

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.04.2017

Revision: 18.04.2017

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

- **1.1 Product identifier**
- **Trade name: MR® 71 Paint Remover**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Life cycle stages**
 - F Formulation or re-packing
 - IS Use at industrial Sites
- **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU14 Manufacture of basic metals, including alloys
- **Product category**
 - PC14 Metal surface treatment 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 mixture (charging and discharging) at non-dedicated facilities
 - PROC13 Treatment of articles by dipping and pouring
- **Environmental release category**
 - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- **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:**
 - MR® Chemie GmbH
 - Nordstr. 61-63
 - 59427 Unna (Germany)
 - Tel. +49 (0)2303 95151 0
 - Fax: +49 (0)2303 95151 10
 - post@mr-chemie.de
 - www.mr-chemie.de
- **Further information obtainable from:**
 - MR Chemie GmbH, Dep. safety data sheets, Tel.: +49/(0)2303/95151-38, 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:

Germany:	0800-181-7059	
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)

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SECTION 2: Hazards identification

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



GHS02 flame

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



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.
 STOT SE 3 H336 May cause drowsiness or dizziness.

- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.
- Hazard pictograms



GHS02 GHS07

- Signal word Danger
- Hazard-determining components of labelling:
Methylacetat
butanone
- Hazard statements
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- 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.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.
Buildup of explosive mixtures possible without sufficient ventilation.
- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

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

· Dangerous components:

CAS: 79-20-9 EINECS: 201-185-2 Reg.nr.: 01-2119459211-47-XXXX	Methylacetat	Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	30-40%
CAS: 78-93-3 EINECS: 201-159-0 Reg.nr.: 01-2119457290-73-XXXX	butanone	Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	25-30%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21-XXXX	propane	Flam. Gas 1, H220 Press. Gas (Comp.), H280	15-20%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32-XXXX	butane	Flam. Gas 1, H220 Acute Tox. 3, H331 Press. Gas (Comp.), H280	15-20%

· **Propellant:** Propane-Butane

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

Take affected persons into fresh air and keep quiet.

Seek medical treatment in case of complaints.

· **After skin contact:** 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:

Do not induce vomiting; call for medical help immediately.

Not relevant - aerosol can.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

Headache

Stupor

Unconsciousness

Nausea

· 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:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

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- **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**
Ensure adequate ventilation
Keep away from ignition sources.
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:**
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.
Do not spray onto a naked flame or any incandescent material.
- **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.
Store away from foodstuffs.
- **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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

79-20-9 Methylacetat

WEL (Great Britain)	Short-term value: 770 mg/m ³ , 250 ppm Long-term value: 616 mg/m ³ , 200 ppm
AGW (Germany)	Long-term value: 610 mg/m ³ , 200 ppm 4(II);DFG, Y

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78-93-3 butanone

IOELV (EU)	Short-term value: 900 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm
WEL (Great Britain)	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV
AGW (Germany)	Long-term value: 600 mg/m ³ , 200 ppm 1(I);DFG, EU, H, Y

74-98-6 propane

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

WEL (Great Britain)	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1,3-diene)
AGW (Germany)	Long-term value: 2400 mg/m ³ , 1000 ppm 4(II);DFG

· DNELs**79-20-9 Methylacetat**

Dermal	Long-term - systemic effects, worker	88 mg/kg bw/day (worker)
Inhalative	Long-term - systemic effects, worker	610 mg/m ³ (worker)

78-93-3 butanone

Dermal	Long-term - systemic effects, worker	1161 mg/kg bw/day (worker)
Inhalative	Long-term - systemic effects, worker	600 mg/m ³ (worker)

· PNECs**79-20-9 Methylacetat**

Aquatic compartment, freshwater	0.12 mg/L (freshwater)
Aquatic compartment - marine water	0.012 mg/L (marine water)
Aquatic compartment - water intermittent releases	1.2 mg/L (intermittent release water)
Aquatic compartment- sediment in freshwater	0.128 mg/kg sed dw (sediment fresh water)
Aquatic compartment sediment in marine water	0.0128 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil	0.0416 mg/kg dw (soil)
Sewage treatment plant	600 mg/L (sewage treatment plant)
Oral secondary poisoning	20.4 mg/kg food (food secondary poisoning)

78-93-3 butanone

Aquatic compartment, freshwater	55.8 mg/L (sediment fresh water)
Aquatic compartment - marine water	55.8 mg/L (marine water)
Aquatic compartment- sediment in freshwater	284.74 mg/kg sed dw (sediment fresh water)
	284.7 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil	22.5 mg/kg dw (soil)
Oral secondary poisoning	1000 mg/kg food (food secondary poisoning)

· Ingredients with biological limit values:**78-93-3 butanone**

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BMGV (Great Britain)	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one
BGW (Germany)	5 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: 2-Butanon

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

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.

Filter AX

· **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.

· **Material of gloves**

Butyl rubber, BR

Recommended thickness of the material: $\geq 0.7 \pm 0.1$ 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 ≤ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Supplier for suitable protection gloves:

ASD ArbeitsSicherheit Dortmund

Torstr. 101 - 37355 Niederorschel OT Rüdigershagen

Tel.: 02301 / 919543 - Fax: 02301 / 9453893

E-Mail: m.schnellhardt@t-online.de - <http://www.arbeitssicherheitdortmund.de>

· **Eye protection:** Safety glasses

· **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:

Colourless

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

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· Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Not applicable, as aerosol.
· Flash point:	-97 °C Basis: propellant
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	Not determined - aerosol.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1.5 Vol %
Upper:	16.0 Vol %
· Vapour pressure at 20 °C:	8300 hPa Basis: propellant
· Density at 20 °C:	0.774 g/cm ³ 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:	100.0 %
VOC (EU)	100 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **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.
Possible formation of peroxide.
- **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.

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SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

79-20-9 Methylacetat		
Oral	LD50	3705 mg/kg (rbt)
78-93-3 butanone		
Oral	LD50	3300 mg/kg (rat)
Dermal	LD50	5000 mg/kg (rbt)
106-97-8 butane		
Inhalative	LC50/4 h	658 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** Easily biodegradable
- **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.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number	UN1950
· ADR, IMDG, IATA	
· 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	Warning: Gases.
· Danger code (Kemler):	-
· EMS Number:	F-D,S-U
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0
	Not permitted as Excepted Quantity
· Transport category	2
· Tunnel restriction code	D

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· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	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.
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **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

- **Relevant phrases**
The wording of the listed risk phrases are those of the individual raw materials.
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H336 May cause drowsiness or dizziness.
- **Recommended restriction of use**
Existing national and local laws concerning chemicals are to be considered.
- **Department issuing SDS:**
MR Chemie GmbH, Abtlg. Sicherheitsdatenblätter, Tel.: +49/(0)2303/95151-38
- **Contact:**
MR Chemie GmbH, Dep. safety data sheets, Tel.: +49/(0)2303/95151-38, QS@mr-chemie.de
- **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)
ICAO: International Civil Aviation Organisation
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)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas (Comp.): Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· *** Data compared to the previous version altered.**

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