



## Safety Data Sheet



**Signal word: DANGER**

**Hazard statements:**

H222 Extremely flammable aerosol.

H229 Pressurized container: May burst if heated.

**Precautionary statement:**

*Prevention:*

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Pressurized container: Do not pierce or burn, even after use.

*Storage:*

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

*Disposal*

P501 Dispose of contents/containers in accordance with local regulation

**2.3 Other hazards**

PBT and vPvB evaluations are in chapter 12.5

### **SECTION 3: Composition / information on ingredients**

**3.1 Mixtures:**

Chemical name	INDEX number EC-Number CAS Nr.	%	Classification according to EC 1272/2008	
			Hazardous class/hazardous category	Hazardous phrases
<b>Isobutane</b>	601-004-00-0 200-857-2 75-28-5	50-100	Flam. Gas 1 Press Gas C	H220 H280
<b>Ethanol</b>	603-002-00-5 200-578-6 64-17-5	2,5-10	Flam. Liq. 2	H225
<b>Pentane</b>	601-006-00-1 203-692-4 109-66-0	< 5	Flam. Liq. 2, Asp. Tox. 1, Aquatic Chronic 2,	H225 H304 H411

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			STOT SE 3, EUH066	H336
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### **SECTION 4: First Aid Measures**

#### **4.1 Description of first aid measures**

*Inhalation:*

Remove victim to the fresh air and place it in half sitting position. Ask for medical attention if difficulties appear. Do not inject adrenaline or its derivatives.

*Skin contact:*

Remove contaminated clothes. Wash off with plenty of water and soap immediately.

*Eye contact:*

Wash off open eye with plenty of water. Ask for medical help when difficulties appear.

*Ingestion:*

Do not induce vomiting. First wash mouth with water and then drink 100 mL of water. Ask for medical attention and show safety data sheet.

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

Symptoms: Coughing and sneezing.

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

Symptomatic treatment.

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

*Suitable:*

CO<sub>2</sub>, foam, powder, water fog.

*Unsuitable:*

Water jet.

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

Threaten containers cool down with dispersed jet of water. Risk of explosion if heated under confinement. Violent eruption of containers may occur under fire conditions.

#### **5.3 Advice for firefighters**

*Special protective equipment for firefighting:*

Large amount of gases can be released during fire – wear suitable gas – mask.

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### **SECTION 6: Accidental release measures**

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

Keep away from the source of ignition. take care for the good ventilation. Avoid contact with skin, eyes and inhalation. Remove containers that cannot be tightly closed.

#### **6.2 Environmental precautions**

Do not allow enter sewage system or waters. Absorb spillage with adsorbent. Discard in accordance with local law.

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

No data available

#### **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**

Packing under pressure. Do not open it by force or set on fire. Discard only completely empty packages. Do not spray in the flame or red-hot objects.

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

Store at room temperature in good ventilated location, safe against fire. Protect it from the direct sun light and temperature above 50°C.

#### **7.3. Specific end use(s)**

Product is intended to be used in dental laboratories.

### **SECTION 8: Exposure controls/personal protection**

#### **8.1 Control parameters**

EU – Commission Directive 98/24/EU with all amendments and supplements

Regulation on the protection of workers from risks due to exposure to chemical substances at work (Official Gazette of the RS, Nos. 72/2021, 29/2024, 26/2025)

Regulation on the protection of workers from risks due to exposure to carcinogenic, mutagenic, or reprotoxic substances at work (Official Gazette of the RS, Nos. 29/2024, 26/2025)

#### **Ingredients with limit values that have to be considered and measured in the working place**

##### **Isobutane**

<b>OEL</b>	Current exposure: 9600 mg/m <sup>3</sup> , 4000 ppm
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	Long-term exposure: 2400 mg/m <sup>3</sup> , 1000 ppm
<b>Pentane</b>	
<b>OEL</b>	Current exposure: 6000 mg/m <sup>3</sup> , 2000 ppm
	Long-term exposure: 3000 mg/m <sup>3</sup> , 1000 ppm (Y, EU <sup>2</sup> )*
<b>Ethanol</b>	
<b>OEL</b>	Current exposure: 1920 mg/m <sup>3</sup> , 1000 ppm
	Long-term exposure: 960 mg/m <sup>3</sup> , 500 ppm (Y)*
<p>* Y – Substances for which there is no danger to the fetus based on limited values and BAT values; EU<sup>2</sup> - Limit value set by Commission Directive 2006/15/EC of 7 February 2006 on establishing another list of indicative limit values for occupational exposure at implementing Council Directive 98/24/EC and amending Directive 91/322/EEC and the Directive 2000/39/EC (OJ L, No. 38 of February 9, 2006, p. 36).</p> <p><b>Limit under which substance has not effect (DNEL)</b>                      No data available.</p> <p><b>For seen concentration without effect (PNEC):</b>                      No data available.</p> <p><b>8.2 Exposure controls</b>                      Personal protective equipment in accordance with Regulation (EU) 2016/425 and list of harmonized standards for personal protection equipment 2018/C 209/03.</p> <p><i>Common protection and hygienic measures:</i>                      Avoid contact with skin and eyes. Contaminated clothes took of immediately. Do not breath vapor, aerosol or gases. Do not eat, drink or smoke during work. Protect food. Wash hands before meal and after meal.</p> <p><i>Respiratory protection:</i>                      In good ventilated area protection is not necessary.</p> <p><i>Hand protection:</i>                      Wear nitrile or butyl gloves (EN ISO 374-1:2016).</p> <p><i>Eye protection:</i>                      Protective goggles (EN 166:2001).</p> <p><b>8.2.2 Control of environment protection</b>                      Common instructions: Do not wash rinse with fresh water or to drainage system.</p>	

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### **SECTION 9: Physical and chemical properties**

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

<b>Physical state</b>	aerosol
<b>Colour</b>	white
<b>Odour</b>	characteristic
<b>pH</b>	No data available
<b>Density</b>	0,64 g/mL (20°C)
<b>Boiling point</b>	-11°C
<b>Flash point</b>	n.a.
<b>Melting point</b>	n.a.
<b>Auto ignition temperature</b>	460 °C
<b>Upper explosion limit</b>	8,5 % (V)
<b>Lower explosion limit</b>	1,8 vol %
<b>Solvent content: VOC (EU)</b>	94 %
<b>Solid content</b>	< 10 %
<b>Decomposition temperature</b>	n.a.
<b>Density and/or relative density</b>	n.a.
<b>pH</b>	No data available
<b>Solubility in water</b>	Not soluble
<b>Partition coefficient n-octanol/water (log value)</b>	n.a.
<b>Vapour pressure</b>	3000 hPa (20°C)
<b>Kinematic viscosity</b>	n.a.
<b>Oxidative properties</b>	n.a.
<b>Particle characteristics</b>	n.a.

#### **9.2 Other information**

No additional information relevant to safe use of the mixture.

### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

Stable under recommended storage conditions and the intended use.

#### **10.2 Chemical stability**

Stable under normal conditions and proper use.

#### **10.3 Possibility of hazardous reaction**

Explosion possible at temperature higher than 50°C because of higher pressure in the package. Possible formation of explosive mixture with air. Reaction with oxidants.

#### **10.4 Conditions to avoid**

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Heat, flame. High temperature raise pressure in packaging and packaging can explode.  
Product is aerosol and must not be sprayed in flame.

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

None under normal conditions of storage and use.

## **SECTION 11: Toxicological information**

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

#### **Chemical name: Isobutane (CAS 72-28-5)**

Acute toxicity

Important LD/LC50 values:

Oral LD50: No data available

Dermal LD50: No data available

Inhalation LC50: 258,000 mg/l (4 h, rat)

#### **Chemical name: Ethanol (CAS 64-17-5)**

Acute toxicity

Important LD/LC50 values:

Oral LD50: >2000 mg/kg (rat)

Dermal LD50: >2000 mg/kg (rabbit)

Inhalation LC50: >20 mg/l (4 h, rat)

#### **Chemical name: Pentane (CAS 109-66-0)**

Acute toxicity

Important LD/LC50 values:

Oral LD50: >5000 mg/kg (rat)

Inhalation LC50: >25.3 mg/l (4 h, rat)

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitisation: Not classified

Germ cell mutagenicity: Not classified

#### **Carcinogenicity:**

Carcinogenicity (OSHA): None of the ingredients in this mixture are listed.

Carcinogenicity (IARC): Ethanol in alcoholic beverages (CAS 64-17-5) is classified in Group 1.

Carcinogenicity (NTP): None of the ingredients in this mixture are listed.

Reproductive toxicity: Not classified

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Teratogenicity: Not classified  
STOT – single exposure: May cause drowsiness or dizziness (pentane).  
STOT – repeated exposure: Not classified  
Aspiration hazard: Not classified

Practical experience:  
Repeated exposure may cause dry or cracked skin.

### 11.2 Information on other hazards

No data available.

## **SECTION 12: Ecological information**

### 12.1 Toxicity

#### Acute toxicity of Isobutane (CAS 75-28-5)

- EC50: 7.71 mg/l (algae)
- LC50/96h: 27.98 mg/l (fish)

#### Acute toxicity of Ethanol (CAS 64-17-5)

- EC50: >10,000 mg/kg (water flea)
- EC50: 275 mg/l (algae)
- EC50: >10,000 mg/l (water flea)
- LC50/96h: 15,300 mg/l (fish)
- LC50/48h: 5,012 mg/l (water flea)

#### Acute toxicity of Pentane (CAS 109-66-0)

- EC50: 2.7 mg/l (water flea)
- LC50/96h: 4.26 mg/l (fish)

### 12.2 Persistence and degradability

No data available.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

No data available.

### 12.6 Endocrine disrupting properties

No data available.

### 12.7 Other adverse effects

Do not allowed enter sewage system, waters, underground water.

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### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

Directive 2008/98/EC, Official Gazette RS 37/15, 69/15

*Methods of disposal:* Dispose in accordance with Regulation about handling with waste and local regulations.

*Waste disposal:*

Store waste separately. Due to the risk of contamination, dispose of it as industrial waste or as hazardous waste.

*Contaminated packaging:*


Store waste separately. Due to the risk of contamination, dispose of it as industrial waste or as hazardous waste.

*Waste codes:*

- 16 05 04\* – Gases in pressure containers (including halons) containing hazardous substances
- 15 01 11\* – Packaging containing residues of or contaminated by hazardous solid (aerosol)

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### SECTION 14: Transport Information

	ADR/RID	IMDG	IATA
<b>14.1 UN number</b>	UN 1950		
<b>14.2 UN proper shipping name</b>	AEROSOLS		AEROSOLS, flammable
<b>14.3 Transport hazard class(es)</b>			
Class	2	2.1	
Classification code	5F	/	/
Label(s)	2.1 		
Hazard identification number	/	/	/
Transport category (Tunnel restriction code)	2 (D)	/	/
EmS	/	F-D, S-U	/
<b>14.4 Packing group</b>	Void		
<b>14.5 Environmental hazards</b>	No environmental hazard		
<b>14.6 Special precautions for user</b>	Warning: Gases		
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	No data available		
ADR · Exempt quantities (EQ): E0 · Limited quantity (LQ) 1L · Exempt quantities (EQ) code: E0 Not permitted in exempt quantities · Transport category 2 · Tunnel restriction code D · IMDG · Limited quantities (LQ) 1L · Excepted quantities (EQ) code: E0 Not permitted as Excepted Quantity			

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### **SECTION 15: Regulatory information**

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

The product is classified in accordance with the requirements of Regulation (EC) No 1272/2008 and 1907/2006, including their amendments, and the corresponding national legislation: the Implementing Regulation of the EU Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Official Gazette of the Republic of Slovenia, No. 23/08 and 191/20, and the Implementing Regulation of EU Regulation No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006, Official Gazette of the Republic of Slovenia, No. 56/10.

#### **15.2 Chemical safety assessment**

No data available.

### **SECTION 16: Other information**

#### *Revision:*

Version 02 issued on July 2025 in accordance with EC No. 1907/2006 (Commission Regulation (EU) 2015/830) and EC No. 1272/2008.

In accordance to changes in COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

#### *Legend of abbreviations:*

ADR – European agreement concerning the international carriage of dangerous goods by road

CAS – Chemical Abstracts Service

CLP – Classification, Labeling and Packaging

CMR – Carcinogenic, Mutagenic or toxic for Reproduction

DNEL - Derived no-effect level

EC<sub>50</sub>: Half maximal effective concentration

EmS – Emergency Schedule

GHS – Globally Harmonised System of Classification and Labeling of Chemicals

IATA – International Air Transport Association

IUCLID – International Uniform Chemical Information Database

IMDG – International Maritime Dangerous Goods Code

LC<sub>50</sub>: Lethal concentration, 50%

LD<sub>50</sub>: Median lethal dose; the dose causing 50% lethality

MARPOL – International convention for the prevention of pollution from ships

NOEC - No-observed-effect concentration

NOAEL – No-observed-adverse-effect level

NTP- National Toxicology Program

OEL - Occupational exposure limit

OECD - Organisation for Economic Co-operation and Development

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PBT – Persistent Bioaccumulative Toxic  
PNEC: Predicted no-effect concentration  
Ppm – parts per million  
REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals  
RTECS – The Registry of Toxic Effects of Chemical Substances  
RID – Regulation concerning the international carriage of dangerous goods by rail  
vPvB – very Persistent and very Bioaccumulative

### *References:*

- Regulation (EC) No. 1907/2006 (REACH), as amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Commission Directive 2009/161/EU
- Safety data sheet of raw material manufacturer
- Martindale: The Extra Pharmacopoeia, 13th edition
- Website: <https://chem.echa.europa.eu/>
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- Regulation on the implementation of Regulation (EU) on personal protective equipment (Official Gazette of RS, No. 33/18)
- List of harmonized standards for personal protective equipment (C 412 / 11.12.2015, with all amendments and supplements)
- Occupational Safety and Health Act (Official Gazette of RS No. 43/2011)
- Waste Regulation (Official Gazette of RS, No. 77/22 and 113/23)
- Regulation on packaging and packaging waste (Official Gazette of RS, No. 54/21, 208/21, 44/22 – ZVO-2 and 120/22)
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- Decree on the publication of Annexes A and B to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- Dangerous Goods Regulations (DGR) for air transport (IATA)
- International Maritime Dangerous Goods (IMDG) Code
- EU – Commission Directive 98/24/EC, with all amendments and supplements
- Regulation on the protection of workers from risks related to exposure to chemical substances at work (Official Gazette of RS, No. 72/2021, 29/2024, 26/2025)
- Regulation on the protection of workers from risks related to exposure to carcinogenic, mutagenic, or reprotoxic substances at work (Official Gazette of RS, No. 29/2024, 26/2025)

### *Disclaimer of expressed and implied warranties:*

The information contained in the safety data sheet have been translated from the manufacturer, revised in accordance with the Slovenian legislation. Guidelines for the safe use, handling, disposal, storage and transportation and cannot be used as a guarantee. The information relates only to the specific product and is not suitable for combining with other materials or for use in another process as described in the instructions.