

## Scan Spray Lab

### SAFETY DATA SHEET

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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VERSION: 1.0

### English Translation Of German SDS

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

### 1.1. Product identifier

Product form : Mixture  
Trade name : Scan Spray Lab  
SDS Number : 9634  
Vaporizer : Aerosol  
Product use : Professional use

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Function or use category : Coating material for special industrial and commercial applications

#### 1.2.2. Uses advised against

Restrictions on use : No additional information available.

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

Lukadent GmbH  
Felsenbergweg 2  
71701 Schwieberdingen  
Deutschland  
Tel.: + 49 (0) 7150 32955  
Fax: + 49 (0) 7150 34113  
Internet: [www.Lukadent.de](http://www.Lukadent.de); [info@Lukadent.de](mailto:info@Lukadent.de)  
E-Mail: [HSE@rle.de](mailto:HSE@rle.de)

### 1.4. Emergency telephone number

+ 49 (0) 7150 32955 (Mo. - Fr. 08:30AM - 04:30PM)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

<b>Physical hazards</b>	Aerosol, Category 1	H222;H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
<b>Health hazards</b>	Aspiration hazard, Category 1	H304	May be fatal if swallowed and enters airways.
<b>Environmental hazards</b>	Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412	Harmful to aquatic life with long lasting effects.

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

#### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms



Signal word

Danger

Contains

pentane

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

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.
P273	Avoid release to the environment.

Response

P301+P310	IF SWALLOWED: Immediately call a doctor.
P331	Do NOT induce vomiting.

Storage

P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

Disposal

P501	Dispose of contents and container to an approved waste disposal plant.
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EUH-statements

EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

## 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Chemical name	CAS- No EC- No Index No RRN	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Notes
butane	106-97-8 203-448-7 601-004-00-0 01-2119474691-32-XXXX	65 - < 70	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	(Note C)(Note U)
Propane	74-98-6 200-827-9 601-003-00-5 01-2119486944-21-XXXX	15 - < 20	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	(Note U)
pentane	109-66-0	10 - < 14	Flam. Liq. 1, H224	#

	203-692-4 601-006-00-1 01-2119459286-30-XXXX		STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	(Note C)
ethanol	64-17-5 200-578-6 603-002-00-5 01-2119457610-43-XXXX	1 - < 2	Flam. Liq. 2, H225 Eye Irrit. 2, H319	( 50 ≤C < 100) Eye Irrit. 2, H319

Comments : #: substance with a Community workplace exposure limit

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note U(table 3.1) : When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Immediately call a POISON CENTER/doctor. Rinse mouth. Do not induce vomiting.

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

Symptoms/effects: : May be fatal if swallowed and enters airways.

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

Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, dry sand, or alcohol-resistant foam.
- Unsuitable extinguishing media : Do not use water jet as an extinguisher, as this will spread the fire.

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

- Fire hazard : Extremely flammable aerosol.
- Explosion hazard : Pressurised container: May burst if heated.
- Reactivity in case of fire : In the event of fire hazardous gases may occur.
- Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide. Nitrogen oxides.

### 5.3. Advice for firefighters

- Firefighting instructions : Move container from fire area if it can be done without risk. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Wear fire/flame resistant/retardant clothing.
- Other information : Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not handle until all safety precautions have been read and understood. Eliminate every possible source of ignition. During fire, gases hazardous to health may be formed. Nitrogen oxides. Carbon monoxide. Carbon dioxide.

#### 6.1.1. For non-emergency personnel

Protective equipment : Use personal protective equipment as required. Wear appropriate protective equipment and clothing during clean-up.

Emergency procedures : Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

#### 6.1.2. For emergency responders

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the MSDS.

### 6.2. Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Remove all sources of ignition. Keep away from combustible material. Stop the leak.

Other information : Prevent entry into waterways, sewer, basements or confined areas.

### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition - No smoking. Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Ground/bond container and receiving equipment. Avoid prolonged exposure. Avoid contact with eyes. Observe good industrial hygiene practices. Do not eat, drink or smoke when using this product. Wear appropriate personal protective equipment. Keep only in original container. Avoid release to the environment.

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

Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep away from ignition sources.

Incompatible materials : combustible materials. Direct sunlight. Heat sources. Sources of ignition.

Storage class (LGK, TRGS 510) : LGK 2B - Aerosol dispensers and lighters

### 7.3. Specific end use(s)

Coating material for special industrial and commercial applications.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. National occupational exposure and biological limit values

pentane (109-66-0)

#### EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Pentane
IOEL TWA	3000 mg/m <sup>3</sup>
IOEL TWA [ppm]	1000 ppm

Regulatory reference COMMISSION DIRECTIVE 2006/15/EC

**Germany - Occupational Exposure Limits (TRGS 900)**

Local name	Pentan
AGW (OEL TWA) [1]	3000 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	1000 ppm
AGW (OEL C)	6000 mg/m <sup>3</sup>
AGW (OEL C) [ppm]	2000 ppm
Remark	DFG;EU;Y
Regulatory reference	TRGS900

**ethanol (64-17-5)**

**Germany - Occupational Exposure Limits (TRGS 900)**

Local name	Ethanol
AGW (OEL TWA) [1]	380 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	200 ppm
AGW (OEL C)	1920 mg/m <sup>3</sup>
AGW (OEL C) [ppm]	1000 ppm
Peak exposure limitation factor	2(II)
Remark	DFG;Y
Regulatory reference	TRGS900

**Propane (74-98-6)**

**Germany - Occupational Exposure Limits (TRGS 900)**

Local name	Propan
AGW (OEL TWA) [1]	1800 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	1000 ppm
AGW (OEL C)	4000 mg/m <sup>3</sup>
AGW (OEL C) [ppm]	7200 ppm
Peak exposure limitation factor	4(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission)
Regulatory reference	TRGS900

**Germany - Occupational Exposure Limits (Generic OEL data)**

DFG-MAK Liste (empfohlene Arbeitsplatzgrenzwerte) Propan (CAS 74-98-6)	1800 mg/m <sup>3</sup> (8-Stunden); 7200 mg/m <sup>3</sup> (15-Minuten)
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**butane (106-97-8)**

**Germany - Occupational Exposure Limits (TRGS 900)**

Local name	Butan
AGW (OEL TWA) [1]	2400 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	1000 ppm
AGW (OEL C)	9600 mg/m <sup>3</sup>
AGW (OEL C) [ppm]	4000 ppm
Remark	DFG
Regulatory reference	TRGS900

## Exposure limit values for the other components

### Titanium dioxide (13463-67-7)

#### Germany - Occupational Exposure Limits (TRGS 900)

AGW (OEL TWA) [1]	10 mg/m <sup>3</sup> inhalable fraction 1.25 mg/m <sup>3</sup> respirable fraction
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#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

##### pentane (109-66-0)

##### DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	432 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3000 mg/m <sup>3</sup>

##### DNEL/DMEL (General population)

Long-term - systemic effects, oral	214 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	643 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	214 mg/kg bodyweight/day

##### PNEC (Water)

PNEC aqua (freshwater)	230 µg/L
PNEC aqua (marine water)	230 µg/L
PNEC aqua (intermittent, freshwater)	880 µg/L

##### PNEC (Sediment)

PNEC sediment (freshwater)	1.2 mg/kg dwt
PNEC sediment (marine water)	1.2 mg/kg dwt

##### PNEC (Soil)

PNEC soil	0.55 mg/kg dwt
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##### PNEC (STP)

PNEC sewage treatment plant	3600 µg/L
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### Titanium dioxide (13463-67-7)

##### DNEL/DMEL (Workers)

Long-term - systemic effects, inhalation	10 mg/m <sup>3</sup>
Long-term - local effects, inhalation	10 mg/m <sup>3</sup>

##### DNEL/DMEL (General population)

Long-term - systemic effects, oral	700 mg/kg bodyweight/day
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##### PNEC (Water)

PNEC aqua (freshwater)	0.127 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	0.61 mg/l

##### PNEC (Sediment)

PNEC sediment (freshwater)	1000 mg/kg dwt
PNEC sediment (marine water)	100 mg/kg dwt

**PNEC (Soil)**

PNEC soil 100 mg/kg dwt

**PNEC (Oral)**

PNEC oral (secondary poisoning) 1667 mg/kg food

**PNEC (STP)**

PNEC sewage treatment plant 100 mg/l

**Silicon dioxide (7631-86-9)**

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**DNEL/DMEL (Workers)**

Long-term - systemic effects, inhalation 4 mg/m<sup>3</sup>

**ethanol (64-17-5)**

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**DNEL/DMEL (Workers)**

Long-term - systemic effects, dermal 343 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 950 mg/m<sup>3</sup>

Long-term - local effects, inhalation 1900 mg/m<sup>3</sup>

**DNEL/DMEL (General population)**

Long-term - systemic effects, oral 87 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 114 mg/m<sup>3</sup>

Long-term - systemic effects, dermal 206 mg/kg bodyweight/day

Long-term - local effects, inhalation 950 mg/m<sup>3</sup>

**PNEC (Water)**

PNEC aqua (freshwater) 0.96 mg/l

PNEC aqua (marine water) 0.79 mg/l

PNEC aqua (intermittent, freshwater) 2.75 mg/l

**PNEC (Sediment)**

PNEC sediment (freshwater) 3.6 mg/kg dwt

PNEC sediment (marine water) 2.9 mg/kg dwt

**PNEC (Soil)**

PNEC soil 0.63 mg/kg dwt

**PNEC (Oral)**

PNEC oral (secondary poisoning) 380 mg/kg food

**PNEC (STP)**

PNEC sewage treatment plant 580 mg/l

**8.1.5. Control banding**

No additional information available

**8.2. Exposure controls****8.2.1. Appropriate engineering controls****Appropriate engineering controls:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**8.2.2. Personal protection equipment****8.2.2.1. Eye and face protection****Eye protection:**

Wear tight-fitting goggles or face shield

### 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing

#### Hand protection:

Wear protective gloves

#### Other skin protection

#### Materials for protective clothing:

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

Wear respiratory protection.

### 8.2.2.4. Thermal hazards

#### Thermal hazard protection:

Wear appropriate thermal protective clothing, when necessary.

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Inform appropriate managerial or supervisory personnel of all environmental releases.

#### Other information:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: white.
Appearance	: Aerosol.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: -188 – -138 °C (1013 hPa)
Freezing point	: Not applicable
Boiling point	: -42 °C (1013 hPa)
Flammability	: Extremely flammable aerosol
Oxidising properties	: None.
Explosive limits	: Not available
Lower explosive limit (LEL)	: 1.5 vol %
Upper explosive limit (UEL)	: 10.9 vol %
Flash point	: Aerosol Not applicable
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not applicable
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Log Kow	: Not available
Vapour pressure	: 2.7 bar (20°C)
Vapour pressure at 50 °C	: Not available
Density	: 0.54 g/cm <sup>3</sup> (20°C)
Relative density	: Not applicable
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable



Particle dustiness : Not applicable

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

% of flammable ingredients : Not applicable

### 9.2.2. Other safety characteristics

VOC (EU) : Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Based on available data, the classification criteria are not met
Acute toxicity (dermal)	: Based on available data, the classification criteria are not met
Acute toxicity (inhalation)	: Based on available data, the classification criteria are not met
Skin corrosion/irritation	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Based on available data, the classification criteria are not met
Carcinogenicity	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Based on available data, the classification criteria are not met
STOT-single exposure	: Based on available data, the classification criteria are not met

#### pentane (109-66-0)

STOT-single exposure	May cause drowsiness or dizziness.
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STOT-repeated exposure : Based on available data, the classification criteria are not met

Aspiration hazard : May be fatal if swallowed and enters airways.

#### scan spray stone

Vaporizer	Aerosol
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### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Not applicable.

#### 11.2.2. Other information

Potential adverse human health effects and symptoms : Occupational exposure to the substance or mixture may cause adverse effects

Other information : Not applicable.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

#### pentane (109-66-0)

Persistence and degradability	Readily biodegradable. (OECD 301F method).
Biodegradation	87 %

#### ethanol (64-17-5)

Persistence and degradability	(OECD 301D method). 80 % - 85 % biodegradation.
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#### Propane (74-98-6)

Persistence and degradability	Readily biodegradable.
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#### butane (106-97-8)

Persistence and degradability	Readily biodegradable.
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### 12.3. Bioaccumulative potential

#### pentane (109-66-0)

Bioconcentration factor (BCF REACH)	171
Log Pow	3.39
Log Kow	3.45 @ 25 °C

#### ethanol (64-17-5)

Log Kow	-0.35 at 20 °C
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#### Propane (74-98-6)

Log Pow	1.09 – 2.8 @ 20 °C, pH 7
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#### butane (106-97-8)

Log Pow	1.09 – 2.8 @ 20 °C, pH 7
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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### scan spray stone

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

Other adverse effects	: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste)	: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Waste treatment methods	: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Additional information	: Dispose in accordance with all applicable regulations.
European List of Waste (LoW) code	: 16 05 04* - gases in pressure containers (including halons) containing dangerous substances 15 01 10* - packaging containing residues of or contaminated by dangerous substances

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1. UN number or ID number

UN-No. (ADR)	: UN 1950
UN-No. (IMDG)	: UN 1950
UN-No. (IATA)	: UN 1950
UN-No. (ADN)	: UN 1950
UN-No. (RID)	: UN 1950

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: AEROSOLS
Proper Shipping Name (IMDG)	: AEROSOLS
Proper Shipping Name (IATA)	: Aerosols, flammable
Proper Shipping Name (ADN)	: AEROSOLS
Proper Shipping Name (RID)	: AEROSOLS

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 2.1
Danger labels (ADR)	: 2.1

#### IMDG

Transport hazard class(es) (IMDG)	: 2.1
Danger labels (IMDG)	: 2.1

#### IATA

Transport hazard class(es) (IATA)	: 2.1
Hazard labels (IATA)	: 2.1

#### ADN

Transport hazard class(es) (ADN)	: 2.1
Danger labels (ADN)	: 2.1

#### RID

Transport hazard class(es) (RID)	: 2.1
Danger labels (RID)	: 2.1

### 14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable

Packing group (RID) : Not applicable

#### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available.

#### 14.6. Special precautions for user

##### Overland transport

Classification code (ADR) : 5F  
Special provisions (ADR) : 190, 327, 344, 625  
Limited quantities (ADR) : 1I  
Packing instructions (ADR) : P207, LP02  
Tunnel restriction code (ADR) : D

##### Transport by sea

Special provisions (IMDG) : 63, 190, 277, 327, 344, 959  
Limited quantities (IMDG) : SP277  
Packing instructions (IMDG) : P207, LP02  
EmS-No. (Fire) : F-D  
EmS-No. (Spillage) : S-U  
Stowage category (IMDG) : None

##### Air transport

PCA Excepted quantities (IATA) : E0  
PCA Limited quantities (IATA) : Y203  
PCA limited quantity max net quantity (IATA) : 30kgG  
PCA packing instructions (IATA) : 203  
PCA max net quantity (IATA) : 75kg  
CAO packing instructions (IATA) : 203  
CAO max net quantity (IATA) : 150kg  
Special provisions (IATA) : A145, A167, A802  
ERG code (IATA) : 10L

##### Inland waterway transport

Classification code (ADN) : 5F  
Special provisions (ADN) : 190, 327, 344, 625  
Limited quantities (ADN) : 1 L

##### Rail transport

Classification code (RID) : 5F  
Special provisions (RID) : 190, 327, 344, 625  
Limited quantities (RID) : 1L  
Packing instructions (RID) : P207, LP02  
Hazard identification number (RID) : 23

#### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

##### EU restriction list (REACH Annex XVII)

Reference code	Applicable on
3(a)	pentane ; ethanol
3(b)	pentane ; ethanol
3(c)	pentane
40.	pentane ; ethanol ; Propane ; butane

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : Not applicable

Other information, restriction and prohibition regulations : Directive 92/85/EEC on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding as amended. Directive 94/33/EC on the protection of young people at work, as amended. Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended. For details, refer to section 3 and 8.

#### Directive 2012/18/EU (SEVESO III)

Seveso Additional information : P3a

#### 15.1.2. National regulations

##### Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)  
Observe restrictions according Prohibition of Chemicals Ordinance (ChemVerbotsV)

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Listed in the 12. BImSchV (Annex I) under: 1.2.3.1  
- Quantity threshold for operational area under § 1 para. 1  
- Sentence 1 :150000 kg  
- Sentence 2 :500000 kg

#### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

#### Indication of changes:

None.

#### Full text of H- and EUH-statements

Aerosol 1	Aerosol, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1A	Flammable gases, Category 1A
Flam. Liq. 1	Flammable liquids, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Press. Gas (Comp.)	Gases under pressure : Compressed gas
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis

#### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Aerosol 1	H222;H229	On the basis of test data
Asp. Tox. 1	H304	Expert judgment
Aquatic Chronic 3	H412	Calculation method

*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.*