

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MD-SPRAY Kälte

Revision date: 23.11.2018

Product code: MSP.KAE.Y400

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

MD-Spray Kälte

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Cleaning agent.

Uses advised against

none

1.3. Details of the supplier of the safety data sheet

Company name:	Marston-Domsel GmbH	
Street:	Bergheimer Str. 15	
Place:	D-53909 Zülpich	
Telephone:	+49(0)2252/9415-0	Telefax: +49(0)2252/1744
e-mail:	info@marston-domsel.de	
Contact person:	Herr Martin Esser	
e-mail:	info@marston-domsel.de	
Internet:	www.marston-domsel.de	
Responsible Department:	Safety Data Sheets/Data Management	

1.4. Emergency telephone number:

Poison Center München, phone: +49 (0) 8919240 (24-hour emergency call).

Further Information

Restricted to professional users. Safety data sheet available for professional user on request. Notice the directions for use on the label. To avoid risks to man and the environment, comply with the instructions for use.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Aerosol: Aerosol 1

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

2.2. Label elements**Regulation (EC) No. 1272/2008****Signal word:** Danger**Pictograms:****Hazard statements**

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

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.

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

Additional advice on labelling

Classification according to Regulation (EC) No 1272/2008 [CLP]

2.3. Other hazards

Wear suitable protective clothing, gloves and eye/face protection.

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
75-28-5	isobutane (containing = 0,1 % butadiene)			75 - < 100 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Compressed gas; H220 H280			
74-98-6	propane			5 - < 15 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Compressed gas; H220 H280			
106-97-8	butane (< 0,1 % butadiene)			1 - < 5 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Compressed gas; H220 H280			

Full text of H and EUH statements: see section 16.

Labelling for contents according to Regulation (EC) No 648/2004

>= 30 % aliphatic hydrocarbons.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! In all cases of doubt, or when symptoms persist, seek medical advice. Remove persons to safety. Keep away from unprotected people. Keep upwind. Ventilate affected area.

After inhalation

Remove casualty to fresh air and keep warm and at rest.

Transport affected person in lying position, in case of shortness of breath in half-sitting position.

After contact with skin

In case of frostbite, wash with plenty of water; do not remove clothing.

Seek medical attention if problems persist.

After contact with eyes

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Caution if victim vomits: Risk of aspiration! Medical treatment necessary. In case of spontaneous vomiting, keep the head below the waist to prevent aspiration of the product.

4.2. Most important symptoms and effects, both acute and delayed

The following symptoms may occur: difficulties of breathing. Headache. Drowsiness. Dizziness. Coughing.

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Nausea, vomiting.

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3. Indication of any immediate medical attention and special treatment needed

Caution if victim vomits: Risk of aspiration! In all cases of doubt, or when symptoms persist, seek medical advice. Subsequent observance for pneumonia and lung oedema. Because of aspiration gastric lavage only under endotracheal intubation.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**Carbon dioxide (CO₂). Dry extinguishing powder. Foam.**Unsuitable extinguishing media**

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire and/or explosion do not breathe fumes.

In case of fire may be liberated: carbon monoxide (CO). Carbon dioxide (CO₂).**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Wear personal protection equipment. Keep away from unprotected people. Keep upwind. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal. Ventilate affected area. Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction.

6.4. Reference to other sections

Treat the recovered material as prescribed in the section on waste disposal. Disposal: see section 13.

Safe handling: see section 7. Personal protection equipment: see section 8.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Use only in well-ventilated areas. Keep away from sources of ignition - No smoking. Flammable vapours can accumulate in head space of closed systems. Avoid contact with skin and eyes. Do not breathe gas/vapour/aerosol.

Advice on protection against fire and explosion

Take precautionary measures against static discharges. Vapours may form explosive mixtures with air. Remove all sources of ignition. Pressurized container: protect from sunlight and do not expose to temperatures

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exceeding 50 °C. Do not pierce or burn, even after use. Heating causes rise in pressure with risk of bursting.

Further information on handling

Heating causes rise in pressure with risk of bursting.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

The official regulations for the storage of compressed gas packages must be observed.

Hints on joint storage

Do not store together with: Food and feedingstuffs, Water.

Further information on storage conditions

Protect against: heat. UV-radiation/sunlight. frost. moisture.

7.3. Specific end use(s)

After use replace the closing cap immediately. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations. Have eye showers and safety shower ready. Provide earthing of containers, equipment, pumps and ventilation facilities.

Protective and hygiene measures

Work in well-ventilated zones or use proper respiratory protection. Do not eat, drink, smoke or sneeze at the workplace.

Wash hands before breaks and after work. Restore grease film of the skin after cleansing by using a fat cream to prevent dermatitis.

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes.

Eye/face protection

Tightly sealed safety glasses. DIN EN 166

Hand protection

Protect skin by using skin protective cream. Hand protection: cold resistant. DIN EN 374

Skin protection

Body protection: not required.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Suitable respiratory protective equipment: Self-contained respirator (breathing apparatus) (DIN EN 133).

Environmental exposure controls

Discharge into the environment must be avoided. Do not allow uncontrolled discharge of product into the environment.

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SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Aerosol
Colour:	colourless
Odour:	like: Aerosol propellant.
pH-Value:	Not applicable, aerosol

Changes in the physical state

Melting point:	Not applicable, aerosol
Initial boiling point and boiling range:	Not applicable, aerosol
Flash point:	< 0 °C

Flammability

Solid:	not determined
Gas:	not determined

Explosive properties

not Explosive.
In use, may form flammable/explosive vapour-air mixture.

Lower explosion limits:	Propellant: 1,5 vol. %
Upper explosion limits:	Propellant: 9,5 vol. %
Ignition temperature:	not determined

Auto-ignition temperature

Solid:	not determined
Gas:	not determined

Decomposition temperature:	not determined
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Oxidizing properties

not determined

Vapour pressure:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	0,553 g/cm ³
Water solubility:	Immiscible

Solubility in other solvents

not determined

Partition coefficient:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Vapour density:	not determined
Evaporation rate:	not determined
Solvent content:	No data available

9.2. Other information

Odour threshold: not determined

Technical specifications Aerosol: Internal pressure (20 ° C) = 0,40 MPa; Internal pressure (50 ° C) = 0,80 MPa
aerosol container: nominal volume = 500 ml; void = 650 ml; Test pressure = 1,5 MPa**SECTION 10: Stability and reactivity**

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10.1. Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactionsExplosive when mixed with oxidizing substances.
Vapours may form explosive mixtures with air.**10.4. Conditions to avoid**

Protect against direct sunlight. Do not store at temperatures over: 50 °C. Heating causes rise in pressure with risk of bursting. Ignition hazard. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materialsMaterial, oxygen-rich, oxidizing
Keep away from sources of ignition - No smoking.**10.6. Hazardous decomposition products**Thermal decomposition can lead to the escape of irritating gases and vapors.
In case of fire may be liberated: carbon monoxide (CO). Carbon dioxide (CO₂).**Further information**

In case of exceeding the storage temperature: >50°C Danger of bursting container.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicocinetics, metabolism and distribution**Vapours may cause drowsiness and dizziness. (10000 ppm für 10 Min.)
High concentrations lead to unconsciousness.
Refrigerated liquefied gas. Contact with the product can cause cold burns or frostbite.**Acute toxicity**Based on available data, the classification criteria are not met.
Not excessively toxic in excess of oxygen.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
74-98-6	propane				
	inhalation (4 h) aerosol	LC50 20 mg/l	Rat		
106-97-8	butane (< 0,1 % butadiene)				
	inhalation (4 h) gas	LC50 658 ppm	Rat	GESTIS	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

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.

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SECTION 12: Ecological information**12.1. Toxicity**

Leakage into the environment must be prevented.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
75-28-5	isobutane (containing = 0,1 % butadiene)	2,8
74-98-6	propane	2,36
106-97-8	butane (< 0,1 % butadiene)	2,89

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available

Further information

Doesn't get into the sewage water as long as the process is carried out according to regulations. Do not allow uncontrolled leakage of product into the environment. non-hazardous to water (nwg)

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Consult the appropriate authorities about waste disposal. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Waste disposal number of used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Consult the appropriate authorities about waste disposal. Dispose of waste according to applicable legislation.

SECTION 14: Transport information**Land transport (ADR/RID)**

- 14.1. UN number:** UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2

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14.4. Packing group:

-

Hazard label:

2.1



Classification code:

5F

Special Provisions:

190 327 344 625

Limited quantity:

1 L

Excepted quantity:

E0

Transport category:

2

Tunnel restriction code:

D

Inland waterways transport (ADN)
14.1. UN number:

UN 1950

14.2. UN proper shipping name:

AEROSOLS

14.3. Transport hazard class(es):

2

14.4. Packing group:

-

Hazard label:

2.1



Classification code:

5F

Special Provisions:

190 327 344 625

Limited quantity:

1 L

Excepted quantity:

E0

Marine transport (IMDG)
14.1. UN number:

UN 1950

14.2. UN proper shipping name:

AEROSOLS

14.3. Transport hazard class(es):

2.1

14.4. Packing group:

-

Hazard label:

2.1



Marine pollutant:

Nein

Special Provisions:

63, 190, 277, 327, 344, 381,959

Limited quantity:

1000 mL

Excepted quantity:

E0

EmS:

F-D, S-U

Air transport (ICAO-TI/IATA-DGR)
14.1. UN number:

UN 1950

14.2. UN proper shipping name:

AEROSOLS, flammable

14.3. Transport hazard class(es):

2.1

14.4. Packing group:

-

Hazard label:

2.1



Special Provisions:

A145 A167 A802

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Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

Other applicable information

Transport as "limited quantity" according to chapter 3.4 ADR/RID.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28: isobutane (containing = 0,1 % butadiene); butane (< 0,1 % butadiene)

2004/42/EC (VOC): 100 % (560 g/l)

Information according to 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): - - not water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

isobutane (containing = 0,1 % butadiene)

propane

butane (< 0,1 % butadiene)

SECTION 16: Other information

Abbreviations and acronyms

 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for

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adhering to existing laws and regulations.

Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1	Aerosol propellant., Industrial spraying, Non industrial spraying	-	3, 22	35	7, 11	-	-	-	Aerosol

LCS: Life cycle stages

SU: Sectors of use

PC: Product categories

PROC: Process categories

ERC: Environmental release categories

AC: Article categories

TF: Technical functions

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)