Material Safety Data Sheet

In accordance with Article 31 and Appendix II of Ordinance (EC) no. 1907/2006 (REACH) in the version of Ordinance (EC) no. 453/2010, and in accordance with Ordinance (EC) no. 1272/2008 (CLP)

Union Spray GmbH

Trade name: Aero Design Bronzen 150 ml

Published:	01.05.2005	Next test on:	23.05.2017
Date of printing:	23.05.2016	Updated on:	23.05.2016 08:26:49
			Version: 1.5

1.0 Identification of the substance or mixture and of the company

1.1 Product identification

Product description: Aero Design Bronzen 150 ml

Product number: 58 78

Product Category: PC9a

1.2 Relevant identified uses of the substance or mixture and use restrictions

Identified uses: Coatings and paints, thinners, paint removers

Restrictions on use: No restrictions.

1.3 Details of the manufacturer and contact details

Manufacturer: Union Spray GmbH

Mailing address: 13407 Berlin, Montanstraße 23

Phone: +49 (0) 30 40 999 30

Fax: +49 (0) 30 40 999 329

E-Mail: Karnotzki@unionspray.de

Homepage: http://www.unionspray.de

1.4 Information in case of emergency

Emergency information during business hours: MEZ 8:00 h - 15:30 h

Phone: +49 (0) 30 40 999 30

2.0 Possible hazards

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) no. 1272/2008 (CLP)

Flam. Aerosol 1 H222 H229 H410

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) no. 1272/2008 (CLP)

Contains: Propane Butane Ethanol Copper

Hazard Statements: DANGER

H222 Extremely flammable aerosol.

H229 Pressurized container: May burst if heated.

H410 Very toxic to aquatic life with long lasting effects.

Precautions:

P102 Keep out of reach of children.

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.

P410+P412 Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.

P501 Dispose of this material and container to hazardous or special waste collection point.

2.3 Other hazards

Additional hazards for human and environment:

Product labeled due to the calculation method and Regulation (EC) No. 1272/2008 on classification, packaging and labeling of dangerous substances and preparations. The classification according to the latest lists of substances in Annex VI to Regulation (EC) no. 1272/2008, by information from technical literature and company information (CLP Regulation).

Physical and/or chemical properties of the mixture:

If handled properly no physicochemical interactions are known.

Symptomatic effect of the mixture:

No known symptomatic effects.

Environmental hazards caused by the mixture:

All environmentally hazardous properties are described in Section 12.0.

3.0 Composition and information on ingredients

3.1 Substances

The product is not a substance according to Regulation (EC) no. 1907/2006.

3.2 Mixtures

The product is a mixture within the meaning of Regulation (EC) no. 1907/2006.

3.2.1 Chemical characterization

Aerosol infiammabile.

3.2.2 Ingredients

Chemical Name: Propane

Classification of substance: Extremely flammable gas.

Index number: 601-003-00-5

Registration number (REACH): No data available.

CAS No .: 74-98-6

EC-No .: 200-827-9

Hazard Code: H220 H280

Concentration: 13 % - 18 %

Chemical Name: Butane

Classification of substance: Extremely flammable gas.

Index number: 601-004-00-0

Registration number (REACH): No data available.

CAS No .: 106-97-8

EC-No .: 203-448-7

Hazard Code: H220 H280

Concentration: 47 % - 52 %

Chemical Name: Ethanol

Classification of substance: Highly flammable liquid and vapour.

Index number: 603-002-00-5

Registration number (REACH): 01-2119457610-43-xxxx

CAS No .: 64-17-5

EC-No .: 200-578-6

Hazard Code: H225

Concentration: 16 % - 21 %

Chemical Name: Copper

Classification of substance:

Index number: No data available.

Registration number (REACH): No data available.

CAS No .: 7440-50-8

EC-No .: 231-159-6

Hazard Code: H400 H410

Concentration: 0 % - 5 %

4.0 Description of first aid measures

4.1.1 General information

Saviour needs to protect himself.

Remove the victim from the contaminated area.

Remove contaminated clothing immediately.

4.1.2 After inhaling

Bring injured person using self-protection from the hazard area to fresh air and protect against hypothermia. If breathing is difficult, the patient must inhale oxygen. If unconscious but breathing, put in a stable position. If not breathing, give mouth-to-nose resuscitation and if not practicable, mouth-to-mouth resuscitation. Keep respiratory tract clear. Provide medical treatment.

4.1.3 After skin contact

Remove wetted clothing while protecting yourself. Wash affected skin areas immediately and thoroughly with running water and soap. Ensure medical treatment in cases of extensive wetting or irritation symptoms.

4.1.4 After eye contact

Immediately rinse eyes thoroughly for 15 minutes under running water with spread eyelids, while protecting the uninjured eye; remove contact lenses beforehand. Provide ophthalmological treatment.

4.1.5 After swallowing

Rinse the mouth and spit out. Keep the injured person calm and protect against hypothermia. Have the injured person drink 1 glass of water slowly in small gulps. Do not stimulate vomiting. With spontaneous vomiting, keep the head of the affected person low in the prone position, in order to prevent the penetration of liquid into the airways. Call a doctor to the accident place.

4.2 The most important acute and delayed appearing symptoms and effects

No acute and delayed symptoms and effects, known.

4.3 Indication of immediate medical attention and special treatment

Decontamination, symptomatic treatment.

5.0 Fire-fighting measures

5.1 Extinguishing agents

Fight large fires with alcohol-resistant foam (AFFF-AR), fine water spray, and fight small fires with powder (ABC) or CO2. After extinguishing, keep the fire source under observation.

5.1.2 Unsuitable extinguishing agent for safety reasons

Full jet water.

5.2 Special hazards arising from the substances or mixture

In case of fire, the origin of flammable, harmful and irritating fumes or vapors is possible. Flash back possible over a large distance. Degradation products resulting from the combustion: carbon monoxide CO, carbon dioxide CO2. Under certain fire conditions, traces of other toxic products cannot be excluded.

5.3 Notes for Fire-fighting

Special protective equipment: For smaller fires should a respirator (full face mask) with Multi range combined filter. Explosion and fire do not breathe fumes. Wear massive release of harmful substances contained breathing apparatus and protective suit. Containers in cool with water spray. Container if possible, removed from the danger zone. Remove sources of ignition. Beware of backfiring. Do not allow into drains extinguishing water.

Pressure increase, bursting and explosion on heating (UN 1950).

6.0 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from sources of heat and sources of ignition. Eliminate all sources of ignition. Avoid contact with skin and eyes and do not breathe gas / fumes / vapor / spray. Clear the hazardous area and warn the affected area. Wear respiratory, eye, hand and body protection (see Chapter 8 - Personal protective measures). Keep unprotected people away. Provide satisfactory ventilation. Firefighting only through trained staff (fire safety exercise).

6.2 Environmental protection measures

Drinking water and environmental hazards: Prevent contamination of surface water, drains, ground. communicate When contamination of surface waters, drains or soil, the competent authorities.

6.3 Methods and materials for containment and cleaning

Absorb spilled liquids with universal binders, like e.g. diatomite, acid binder or universal binder, vermiculite, sand. Pump out larger amounts and collect in separate containers. Treat the absorbed material according to Section 13.

6.4 Reference to other sections

For more information in chapters 7.0, 8.2.1.2 and 13.0.

7.0 Handling and Storage

7.1 Protection measures for safe handling

7.1.1 Precautions for use

Pay attention to cleanliness in the workplace.

Avoid skin contact possible.

Use personal protective equipment.

Use only outdoors or in well-ventilated areas.

Provide good room ventilation even at ground level (vapors are heavier than air).

When using the product avoid near open flames and hot surfaces.

Observe the operating and safety instructions on the product.

7.1.2 Technical protection measures

Ensure compliance with the occupational exposure limits and other limits.

7.1.3 Further information on handling

No further information.

7.1.4 Notes on fire safety and explosion protection

Provide fire-fighting equipment.

Ignition group: T 2 (DIN EN 50 014); Fire class: B (fires involving liquids or melting materials.)

7.1.5 Technical specifications for storage

Aerosol dispensers not together storage with the storage classes: 3, 4.1A, 4.1B, 4.2, 4.3, 5.1A, 5.1B, 5.2, 6.2 and 7.0 (Germany: "Technical regulations for hazardous substances" 510, Table 2).

The "Technical rule for Hazardous Substances 510" you will find here http://www.baua.de/en/Topics-from-A-to-Z/Hazardous-Substances/TRGS/TRGS-510.html

Limit the amount of stock in public stores to a maximum of 20 Kg.

Fire extinguisher for fire classes A, B and C, to provide.

The storage in the following areas should be avoided: passageways, stairwells, Publicly accessible corridors, on roofs and in roof and workrooms.

7.2 Conditions for safe storage taking into account intolerances

7.2.1 Storage class "Technical Rule for Hazardous Substances 510"

Storage class (VCI): 3 (flammable liquids)

7.2.2 Technical measures and storage conditions

Store containers dry. Ventilate storerooms well.

7.2.3 Packaging materials

Store material only in original container.

7.2.4 Requirements for storerooms and containers

Storage only in the designated areas. In case of fire: containers must be freely accessible.

7.2.5 Advice on common storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

7.2.6 Other information about storage conditions

Protect against heat and direct sunlight.

7.3. Specific final applications

Painting of surfaces in various metallic shades.

8.0 Limiting and monitoring the exposure / personal protective equipment

8.1 Control parameters

8.1.1 Occupational Exposure Limits (OEL)

Chemical Name: Propane

Index number: 601-003-00-5

CAS No .: 74-98-6

EC-No .: 200-827-9

Time-weighted average concentration (8h): [1] 1800 mg/m³ [2] 1000 ml/m³ 4(II) Parameter: DFG

Chemical Name: Butane

Index number: 601-004-00-0

CAS No .: 106-97-8

EC-No .: 203-448-7

Time-weighted average concentration (8h): [1] 2400 mg/m³ [2] 1000 ml/m³ 4(II) Parameter: DFG

Chemical Name: Ethanol

Index number: 603-002-00-5

CAS No .: 64-17-5

EC-No .: 200-578-6

Time-weighted average concentration (8h): [1] 960 mg/m³ [2] 500 ml/m³ 2 Parameter: TRGS 900

Chemical Name: Copper

Index number: No data available.

CAS No .: 7440-50-8

EC-No .: 231-159-6

Time-weighted average concentration (8h): [1] 1 mg/m³ [2] Parameter: TRGS 900

Time-weighted average concentration (8h): [1] 1 mg/m³ [2] Parameter: TRGS 900

8.1.3 DNEL and PNEC values (REACH Appendix I Section 1.4)

Note: Values not reported could not be written due to lack of data

Chemical Name: Propane

Index number: 601-003-00-5

CAS No .: 74-98-6

EC-No .: 200-827-9

DNEL (derived no-effect level) Employees

Exposure Inhalation longterm (systemic effect) No data available.

Exposure Inhalation shortterm (systemic effect) No data available.

Exposure Inhalation longterm (lokal effect) No data available.

Exposure Inhalation shortterm (lokal effect) No data available.

Exposure Dermal longterm (systemic effect) No data available.

Exposure Dermal shortterm (systemic effect) No data available.

Exposure Dermal longterm (lokal effect) No data available.

Exposure Dermal shortterm (lokal effect) No data available.

DNEL (derived no-effect level) consumer

Exposure Inhalation longterm (systemic effect) No data available.

Exposure Inhalation shortterm (systemic effect) No data available.

Exposure Inhalation longterm (lokal effect) No data available.

Exposure Inhalation shortterm (lokal effect) No data available.

Exposure Dermal longterm (systemic effect) No data available.

Exposure Dermal shortterm (systemic effect) No data available.

Exposure Dermal longterm (lokal effect) No data available.

Exposure Dermal shortterm (lokal effect) No data available.

Exposure Oral longterm (systemic effect) No data available.

Exposure Oral shortterm (systemic effect) No data available.

PNEC (predicted no effect concentration) Environmental

Episodic water pollution. No data available.

Freshwater No data available.
Sediment freshwater No data available.
Marine water No data available.
Sediment marine water No data available.
Soil No data available.
Wastewater treatment plants No data available.

Chemical Name: Butane
Index number: 601-004-00-0
CAS No .: 106-97-8
EC-No .: 203-448-7

DNEL (derived no-effect level) Employees
Exposure Inhalation longterm (systemic effect) No data available.
Exposure Inhalation shortterm (systemic effect) No data available.
Exposure Inhalation longterm (lokal effect) No data available.
Exposure Inhalation shortterm (lokal effect) No data available.
Exposure Dermal longterm (systemic effect) No data available.
Exposure Dermal shortterm (systemic effect) No data available.
Exposure Dermal longterm (lokal effect) No data available.
Exposure Dermal shortterm (lokal effect) No data available.

DNEL (derived no-effect level) consumer
Exposure Inhalation longterm (systemic effect) No data available.
Exposure Inhalation shortterm (systemic effect) No data available.
Exposure Inhalation longterm (lokal effect) No data available.
Exposure Inhalation shortterm (lokal effect) No data available.
Exposure Dermal longterm (systemic effect) No data available.
Exposure Dermal shortterm (systemic effect) No data available.
Exposure Dermal longterm (lokal effect) No data available.
Exposure Dermal shortterm (lokal effect) No data available.
Exposure Oral longterm (systemic effect) No data available.
Exposure Oral shortterm (systemic effect) No data available.

PNEC (predicted no effect concentration) Environmental
Episodic water pollution. No data available.
Freshwater No data available.
Sediment freshwater No data available.
Marine water No data available.
Sediment marine water No data available.
Soil No data available.
Wastewater treatment plants No data available.

Chemical Name: Ethanol
Index number: 603-002-00-5
CAS No .: 64-17-5
EC-No .: 200-578-6

DNEL (derived no-effect level) Employees

Exposure Inhalation longterm (systemic effect) 950,00 mg/m³

Exposure Inhalation shortterm (systemic effect) No data available.

Exposure Inhalation longterm (lokal effect) No data available.

Exposure Inhalation shortterm (lokal effect) 1900,00 mg/m³

Exposure Dermal longterm (systemic effect) 343,00 mg/kg

Exposure Dermal shortterm (systemic effect) No data available.

Exposure Dermal longterm (lokal effect) No data available.

Exposure Dermal shortterm (lokal effect) No data available.

DNEL (derived no-effect level) consumer

Exposure Inhalation longterm (systemic effect) 114,00 mg/m³

Exposure Inhalation shortterm (systemic effect) No data available.

Exposure Inhalation longterm (lokal effect) No data available.

Exposure Inhalation shortterm (lokal effect) 950,00 mg/m³

Exposure Dermal longterm (systemic effect) 206,00 mg/kg

Exposure Dermal shortterm (systemic effect) No data available.

Exposure Dermal longterm (lokal effect) No data available.

Exposure Dermal shortterm (lokal effect) No data available.

Exposure Oral longterm (systemic effect) 87,00 mg/kg

Exposure Oral shortterm (systemic effect) No data available.

PNEC (predicted no effect concentration) Environmental

Episodic water pollution. 2,750 mg/l

Freshwater 0,960 mg/l

Sediment freshwater 3,600 mg/kg

Marine water 0,790 mg/l

Sediment marine water 2,900 mg/kg

Soil 0,630 mg/kg

Wastewater treatment plants 580,00 mg/l

Chemical Name: Copper

Index number: No data available.

CAS No .: 7440-50-8

EC-No .: 231-159-6

DNEL (derived no-effect level) Employees

Exposure Inhalation longterm (systemic effect) No data available.

Exposure Inhalation shortterm (systemic effect) No data available.

Exposure Inhalation longterm (lokal effect) No data available.

Exposure Inhalation shortterm (lokal effect) No data available.

Exposure Dermal longterm (systemic effect) No data available.

Exposure Dermal shortterm (systemic effect) No data available.

Exposure Dermal longterm (lokal effect) No data available.

Exposure Dermal shortterm (lokal effect) No data available.

DNEL (derived no-effect level) consumer

Exposure Inhalation longterm (systemic effect) No data available.

Exposure Inhalation shortterm (systemic effect) No data available.

Exposure Inhalation longterm (lokal effect) No data available.

Exposure Inhalation shortterm (lokal effect) No data available.

Exposure Dermal longterm (systemic effect) No data available.

Exposure Dermal shortterm (systemic effect) No data available.

Exposure Dermal longterm (lokal effect) No data available.

Exposure Dermal shortterm (lokal effect) No data available.

Exposure Oral longterm (systemic effect) No data available.

Exposure Oral shortterm (systemic effect) No data available.

PNEC (predicted no effect concentration) Environmental

Episodic water pollution. No data available.

Freshwater No data available.

Sediment freshwater No data available.

Marine water No data available.

Sediment marine water No data available.

Soil No data available.

Wastewater treatment plants No data available.

8.2 Limiting and monitoring the exposure

8.2.1 Limiting exposure in the workplace

8.2.1.1 Technical measures for the avoidance of exposure

Observe emission limits and if necessary provide waste air cleaning.

8.2.1.2 Personal protective equipment

Respiratory protection: In exceptional cases, e.g. the workplace limit value is exceeded, the wearing of respiratory protection is necessary, while observing the wearing time limitations. Self-contained breathing apparatus: Gas filter A, Identifying color: brown: (EN 136, EN 140, CEN 405). Details on application requirements and maximum application concentrations are found in "Rules for the use of self-contained breathing apparatus" (Germany:BGR 190).

Body protection: Depending on the danger, wear tight, sufficiently long aprons and boots, or a suitable protective suit.
Eye protection: wear a tight fitting protective goggles with side protection according to EN 166 when using.

Hand protection: When using protective gloves, resistance of the glove material against the substance being used is necessary. Before use, check leakage tightness. Pre-clean gloves before taking them off and afterwards keep well aired. Make sure to practice skin care. Fabric or leather gloves are absolutely unsuitable. Glove material in case of spray contact and full contact: Neoprene coating thickness: 0.6 mm (EN 388CAT2, EN374 CAT3, LFGB), Penetration time: > 480 min.
Increased temperatures and decrease of actual coating thickness through stretching can reduce breakthrough time considerably. In case of doubt, ask the manufacturer. In full contact with the material, the breakthrough time can be halved. Data are valid only for the ingredients used when the product is a mixture.

For professional use: Protective gloves must comply with the specifications of EC RL 89/686/EWG and DIN EN 374, like e.g.: in splash contact and full contact: Nitras 3460

Skin protection: Skin protection products do not offer effective protection like protective gloves, and so suitable protective gloves are preferred as far as possible. If protective gloves cannot be worn, apply water-insoluble skin protection preparations on clean skin before starting work and after each break and carefully rub in. Before breaks and at the end of working, cleaning the skin with water and soap is

necessary. Use greasy skin care products after cleaning.

Workplace hygiene: Keep away from food, drinks and feedstuff. Remove soiled or soaked clothing immediately. Wash your hands before breaks and at the end of working. Avoid contact with the eyes and the skin.

8.2.2 Limiting environmental exposure

This product is marketed as an aerosol. Environmental exposure is not to be expected with proper use and compliance with the relevant "Operating Instructions" (Germany: BetrSichV §9, GefStoffV §14).

8.2.3 Limiting exposure of the end users

With proper use, exceeding the DNEL values specific for the substance is not to expected. Before the spraying process, end users should pay attention to good ventilation, e.g. open the windows. Do not use close to food. Do not smoke during use.

9.0 Physical and chemical properties

9.1 Information on the basic physical and chemical properties

9.1.1 Appearance

Physical state: Liquid.

Color: Color is on the product label.

Odor: Ethanol

9.1.2 Basic data relevant for safety

Properties of the mixture

Organic solvents: 30%

Water content: 0%

PH value at 20°C: not applicable

Melting point or melting range: not applicable

Boiling point or boiling range: 82 °C

Flash point: 12 °C

Ignition temperature: 425 °C

Self-inflammability: not self-igniting

Danger of explosion: The formation of explosive air / vapor mixtures is possible.

Vapour pressure at 20°C: 88 hPa

Density at 20°C: 0,988 g/cm³

Water solubility at 20°C: not applicable

Distribution coefficient Log Kow (components):

Propane No data available.

Butane No data available.

Ethanol 0,3

Copper No data available.

Dynamic viscosity: 1,19 mPas

Lower / Upper explosion limit: 3,5 Vol-% - 15,0 Vol-%

9.2. Other information

No further information is required.

10.0 Stability and Reactivity

10.1 Reactivity

Not reactive under normal conditions of use and storage.

10.2 Chemical stability

Chemically stable with intended use and storage.

10.3 Possibility of hazardous reactions

No hazardous chemical reactions with intended use and storage.

10.4 Conditions to be avoided

Avoid high temperatures. No decomposition by use and stored expected.

10.5 Unacceptable materials

Strong oxidation means and strong acids.

10.6 Hazardous decomposition products in the combustion

Carbon monoxide CO, Carbon dioxide CO2 and organic decomposition products while heating up.

11.0 Toxicological information

11.1 Information on toxicological effects

Information from published registry data and information GESTIS database for the following ingredients.

Chemical Name: Propane

Index number: 601-003-00-5

CAS No .: 74-98-6

EC-No .: 200-827-9

Chemical Name: Butane

Index number: 601-004-00-0

CAS No .: 106-97-8

EC-No .: 203-448-7

Chemical Name: Ethanol

Index number: 603-002-00-5

CAS No .: 64-17-5

EC-No .: 200-578-6

Chemical Name: Copper

Index number: No data available.

CAS No .: 7440-50-8

EC-No .: 231-159-6

11.1.1 Toxicokinetics, metabolism and distribution

Propane Inhalation recorded propane (50000 ppm) was (no quantitative data) metabolized by mice partially isopropanol and acetone. Both metabolites were detected after one hour of exposure to blood, liver, brain and kidney.

Butane In studies in rodents, it was observed that inhaled butane spreads in the organism and the highest concentrations were found in adipose tissue, brain, spleen, liver and kidneys (descending in this order). With mice that inhaled very high butane concentrations for 1 hr (660000 ppm and sufficient oxygen), one found as metabolites in the blood and in different organs, besides unchanged butane, 2-butanol and methyl ethyl ketone. Both metabolites can be exhaled. For 2-butanol, excretion in the urine (as a glucuronic acid conjugate) can also be an essential elimination path. From kinetic studies with ethane and pentane, a very quick elimination (half-life 8 min) was estimated for butane.

Ethanol Once absorbed, Ethanol is mainly distributed into aqueous compartiments. It penetrates the blood-brain barrier and the placenta. More than 90 % of the absorbed dose is metabolized in the liver, the remainder is eliminated unchanged via the kidneys or is exhaled. In the liver, Ethanol is oxidized to form acetaldehyde which is further oxidized mainly to acetic acid. This is included into the intermediary metabolism or is decomposed to form water and CO2. The reaction of Ethanol to form acetaldehyde in the liver is mainly catalyzed by alcohol-dehydrogenase (ADH). At high contents of Ethanol in the blood, cytochrome-P450-2E1 significantly contributes to the decomposition of Ethanol. As opposed to ADH, 4 to 10 fold cytochrome-P450-2E1 is induceable by chronic high consumption of alcohol. Furthermore, catalase is involved in the conversion to acetaldehyde, however, to a minor extent only. With the exception of very low and very high concentrations of Ethanol in the blood, the velocity of the Ethanol oxidation is independent of the concentration. Maximum elimination velocities of 175 and 228 mg/l x h were estimated from experiments on volunteers. They were independent of the gender. Very short half lives (1.7 and 6.4 min) were estimated for metabolically formed acetaldehyde and acetic acid.

Copper The necessary for the organism trace element Cu is involved in numerous enzymatic processes. The recording takes place mainly through food and is certain fluctuations, so that necessary for homeostasis biochemically controlled leveling reactions. The optimal intake should approximately between 20 and 50 micrograms / kg / d are. Absorbed Cu initially bound to albumin and mainly transported to the liver. In the liver cells is then carried out for binding to a specific protein, the metallothionein. The complex represents a form of storage, from which the copper is transferred to another protein ceruloplasmin. This complex is secreted back into the blood and transported to the various tissues, which is used in Cu biochemically. The excretion of Keep unnecessary Cu occurs primarily via the bile.

11.1.2 Acute Toxicity

Propane LD50 oral not applicable

Propane LD50 dermal not applicable

Propane LC50 inhalation 658,00 mg/l Rat

Butane LD50 oral not applicable

Butane LD50 dermal not applicable

Butane LC50 inhalation 20,00 mg/l Rat

Ethanol LD50 oral > 2000 mg/kg Rat

Ethanol LD50 dermal > 2000 mg/kg Rabbit

Ethanol LC50 inhalation > 20,00 mg/l Rat

Copper LD50 oral No data available.

Copper LD50 dermal No data available.

Copper LC50 inhalation No data available.

11.1.3 Corrosive and irritant effects

Propane: LPG may cause frostbite.

Butane: LPG may cause frostbite.

Ethanol: Causes serious eye irritation.

Copper: No data available.

11.1.4 Sensitization

Ingredients are classified as non-sensitizing.

11.1.5 Sub acute to chronic toxicity

Propane: No data available.

Butane: No data available.

Ethanol: No data available.

Copper: No data available.

11.1.6 Carcinogenicity, mutagenicity and reproductive toxicity

Ingredients do not have carcinogenic, mutagenic effects or effects that are toxic for reproduction.

11.1.7 Practical experience

Propane: No data available.

Butane: No data available.

Ethanol: No data available.

Copper: No data available.

11.1.8 General remarks

All substances are described sufficiently in this data sheet.

12.0 Environmental Information

Information from published registration data as well as information of the GESTIS substance database for the following ingredients.

Chemical Name: Propane

Index number: 601-003-00-5

CAS No .: 74-98-6

EC-No .: 200-827-9

Chemical Name: Butane

Index number: 601-004-00-0

CAS No .: 106-97-8

EC-No .: 203-448-7

Chemical Name: Ethanol

Index number: 603-002-00-5

CAS No .: 64-17-5

EC-No .: 200-578-6

Chemical Name: Copper

Index number: No data available.

CAS No .: 7440-50-8

EC-No .: 231-159-6

12.1 Toxicity

Toxicity fish: [Propane] No data available.

Toxicity crustaceans: [Propane] No data available.

Toxicity algae: [Propane] No data available.

Toxicity bacteria: [Propane] No data available.

Toxicity fish: [Butane] No data available.

Toxicity crustaceans: [Butane] No data available.

Toxicity algae: [Butane] No data available.

Toxicity bacteria: [Butane] No data available.

Toxicity fish: [Ethanol] 15300,00 mg/l Pimephales promelas

Toxicity crustaceans: [Ethanol] 10000,00 mg/l Daphnia magna

Toxicity algae: [Ethanol] 275,00 mg/l Chlorella vulgaris

Toxicity bacteria: [Ethanol] 5800,00 mg/l Paramaecium caudatum

12.2 Persistence and degradability

All ingredients used are not persistent substances and completely biodegradable.

12.3 Bioaccumulation potential

All ingredients used are classified as non-bioaccumulative.

12.4 Mobility in soil

Propane: No data available.

Butane: No data available.

Ethanol: The substance is mobile in an aqueous environment.

Copper: No data available.

12.5 Results for the ingredients (PBTs, vPvBs)

PBT: The ingredients are to be considered neither as persistent, bioaccumulative, nor toxic

vPvB: The ingredients are neither highly persistent nor highly bioaccumulative

12.6 Other adverse effects

There are no known other harmful effects on components.

13.0 Waste treatment information

13.1 Methods of waste treatment

13.1.1 Disposal of residual quantities and product waste

European Waste Code: 08 01 11* waste paint and varnish containing organic solvents or other dangerous substances.

13.1.2 Disposal of contaminated packaging

Disposal or recycling of contaminated packaging allowed by authorized waste management companies.

European Waste Code: 15 01 10* packaging containing residues of hazardous substances or contaminated by dangerous substances.

13.1.3 Disposal of completely emptied packaging

European Waste Code: 15 01 04 metallic packaging.

Dispose of packaging only when totally empty.

Do not pierce or burn, even after use. Dispose of the completely emptied aerosol packaging on the recycling system (green dot).

Note: If a packaging not emptied, they are not subject to the Ordinance and must be disposed of properly and safely by the end user as waste or hazardous waste. This is especially true when disposing of packaging, containing dangerous substances as adhesions or contaminated with dangerous substances. This engages the the Ordinance parent Recycling and Waste Act (Waste Recovery / AbfG). The Waste Catalogue Ordinance (AVV) in turn leads to a number of assessment criteria for classification of a substance, mixture or packaging waste collected to the risks and specifies the name of the waste in conjunction with a six-digit waste code.

14.0 Transport information

14.1 UN number

UN 1950

14.2 Correct UN shipping designation

UN 1950 AEROSOLS, flammable

14.3 Transport hazard classes

2 (5F)

14.4 Packaging group

4G BOXES

14.5 Environmental hazards

No environmentally hazardous properties.

14.6 Special precautions for the user

Note transporting leaflets.Before transport,dangerous goods secure against slipping.

Transport empty aerosol dispensers only when properly secured. "H220 Extremely flammable gas".

14.7 Bulk goods transportation according to Appendix II of MARPOL Convention 73/78 and according to IBC code

Product is not classified as intermediate bulk containers.

Overland transport (ADR/RID/ADN/ADNR/GGVSEB)

UN number:

UN 1950

Class/Classification code:

2 (5F)

Hazard label:

2.1

Hazardous goods designation:

UN 1950 AEROSOLS, flammable

Packaging group:

4G BOXES

Identification:

Note:

Limited and excepted quantity according to ADR chapter 3.4.2.

Sea transport (IMDG-Code / GGVSee)

UN number:

UN 1950

Class:

2 (5F)

EmS-Code:

F-D, S-U

Hazardous goods designation:

UN 1950 AEROSOLS, flammable

Packaging group:

4G BOXES

Marine Pollutant:

The mixture is not classified hazardous for water.

Identification:

Note: Dangerous goods in limited quantities of class 2, UN 1950 AEROSOLS.

15.0 Legislation

15.1 Legislation on the substance or mixture as well as specific legislation on safety, health and environmental protection

15.1.1 Regulations EU

15.1.1.1 Classification and identification according to Ordinance (EC) no. 1272/2008 (CLP)

The preparation is liable to identification, see Section 2.

15.1.1.2 Special identification of certain preparations

The product is not special to characterize.

15.1.1.3 Approvals and/or use restrictions

No restriction on use within the meaning of Regulation (EC) no. 1272/2008.

15.1.1.4 EC RL 1999/13/EC (VOC-RL) on the limitation of VOC emissions

VOC 596 g/l

15.1.2 National regulations

15.1.2.1 Classification and identification according to Hazardous Substance Ordinance (Germany: GefStoffV)

The preparation is liable to identification, see Section 2.

15.1.2.2 Occupation restrictions

According to §22 Section 1 No. 6 Youth Industrial Safety Act (Germany: JArbSchG), youngsters are not allowed to be employed with works involving harmful exposure to hazardous materials. The same applies respectively for expectant and nursing mothers according to § 4 Maternity Protection Directive Ordinance (Germany: MuSchRiLiV).

Germany: No restrictions to youth employment law (usability limits) and Maternity Protection Directive (MuSchRiV).

15.1.2.4 Classification according to Administrative Regulation of Water-polluting Substances (Germany: VwVwS)

Water hazard class: 1 - slightly hazardous to water as per investment classification. 4

15.2 Chemical safety assessment

Chemical safety assessments (CSA) according to Article 14 Section 1 of Ordinance (EC) no. 1907/2006 (REACH) for the individual components are not available.

16.0 Other information

16.1 Text of the H statements from Chapters 2 and 3

H220 Extremely flammable gas.

H222 Extremely flammable aerosol.

H225 Highly flammable liquid and vapour.

H229 Pressurized container: May burst if heated.

H280 Contains gas under pressure; may explode if heated.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

16.2 Training notes

No operator training required.

16.3 Recommended restriction(s) of use

No use restriction.

16.4 Further information and contact places for technical information

No further information.

16.5 Data sources for the creation of the safety data sheet

European chemical Substances Information System (ESIS), Internet: http://ecb.jrc.it/esis.

TOXNET Databases on toxicology, hazardous chemicals, environmental health, and toxic releases – U.S. National Library of Medicine (NLM), Internet: http://toxnet.nlm.nih.gov.

Hazardous substance information system of commercial professional associations (GESTIS), Internet: http://www.hvbg.de/d/bia/gestis/stoffdb/index.html.
Hommel interactively 4.0 - Handbook of dangerous goods Internet: http://www.springer.com/dal/home/chemistry.

CRC Handbook of Chemistry and Physics, 88th Edition, 2007-2008, Internet: http://www.hbcpnetbase.com.

16.6 Changed information and reasons for change

Adjustments to the substance data and checking the water hazard class. Name change of the company.

16.7 Recommendations

Classification of the product according to Simple Control Scheme for Hazardous substances (EMKG):

Hazard group inhalation: A

Hazard group Skin contact: -

Emission group: high

The “Simple Control Scheme for Hazardous Substances” (EMKG) is concerned with procedural guidelines developed by the Government Institution of Occupational Safety and Industrial Medicine (BAUA) for the application of the Hazardous Substance Ordinance in small and middle-sized enterprises (KMU) for activities with hazardous substances without limit value. With this, a classification into protection levels becomes possible, taking into account the hazard characteristics of the product, as well as the activities including the release potential. The appropriate protection level is subsequently to be defined by the user of the product himself with the help of his conditions of use. Further information is available on the Internet at http://www.einfaches-massnahmenkonzept-gefahrstoffe.de.

16.8 Notes

This information should give a starting point for the safe handling of the products named in the safety data sheet for storage, processing, transport and disposal. The information is based on the present state of our knowledge, but this shall not represent a guarantee of product properties and does not establish a legally valid contractual relationship. If in doubt, please consult us on the above.

Abbreviations: DSD (Dangerous Substance Directive), DPD (Dangerous Product Directive), CLP (Classification Labeling and Packaging of substances and mixtures), GHS (Global Harmonized System).