

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 1 of 11

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

ALU Aluminiumspray

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

Spray for repair, covering, protection

Uses advised against

Do not use for products which come into contact with the food stuffs.

1.3. Details of the supplier of the safety data sheet

Company name: E/D/E - Einkaufsbüro Deutscher Eisenhändler GmbH
 Street: EDE-Platz 1
 Place: D-42389 Wuppertal
 Telephone: (0)202 6096-0
 Internet: www.ede.de

1.4. Emergency telephone

(0)202 6096-0

number:

Contact times of emergency phone number: 8:00 - 17:00

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: F+ - Extremely flammable, Xi - Irritant

R phrases:

Extremely flammable.

Irritating to eyes.

Vapours may cause drowsiness and dizziness.

2.2. Label elements

Danger symbols:

F+ - Extremely flammable; Xi - Irritant



F+ - Extremely flammable

Xi - Irritant

R phrases

12 Extremely flammable.
 36 Irritating to eyes.
 67 Vapours may cause drowsiness and dizziness.

S phrases

02 Keep out of the reach of children.
 03 Keep in a cool place.
 09 Keep container in a well-ventilated place.
 16 Keep away from sources of ignition - No smoking.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 43 In case of fire, use Sand, Extinguishing powder, alcohol resistant foam . Never use water.
 46 If swallowed, seek medical advice immediately and show this container or label.
 51 Use only in well-ventilated areas.
 29/35 Do not empty into drains; dispose of this material and its container in a safe way.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 2 of 11

Special labelling of certain mixtures

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. Keep out of the reach of children.
Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
200-827-9	propane	20-25 %
74-98-6	F+ - Extremely flammable R12	
601-003-00-5	Flam. Gas 1; H220	
203-448-7	butane	20-25 %
106-97-8	F+ - Extremely flammable R12	
601-004-00-0	Flam. Gas 1; H220	
205-500-4	ethyl acetate	10-15 %
141-78-6	F - Highly flammable, Xi - Irritant R11-36-66-67	
607-022-00-5	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066	
215-535-7	xylene	10-15 %
1330-20-7	Xn - Harmful, Xi - Irritant R10-20/21-38	
601-022-00-9	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2; H226 H312 H332 H315	
231-072-3	aluminium powder (stabilised)	1-5 %
7429-90-5	F - Highly flammable R11-15	
013-002-00-1	Water-react. 2, Flam. Sol. 1; H261 H228	
201-148-0	2-methylpropan-1-ol; iso-butanol	1-5 %
78-83-1	Xi - Irritant R10-37/38-41-67	
603-108-00-1	Flam. Liq. 3, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H226 H335 H315 H318 H336	
204-550-4	Triethylorthoformiat	1-5 %
122-51-0	Xi - Irritant R10-36/38	
	Skin Irrit. 2, Eye Irrit. 2; H315 H319	
202-849-4	ethylbenzene	1-5 %
100-41-4	F - Highly flammable, Xn - Harmful R11-20	
601-023-00-4	Flam. Liq. 2, Acute Tox. 4; H225 H332	

Full text of R-, H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 3 of 11

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). No administration in cases of unconsciousness or cramps.

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Put victim at rest, cover with a blanket and keep warm. If victim is at risk of losing consciousness, position and transport on their side.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. After contact with skin, wash immediately with plenty of water and soap.

Take off immediately all contaminated clothing, including underwear and shoes. Wash thoroughly the body (shower or bath).

In case of skin irritation, seek medical treatment.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Medical treatment necessary.

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

Vapours may cause drowsiness and dizziness. Frequently or prolonged contact with skin may cause dermal irritation.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder. Water mist, Sand, Dry extinguishing powder.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours can form explosive mixtures with air.

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

In case of fire may be liberated: Nitrogen oxides (NO_x). Carbon monoxide.

5.3. Advice for firefighters

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

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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.

Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 4 of 11

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion.

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).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13 See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not pierce or burn, even after use. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Use only in well-ventilated areas. If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

Advice on protection against fire and explosion

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharge. Vapours can form explosive mixtures with air. Only use the material in places where open light, fire and other flammable sources can be kept away. Vapours may form explosive mixtures with air.

Further information on handling

Do not spray on naked flames or any incandescent material.

Protect against: heat. 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. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect against: heat.

Advice on storage compatibility

Do not store together with: Material, oxygen-rich, oxidizing. Pyrophoric or self-heating substances.

Material, rich in oxygen, oxidizing.

Materials to avoid: Oxidizing agents. acid. Base. paper.

7.3. Specific end use(s)

Spray for repair, covering, protection

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 5 of 11

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
78-83-1	2-Methylpropan-1-ol	50	154		TWA (8 h)	WEL
		75	231		STEL (15 min)	WEL
7429-90-5	Aluminium metal, respirable dust	-	4		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL
141-78-6	Ethyl acetate	200	-		TWA (8 h)	WEL
		400	-		STEL (15 min)	WEL
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		STEL (15 min)	WEL
1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid	650 mmol/mol	urine	Post shift

8.2. Exposure controls**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid contact with skin, eyes and clothes. Thorough skin-cleansing after handling the product. After work, wash hands and face. Do not eat, drink, smoke or sneeze at the workplace.

Eye/face protection

Suitable eye protection: goggles.

Hand 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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Tested protective gloves are to be worn: Suitable material: NBR (Nitrile rubber). Butyl rubber. Thickness of glove material: >0,4mm. penetration time (maximum wearing period): >480min

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 6 of 11

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Suitable respiratory protective equipment: Filtering device (full mask or mouthpiece) with filter:

Environmental exposure controls

No data available

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

Physical state: Aerosol
 Colour: silver
 Odour: of solvent

Test method

pH-Value: not relevant

Changes in the physical state

Melting point: not relevant

Initial boiling point and boiling range: 4 °C

Flash point: -38 °C DIN EN ISO 1523

Flammability

Solid: not applicable

Gas: not applicable

Lower explosion limits: 1,7 vol. %

Upper explosion limits: 10,9 vol. %

Ignition temperature: 273 °C DIN 51794

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapour pressure: 3,2 hPa DIN EN 12

Density: 0,75 g/cm³

Water solubility: insoluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Flow time: 34s 3 DIN 53211

Vapour density: not determined

Evaporation rate: not determined

Solvent content: 74,1 %
677,27 g/l**9.2. Other information**

Solid content: not determined

SECTION 10: Stability and reactivity

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 7 of 11

10.1. Reactivity

Flammable, Ignition hazard. Material is stable under normal conditions.

10.2. Chemical stability

Material does not decompose at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reactions with: Oxidizing agents. Acid. Alkalis (alkalis).

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.
Protect from direct sunlight.
Heating causes rise in pressure with risk of bursting.

10.5. Incompatible materials

Exothermic reactions with: Oxidizing agents. Acid. Alkalis (alkalis).

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapors.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Preparation not tested. The statement is derived from the properties of the single components.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
106-97-8	butane				
	inhalative (4 h) gas	LC50	658 ppm	Rat	GESTIS
1330-20-7	xylene				
	dermal	ATE	1100 mg/kg		
	inhalative vapour	ATE	11 mg/l		
	inhalative aerosol	ATE	1,5 mg/l		
78-83-1	2-methylpropan-1-ol; iso-butanol				
	oral	LD50	> 2830 mg/kg	Rat	
	dermal	LD50	> 2000 mg/kg	Rat	
	inhalative (4 h) vapour	LC50	> 24 mg/l	Rat	
100-41-4	ethylbenzene				
	oral	LD50	3500 mg/kg	Rat	GESTIS
	dermal	LD50	15400 mg/kg	Rabbit	GESTIS
	inhalative (4 h) vapour	LC50	17,2 mg/l	Rat	
	inhalative aerosol	ATE	1,5 mg/l		

Severe effects after repeated or prolonged exposure

Can cause frostbite. Has degreasing effect on the skin.

Carcinogenic/mutagenic/toxic effects for reproduction

No data available

Specific effects in experiment on an animal

Toxicological data are not available.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 8 of 11

Additional information on tests

This mixture is classified as hazardous according to 1999/45/EC.

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

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
78-83-1	2-methylpropan-1-ol; iso-butanol					
	Acute fish toxicity	LC50	1430 mg/l	96 h	Pimephales promelas	
	Acute algae toxicity	ErC50	1250 mg/l		Desmodesmus subspicatus	
	Acute crustacea toxicity	EC50	1439 mg/l	48 h	Daphnia magna	
100-41-4	ethylbenzene					
	Acute algae toxicity	ErC50	3,6 mg/l	96 h		GESTIS

12.2. Persistence and degradability

The product has not been tested. No data available

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
74-98-6	propane	2,36
106-97-8	butane	2,89
78-83-1	2-methylpropan-1-ol; iso-butanol	0,79
100-41-4	ethylbenzene	3,15

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 information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

Waste disposal number of waste from residues/unused products160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing dangerous substances
Classified as 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 dangerous substances
Classified as hazardous waste.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 9 of 11

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances
Classified as hazardous waste.

Contaminated packaging

Handle contaminated packaging in the same way as the substance itself.

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
 Hazard label: 2.1



Classification code: 5F
 Limited quantity: LQ2

Other applicable information (land transport)

Special provisions: 190 - 327 - 625
 E0
 : 2
 : B1D

Inland waterways transport (ADN)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
 Hazard label: 2.1



Classification code: 5F
 Limited quantity: LQ2

Other applicable information (inland waterways transport)

Special provisions: 190 327 625

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

Marine pollutant: •

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 10 of 11

Limited quantity: See SP277
 EmS: F-D, S-U

Other applicable information (marine transport)

Special provisions: 63, 190, 277, 327, 959

Air transport (ICAO)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
 Hazard label: 2.1



Limited quantity Passenger: -
 IATA-packing instructions - Passenger: forbidden
 IATA-max. quantity - Passenger: forbidden
 IATA-packing instructions - Cargo: 203
 IATA-max. quantity - Cargo: 150 kg

Other applicable information (air transport)

Special provisions: A1

14.6. Special precautions for user

Warning: Flammable gases.

14.7. Transport in bulk according to Annex II of MARPOL73/78 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**

2004/42/EC (VOC): 78,6% (589,6 g/l)

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 3 - highly water contaminating

Additional information

BGR 190 Regeln für den Einsatz von Atemschutzgeräten
 BGR 192 Regeln für den Einsatz von Augen- und Gesichtsschutz
 BGR 195 REgeln für den Einsatz von Schutzhandschuhen

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

Revision date: 2009-04-14 completely revised
 Revision date: 2011-06-16 completely revised
 Revision date: 2014-02-04 completely revised
 Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ALU Aluminiumspray

Print date: 25.01.2015

Product code: 0409

Page 11 of 11

(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%

Relevant R-phrases (Number and full text)

- | | |
|-------|---|
| 10 | Flammable. |
| 11 | Highly flammable. |
| 12 | Extremely flammable. |
| 15 | Contact with water liberates extremely flammable gases. |
| 20 | Harmful by inhalation. |
| 20/21 | Harmful by inhalation and in contact with skin. |
| 36 | Irritating to eyes. |
| 36/38 | Irritating to eyes and skin. |
| 37/38 | Irritating to respiratory system and skin. |
| 38 | Irritating to skin. |
| 41 | Risk of serious damage to eyes. |
| 66 | Repeated exposure may cause skin dryness or cracking. |
| 67 | Vapours may cause drowsiness and dizziness. |

Relevant H- and EUH-phrases (Number and full text)

- | | |
|--------|---|
| H220 | Extremely flammable gas. |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H228 | Flammable solid. |
| H261 | In contact with water releases flammable gases. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

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.)