

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**JMC Cold spray 400 ml**

Revision date: 27.08.2019

Product code: 5570270

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

JMC Cold spray 400 ml

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

No information available.

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Company name: Johannes J. Matthies GmbH & Co. KG  
Street: Hammerbrookstr. 97  
Place: D-20097 Hamburg  
Telephone: + 49 (0) 40 2 37 21-0  
e-mail: info@matthies.de  
Internet: www.matthies.de

**Supplier**

Company name: Larsson UK Ltd.  
Street: 7 Alpha Court, Phoenix Parkway  
Place: GB-NN17 5DP Corby  
Telephone: + 44 1536 265633  
e-mail: info@larsson.uk.com  
Internet: www.larsson.uk.com

**1.4. Emergency telephone number:**

+ 44 1536 265633

**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**

P102 Keep out of reach of children.  
P101 If medical advice is needed, have product container or label at hand.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe @ES04.B002074.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of waste according to applicable legislation.

### 2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.  
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

## 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			50 - <= 100 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Liquefied gas; H220 H280			
74-98-6	propane			10 - < 20 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Liquefied gas; H220 H280			
106-97-8	butane			3 - < 5 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			
124-38-9	Carbon Dioxide			1 - < 3 %
	204-696-9			
	Compressed gas; H280			

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

#### After inhalation

Remove person to fresh air and keep comfortable for breathing. When in doubt or if symptoms are observed, get medical advice.

#### After contact with skin

Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. When in doubt or if symptoms are observed, get medical advice.

#### After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache

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Nausea  
Dizziness  
fatigue  
Skin irritation.

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Water mist. Foam. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder.

**Unsuitable extinguishing media**

Full water jet

**5.2. Special hazards arising from the substance or mixture**

Gases of varying toxicity can be created through incomplete combustion and thermolysis. In the case of hydrocarbonic products (e.g. CO, CO<sub>2</sub>, aldehydes and soot). These can be extremely hazardous if inhaled in high concentrations or enclosed spaces.

**5.3. Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Danger of bursting container.

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

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Use personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

**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). Clean contaminated articles and floor according to the environmental legislation.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

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

Observe instructions for use. Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

When using do not eat, drink, smoke, sniff.

Personal protection equipment: see section 8

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

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

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### Further information on handling

Avoid contact with skin. Avoid contact with eyes.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed. Observe statutory rules and regulations.

#### Hints on joint storage

Do not store together with: Oxidizing agent0 Pyrophoric or self-heating substances0 Food and feedingstuffs

#### Further information on storage conditions

Protect against: Frost. Protect against direct sunlight. Store in a cool dry place. Observe statutory rules and regulations.

### 7.3. Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL
124-38-9	Carbon dioxide	5000	9150		TWA (8 h)	WEL
		15000	27400		STEL (15 min)	WEL

#### Additional advice on limit values

- a no restriction
- b End of exposure or shift
- c in long-term exposure: after several shifts
- d prior to next shift

Y: A risk of reproductive effects needs not to be feared if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

Z: A risk of reproductive effects cannot to be excluded if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

U: Urea

B: blood

### 8.2. Exposure controls

#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Protective and hygiene measures

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

#### Eye/face protection

Suitable eye protection: Wear safety glasses.

DIN EN 166

#### Hand protection

Apply skin protection cream for preventive skin protection.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber).

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Breakthrough time (maximum wearing time): 480 min

Thickness of the glove material: 0,45 mm

DIN EN 374

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Respiratory protection necessary at: exceeding exposure limit values

Suitable respiratory protection apparatus: gas filtering equipment (EN 141).

Filtering device with filter or ventilator filtering device of type: AX

Observe the wear time limits as specified by the manufacturer.

Observe statutory rules and regulations.

**Environmental exposure controls**

Observe statutory rules and regulations.

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

Physical state:	Aerosol
Colour:	colourless
Odour:	characteristic

**Test method**

pH-Value (at 20 °C):

DIN 19268

**Changes in the physical state**

Melting point: not determined

Initial boiling point and boiling range: -40 °C

Flash point: -80 °C

**Flammability**

Solid: not applicable

Gas: not applicable

Lower explosion limits: 1 vol. %

Upper explosion limits: 11 vol. %

**Auto-ignition temperature**

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidising.

Vapour pressure: not determined

Density (at 20 °C): DIN 51757

Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

**Solubility in other solvents**

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

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**9.2. Other information**

Solid content: not determined

Data apply to the technically active substance.:Relative density, Colour, Odour, Viscosity, pH

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Flammable. Ignition hazard.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

**10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

**10.5. Incompatible materials**

Oxidizing agent. Pyrophoric or self-heating substances

**10.6. Hazardous decomposition products**Gases of varying toxicity can be created through incomplete combustion and thermolysis. In the case of hydrocarbonic products (e.g. CO, CO<sub>2</sub>, aldehydes and soot). These can be extremely hazardous if inhaled in high concentrations or enclosed spaces.**Further information**

Do not mix with other chemicals.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No information available.

**Acute toxicity**

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

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
75-28-5	isobutane					
	inhalation vapour	LC50	1237 mg/l	Mouse		
106-97-8	butane					
	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.

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**Aspiration hazard**

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

**Specific effects in experiment on an animal**

No information available.

**Additional information on tests**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

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

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
75-28-5	isobutane					
	Acute fish toxicity	LC50 mg/l	91,42	96 h	Piscis	US EPA
	Acute algae toxicity	ErC50 mg/l	19,37	96 h	Algae	US EPA OPPT
	Acute crustacea toxicity	EC50 mg/l	69,43	48 h	Daphnia sp.	US EPA OPPT
74-98-6	propane					
	Acute fish toxicity	LC50 mg/l	49,9	96 h	Piscis	US EPA
	Acute algae toxicity	ErC50 mg/l	19,37	96 h	Algae	US EPA OPPT
	Acute crustacea toxicity	EC50 mg/l	69,43	48 h	Daphnia sp.	US EPA OPPT
106-97-8	butane					
	Acute fish toxicity	LC50 mg/l	49,9	96 h	Piscis	US EPA
	Acute algae toxicity	ErC50 mg/l	19,37	96 h	Algae	US EPA OPPT
	Acute crustacea toxicity	EC50 mg/l	69,43	48 h	Daphnia Spec.	US EPA OPPT

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
75-28-5	isobutane	1,09
74-98-6	propane	1,09
106-97-8	butane	1,09

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

The product has not been tested.

**12.6. Other adverse effects**

No information available.

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### Further information

No special environmental measures are necessary.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Advice on disposal

Do not allow to enter into surface water or drains. 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

## SECTION 14: Transport information

### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN 1950
<b>14.2. UN proper shipping name:</b>	AEROSOLS
<b>14.3. Transport hazard class(es):</b>	2
<b>14.4. Packing group:</b>	-
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)

<b>14.1. UN number:</b>	UN 1950
<b>14.2. UN proper shipping name:</b>	AEROSOLS
<b>14.3. Transport hazard class(es):</b>	2
<b>14.4. Packing group:</b>	-
Hazard label:	2.1



Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L

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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  
**14.4. Packing group:** -  
 Hazard label: 2, see SP63

Special Provisions: 63, 190, 277, 327, 344, 959  
 Limited quantity: See SP277  
 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  
 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: Flammable gases.

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

not applicable

## SECTION 15: Regulatory information

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

#### EU regulatory information

2010/75/EU (VOC): VOC-CH, VOC 1999/13/EG: 97,8166 % w/w

#### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)  
 Aerosol directive (75/324/EEC).

#### National regulatory information

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

Water contaminating class (D): 1 - slightly water contaminating

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****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 Harmonized 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

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**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 above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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