Ingredients with limit values that require monitoring at the workplace:**

##### **74-98-6 propane**

AGW (Germany)	Long-term value: 1800 mg/m <sup>3</sup> , 1000 ppm 4(II);DFG
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##### **106-97-8 butane**

WEL (Great Britain)	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
AGW (Germany)	Long-term value: 2400 mg/m <sup>3</sup> , 1000 ppm 4(II);DFG

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**  
Filter A/P2  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.  
For good ventilation provide, this can be achieved by local or space exhaust. If the concentration lies over the job limit values, then, a certified respirator suitable for this purpose must be used.
- **Protection of hands:**  
Check the permeability prior to each renewed use of the glove.  
For the protection against chemicals in areas with heightened risk of injury (mechanical hazard) no recommendation for a suitable glove material can be given.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
Nitrile rubber, NBR  
Fluorocarbon rubber (Viton)  
Recommended thickness of the material:  $\geq 0.5$  mm  
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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
Value for the permeation: Level  $\leq 4$   
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** With danger of the eye contact closing eye protector.

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· **Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

· **Form:** Aerosol  
 · **Colour:** According to product specification

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

#### · Change in condition

· **Melting point/Melting range:** Undetermined.  
 · **Boiling point/Boiling range:** Not applicable, as aerosol.

· **Flash point:** -97 °C  
 Basis: propellant

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 210 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

#### · Explosion limits:

· **Lower:** 0.5 Vol %  
 · **Upper:** 10.9 Vol %

· **Vapour pressure at 20 °C:** 8300 hPa  
 Basis: propellant

· **Spray can internal pressure (20 °C):** 4,8 bar

· **Spray can internal pressure (50 °C):** 7,0 bar

· **Density at 20 °C:** 0.77 g/cm<sup>3</sup>  
 Basis: active substance

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

#### · Viscosity:

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

· **Organic solvents:** 44.6 %

· **VOC (EU)** 99 %

· **9.2 Other information** No further relevant information available.

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### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
 Danger of bursting of the aerosol can during overheating
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity**
- |  |          |                |
|--|----------|----------------|
| · <b>LD/LC50 values relevant for classification:</b> |          |                |
| <b>106-97-8 butane</b>                               |          |                |
| Inhalative   | LC50/4 h | 658 mg/l (rat) |
- **Primary irritant effect:**
  - **Skin corrosion/irritation** No irritant effect.
  - **Serious eye damage/irritation** No irritating effect.
  - **Respiratory or skin sensitisation** No sensitising effects known.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- |  |  |
|--|--|
| · <b>Aquatic toxicity:</b>                         |  |
| <b>Distillates (petroleum), hydrotreated light</b> |  |
| LC50/96h   | 2.6 mg/l (Fisch/fish/poissons/peixes) (Ecotoxicological Data, compiled by the US Environm) |
- **12.2 Persistence and degradability** No further relevant information available.
  - **12.3 Bioaccumulative potential** No further relevant information available.
  - **12.4 Mobility in soil** No further relevant information available.
  - **Additional ecological information:**
  - **General notes:**  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Water hazard class 1: weakly water-endangering
  - **12.5 Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· **Waste disposal key:**

For this product no waste key number can be specified, because only the intended purpose permits an allocation. The waste key number is to be specified in arrangement with the regional waste disposal.

· **European waste catalogue**

07 07 04*	other organic solvents, washing liquids and mother liquors
15 01 10*	packaging containing residues of or contaminated by dangerous substances

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA** UN1950

· **14.2 UN proper shipping name**

· **ADR** 1950 AEROSOLS  
 · **IMDG** AEROSOLS  
 · **IATA** AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 2 5F Gases.  
 · **Label** 2.1

· **IMDG, IATA**



· **Class** 2.1  
 · **Label** 2.1

· **14.4 Packing group**

· **ADR, IMDG, IATA** Void

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

· **Danger code (Kemler):** Warning: Gases.  
 -  
 · **EMS Number:** F-D,S-U

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)** 1L  
 · **Excepted quantities (EQ)** Code: E0  
 Not permitted as Excepted Quantity

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· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	D
<hr/>	
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN1950, AEROSOLS, 2.1

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P3a FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations:**
- **Waterhazard class:**  
Water hazard class 1: slightly hazardous for water. (In accordance with classification VwVwS, appendix 4)
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The data in this safety data sheet are based on our knowledge at the time of the revision. The information should give you reference points for a safe handling of the product specified in this safety data sheet. The data are not transferable to other products. If the product specified in this safety data sheet is mixed or processed with other materials, the data cannot be transferred without examination.

- **Relevant phrases**  
The wording of the listed risk phrases are those of the individual raw materials.  
H220 Extremely flammable gas.  
H226 Flammable liquid and vapour.  
H280 Contains gas under pressure; may explode if heated.  
H304 May be fatal if swallowed and enters airways.
- **Recommended restriction of use**  
Existing national and local laws concerning chemicals are to be considered.
- **Department issuing MSDS:** MR® Chemie GmbH, Development
- **Contact:**  
Laboratory  
MR® Chemie GmbH, Tel.: 0049(0)2303/95151-0
- **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)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)

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VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Gas 1: Flammable gases, Hazard Category 1

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas C: Gases under pressure: Compressed gas

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

• **\* Data compared to the previous version altered.**

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