

Safety data sheet

according to 1907/2006/EC, Article 31

...das wirkt!

Printing date 07.06.2023

Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 1)

- 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.
 P261 Avoid breathing spray.
 P271 Use only outdoors or in a well-ventilated area.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

2.3 Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

• **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0 Reg.nr.: 01-2119485395-27	Isobutane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	25-50%
CAS: 1634-04-4 EINECS: 216-653-1 Index number: 603-181-00-X	tert-butyl methyl ether Flam. Liq. 2, H225; Acute Tox. 3, H311; Skin Irrit. 2, H315	10-25%
CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8 Reg.nr.: 01-2119471330-49	acetone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	10%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg.nr.: 01-2119486944-21	Propane Flam. Gas 1A, H220; Press. Gas (Liq.), H280	5-10%
CAS: 64742-49-0 EC number: 927-510-4 Reg.nr.: 01-2119475515-33	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≥5-<10%
EC number: 921-024-6 Index number: 649-328-00-1 Reg.nr.: 01-2119475514-35	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≥5-<10%

(Contd. on page 3)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

...das wirkt!

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Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 2)

CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0 Reg.nr.: 01-2119474691-32	butane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	1-2.5%
CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X Reg.nr.: 01-2119433307-44	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370 Specific concentration limits: STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %	<1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

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Printing date 07.06.2023

Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 3)

- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Do not seal receptacle gas tight.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

CAS: 1634-04-4 tert-butyl methyl ether (10-25%)	
IOELV	Short-term value: 367 mg/m ³ , 100 ppm Long-term value: 183.5 mg/m ³ , 50 ppm
CAS: 67-64-1 acetone (10%)	
IOELV	Long-term value: 1210 mg/m ³ , 500 ppm
CAS: 67-56-1 methanol (<1%)	
IOELV	Long-term value: 260 mg/m ³ , 200 ppm Skin

· 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Hand protection**
Solvent resistant gloves
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
Butyl rubber, BR

(Contd. on page 5)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

...das wirkt!

Printing date 07.06.2023

Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 4)

Recommended thickness of the material: ≥ 0.6 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

Value for the permeation: Level ≥ 30

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection** *Tightly sealed goggles*

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Physical state**

Aerosol

· **Colour:**

Colourless

· **Odour:**

Solvent-like

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

-40 °C

· **Flammability**

Not applicable.

· **Lower:**

1.4 Vol %

· **Upper:**

36 Vol %

· **Flash point:**

-80 °C

· **Ignition temperature:**

Not determined.

· **Decomposition temperature:**

Not determined.

· **pH**

Not determined.

· **Viscosity:**

· **Kinematic viscosity**

Not determined.

· **Dynamic:**

Not determined.

· **Solubility**

· **water:**

Not miscible or difficult to mix.

· **Partition coefficient n-octanol/water (log value)**

Not determined.

· **Vapour pressure:**

Not determined.

· **Density and/or relative density**

· **Density at 20 °C:**

0.74 g/cm³

· **Relative density**

Not determined.

· **Vapour density**

Not determined.

· **9.2 Other information**

· **Appearance:**

· **Form:**

Aerosol

· **Important information on protection of health and environment, and on safety.**

· **Auto-ignition temperature:**

Product is not selfigniting.

· **Explosive properties:**

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Solvent separation test:**

· **Organic solvents:**

80.9 %

· **Solids content:**

0.0 %

· **Change in condition**

· **Evaporation rate**

Not applicable.

· **Information with regard to physical hazard classes**

· **Explosives**

Void

(Contd. on page 6)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

...das wirkt!

Printing date 07.06.2023

Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 5)

· Flammable gases	Void
· Aerosols	Extremely flammable aerosol. Pressurised container: May burst if heated.
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

CAS: 1634-04-4 tert-butyl methyl ether

Oral	LD50	4,000 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rabbit)
Inhalative	LC50/4 h	142 mg/l (rat)

CAS: 67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)
Inhalative	LC50/4 h	76 mg/l (rat)

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Oral	LD50	>5,000 mg/kg (rat) (OECD Richtlinie 401)
Dermal	LD50	>2,920 mg/kg (rat) (OECD Richtlinie 402) >2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>25 mg/l (rat) (OECD Richtlinie 403)

CAS: 67-56-1 methanol

Oral	LD50	100 mg/kg (default)
Dermal	LD50	15,800 mg/kg (rabbit)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

...das wirkt!

Printing date 07.06.2023

Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 6)

- **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** May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** May be fatal if swallowed and enters airways.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

CAS: 64742-49-0 Hydrocarbons, C7, n-alkanes, isoalkanes,cyclics

EC50/48 h 3 mg/l (Daphnia Magna)

NOEC/28 d 1.543 mg/l (Oncorhynchus mykiss)

NOEC/21 d 1 mg/l (Daphnia Magna)

Hydrocarbons, C6-C7, n-alkanes, isoalkanes,cyclics, <5% n-hexane

EC50/48 h 3 mg/l (Daphnia Magna)

NOEC/28 d 2,045 mg/l (Oncorhynchus mykiss)

NOEC/21 d 1 mg/l (Daphnia Magna)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN1950

(Contd. on page 8)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

...das wirkt!

Printing date 07.06.2023

Version number 2 (replaces version 1)

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Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 7)

- **14.2 UN proper shipping name**
- **ADR, IMDG**
- **IATA**
- **14.3 Transport hazard class(es)**

AEROSOLS
AEROSOLS, flammable

- **ADR**



- **Class**
- **Label**

2 5F Gases.
2.1

- **IMDG, IATA**



- **Class**
- **Label**
- **14.4 Packing group**
- **ADR, IMDG, IATA**
- **14.5 Environmental hazards:**
- **Marine pollutant:**
- **14.6 Special precautions for user**
- **Hazard identification number (Kemler code):**
- **EMS Number:**
- **Stowage Code**

2.1 Gases.
2.1

Void

No
Warning: Gases.

-
F-D,S-U

SW1 Protected from sources of heat.
SW22 For AEROSOLS with a maximum capacity of 1 litre:
Category A. For AEROSOLS with a capacity above 1 litre:
Category B. For WASTE AEROSOLS: Category C, Clear
of living quarters.

- **Segregation Code**
- SG69 For AEROSOLS with a maximum capacity of 1 litre:
Segregation as for class 9. Stow "separated from" class 1
except for division 1.4.
For AEROSOLS with a capacity above 1 litre:
Segregation as for the appropriate subdivision of class 2.
For WASTE AEROSOLS:
Segregation as for the appropriate subdivision of class 2.

- **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

- **Transport/Additional information:**

- **ADR**
- **Excepted quantities (EQ):**
- **Limited quantities (LQ)**
- **Transport category**
- **Tunnel restriction code**
- **UN "Model Regulation":**

E0
1L
2
D
UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Please note TRGS 510.
Commission Regulation 878/2020
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P3a FLAMMABLE AEROSOLS**

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

...das wirkt!

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Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 8)

- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

CAS: 67-64-1 acetone

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H301 Toxic if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H336 May cause drowsiness or dizziness.
- H370 Causes damage to organs.
- H411 Toxic to aquatic life with long lasting effects.
- EUH066 Repeated exposure may cause skin dryness or cracking.

· **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

On the basis of test data

· **Date of previous version:** 07.06.2023

· **Version number of previous version:** 1

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised 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 (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1A: Flammable gases – Category 1A

Aerosol 1: Aerosols – Category 1

Press. Gas (Comp.): Gases under pressure – Compressed gas

Press. Gas (Liq.): Gases under pressure – Liquefied gas

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

...das wirkt!

Printing date 07.06.2023

Version number 2 (replaces version 1)

Revision: 07.06.2023

Trade name: CARAMBA Express Starthilfe Spray(Aerosol)

(Contd. of page 9)

*Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**STOT SE 1: Specific target organ toxicity (single exposure) – Category 1**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**Asp. Tox. 1: Aspiration hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3**** Data compared to the previous version altered.**

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