

Safety Data Sheet

according to Regulation (EC) Nr. 1907/2006 (REACH)

Print date: 28.09.2016

Revision number 1.0

Version date: 28.09.2016

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

· **Product name:** Viehzeichenspray, grün, kanadische Version

· **Product code:** 20157-CA

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

· **Identified uses of the substance or mixture**

Marking spray

1.3 Details of the supplier of the safety data sheet

Albert Kerbl GmbH

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· **Responsible Department:**

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1.4 Emergency telephone number:

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2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) Nr. 1272/2008

Aerosol: Aerosol 1 (H222, H229)

Serious eye damage/eye irritation: Eye Irrit. 2 (H319)

Specific target organ toxicity - single exposure: STOT SE 3 (H336)

2.2 Label elements

Label elements according to Regulation (EC) Nr. 1272/2008 (CLP/GHS)

Hazard pictograms



Flame (GHS 02)



Exclamation mark (GHS07)

Signal word

Danger



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Hazard statements

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

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.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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

Others:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container according to local regulations.

2.3 Other hazards

· None

3 Composition/information on ingredients

Chemical Characterization: Mixtures

Hazardous ingredients:

CAS: 64-17-5	Ethanol	30-60 %
EC-Nr. 200-578-6	Flam. Liq. 2, H225	
Index-Nr. 603-002-00-5		
CAS: 67-63-0	2-Propanol (Isopropanol)	30-60 %
EC-Nr. 200-661-7	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	
Index-Nr. 603-117-00-0		
CAS: 106-97-8	Butane	10-30 %
EC-Nr. 203-448-7	Flam. Gas 1, H220; Press. Gas, H280	
Index-Nr. 601-004-00-0		
CAS: 74-98-6	Propane	10-30 %
EC-Nr. 200-827-9	Flam. Gas 1, H220; Press. Gas, H280	
Index-Nr. 601-003-00-5		
CAS: 75-28-5	Isobutane	10-30 %
EC-Nr. 200-857-2	Flam. Gas 1, H220; Press. Gas, H280	
Index-Nr. 601-004-00-0		

Additional information:

The wording of the listed risk phrases and hazard statements refer to section 16.



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4 First aid measures

4.1 Description of first aid measures

· General information:

As a general rule, in case of doubt or if symptoms persist, always call a doctor. NEVER induce swallowing by an unconscious person.

· Inhalation:

Move to fresh air. If symptoms persist, call a physician.

· Skin contact:

Remove immediately any soiled or splashed garment. Rinse abundantly in the water and in the soap. Clean clothes separately before reusing them. Consult a doctor in case of persistent pain.

· Eye contact:

Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open. If there is any redness, pain or visual impairment, consult an ophthalmologist.

· Ingestion:

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor. Keep the person exposed at rest. Do not force vomiting. Seek medical attention, showing the label. If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation of spray mist is irritating to the upper airways.

4.3 Indication of any immediate medical attention and special treatment needed

None

5 Firefighting measures

5.1 Extinguishing media

Suitable methods of extinction - In the event of a fire, use: sprayed water or water mist, foam, multipurpose ABC powder, BC powder, carbon dioxide (CO₂)

Unsuitable methods of extinction - In the event of a fire, do not use: water jet

5.2 Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health. Do not breathe in smoke. In the event of a fire, the following may be formed: carbon monoxide (CO), carbon dioxide (CO₂)

5.3 Advice for firefighters

Special protective equipment: Wear self-contained breathing apparatus.

Further information

Cool endangered containers with water spray jet.

Dispose fire residues and contaminated fire fighting water in accordance with official regulations.



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6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected people away.

Keep people away and stay on the upwind side.

Keep ignition sources away. No smoking.

Consult the safety measures listed under headings 7 and 8.

6.2 Environmental precautions:

Avoid unnecessary release to the environment. Prevent any material from entering drains or waterways. In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up:

Collect spillage. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Ensure adequate ventilation.

6.4 Reference to other sections

Informationen regarding safe handling see chapter 7.

Informationen regarding personal protection see chapter 8.

Informationen regarding disposal see chapter 13.

7 Handling and storage

7.1 Precautions for safe handling

Ensure that there is adequate ventilation, especially in confined areas.

Open and handle container with care.

Fire prevention:

Keep ignition sources away - Do not smoke. Take precautionary measures against static discharges. Pressurized container. Protect from sunlight and temperatures above 50 °C (eg by Electric lights). Do not open by force or burn even after use. Do not spray in flames or on hot surfaces.

7.2 Conditions for safe storage, including any incompatibilities

Storage

· Requirements for storage rooms and vessels:

Store in a cool place.

Official regulations on storing pressurized containers must be observed.

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly closed.

Not keep the container sealed.

Store in tightly closed containers in a cool, dry place.

Protect from heat and direct sunlight.

Recommended storage temperature: 10-50 °C

Storage class: No data available.

7.3 Specific end use(s) Keep out of reach of children.



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8 Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits		Exposure			
	Country	limit	ml/m ³	mg/m ³	Remarks
64-17-5 Ethanol	D, TRGS 900 UK, WEL F, INRS	AGW	500	960	2(II);DFG, Y
		TWA	1000	1920	8 h
		VME	1000	1900	8 h
		VLE	5000	9500	15 min
106-97-8 Butane	D, TRGS 900 UK, WEL	AGW	1000	2400	4(II);DFG
		TWA	600	1450	8 h
		STEL	750	1810	15 min
		VME	800	1900	8 h
67-63-0 Propan-2-ol	D, TRGS 900 UK, WEL	AGW	200	500	2(II);DFG, Y
		TWA	400	999	8 h
		STEL	500	1250	15 min
		VLE	400	980	15 min
74-98-6 Propane	D, TRGS 900 UK, WEL	AGW	1000	1800	4(II);DFG
		TWA	1000	1800	8 h
75-28-5 Isobutane	D, TRGS 900	AGW	1000	2400	4(II);DFG
Biological limits		Country	mg/l	Remarks	
67-63-0 Propan-2-ol	D, TRGS 903		25	Acetone, Blood, end of shift/exposure	
			25	Acetone, Urine, end of shift/exposure	

8.2 Exposure controls / Personal protection

Use personal protective equipment that is clean and has been properly maintained. Store personal protective equipment in a clean place, away from the work area. Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

Eye / face protection

Avoid contact with eyes. Use eye protectors designed to protect against liquid splashes. Before handling, wear safety goggles with protective sides in accordance with standard EN166. In the event of high danger, protect the face with a face shield. When spraying, wear a face shield in accordance with standard EN166. Prescription glasses are not considered as protection. Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours. Provide eyewash stations in facilities where the product is handled constantly.

Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact. Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374. Gloves must be selected according to the application and duration of use at the workstation. Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended:

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

Recommended properties:

- Impervious gloves in accordance with standard EN374



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Skin protection (other than of the hands)

Work clothing worn by personnel shall be laundered regularly. After contact with the product, all parts of the body that have been soiled must be washed.

Respiratory protection

In case of insufficient ventilation, wear respiratory protective equipment with filter.

Thermal hazards

Pressurised container: May burst if heated.

Exposure controls regarding environmental protection

No data available.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information
- Appearance:
 - Form: Aerosol
 - Colour: green
- Odour: Alcohol
- Smell Threshold: not determined
- pH: not determined
- Change of state
 - Melting point/range: not relevant
 - Boiling point/range: -42.1/-11.7/-0.5 °C (Propane/Isobutane/Butane)
- Flash point: -104/-83/-60 °C (Propane/Isobutane/Butane)
- Flammability (solid, gas): not applicable
- Ignition temperature: 450/460/365 °C (Propane/Isobutane/Butane)
- Thermal decomposition: not relevant
- Autoinflammability: not self-flammable
- Explosion hazard: not determined
- Explosion limits:
 - Lower: 1.7/1.5/1.4 Vol.-% (Propane/Isobutane/Butane)
 - Upper: 10.8/9.4/9.4 Vol.-% (Propane/Isobutane/Butane)
- Vapour pressure at 20 °C: 8.33/3.02/2.08 bar (Propane/Isobutane/Butane)
- Density: not determined
- Bulk density: not determined
- Vapour density: not determined
- Evaporation rate: not determined
- Solubility / miscibility
 - Water: not miscible
- Partition coefficient (n-Octanol/Water): not determined
- Viscosity: not determined
- Oxidising properties: not determined

9.2 Other information

No data available.



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10 Stability and reactivity

10.1 Reactivity Heating may cause a fire or explosion.

10.2 Chemical stability This mixture is stable under the recommended handling and storage conditions in section 7.

10.3 Possibility of hazardous reactions No hazardous reactions when stored under the recommended handling and storage conditions.

10.4 Conditions to avoid:

Sunlight. High temperatures. Keep away from sources of ignition.

10.5 Incompatible materials: Reacts with strong oxidants.

10.6 Hazardous decomposition products: None when used as intended.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

64-17-5	Ethanol		
Oral	LD50	>5000 mg/kg (Rat)	ECHA Dossier
Dermal	LD50	>2000 mg/kg (Rabbit)	SDB extern
Inhalative	LC50	51-124.7 mg/l (Rat, vapour, 4 h)	ECHA Dossier
67-63-0	2-Propanol		
Oral	LD-50	5.84 mg/kg (Rat)	
Dermal	LD-50	16.4 mg/kg (Rabbit)	
Inhalative	LC50	> 10000 mg/l (Rat)	

Skin corrosion/irritation:

Slight irritation is not ruled out, based on the product composition.

Eye damage/irritation:

Causes serious eye irritation.

Sensitisation, respiratory or skin:

No sensitizing effects known.

Carcinogenicity, mutagenicity, and toxicity for reproduction (CMR):

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT), single/repeated exposure:

May cause drowsiness or dizziness.

Aspiration hazard:

Based on available data, the classification criteria are not met.

Additional toxicological information:

Inhalation of concentrated vapors as well as oral intake will lead to anesthesia-like conditions and headache, dizziness, etc. Has a degreasing effect on the skin!



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12 Ecological information

12.1 Toxicity

Aquatic Toxicity:

64-17-5 Ethanol

LC50	14200 mg/l (Pimephales promelas, 96 h)	ECHA Dossier
ErC50	275 mg/l (Chlorella vulgaris, 72 h)	ECHA Dossier
EC50	5012 mg/l (Ceriodaphnia dubia, 48 h)	ECHA Dossier
NOEC	9.6 mg/l (Daphnia magna, 9 d)	ECHA Dossier

67-63-0 2-Propanol

LC50	9640 mg/l	96 h, Fish
EC50	>10000 mg/l	24 h, Daphnia

12.2 Persistence and degradability Readily biodegradable.

64-17-5 Ethanol:

84 % (20 d) Readily biodegradable. ECHA Dossier

67-63-0 2-Propanol

Degradability 53 % (EU Method C.5, 5 d)

12.3 Bioaccumulative potential The product is not bioaccumulative.

64-17-5 Ethanol

Log Pow -0.31

67-63-0 2-Propanol

Log Pow 0.05

12.4 Mobility in soil No data available.

12.5 Results of PBT and vPvB assessment The mixture does not meet the criteria for PBT or vPvB.

12.6 Other adverse effects No data available.

Additional ecological information No data available.

13 Disposal considerations

13.1 Waste treatment methods

Recommendation:

Must not be disposed together with household garbage. Do not empty into drains.

Must be supplied to an authorized hazardous waste incineration plant, after pretreatment, in accordance with regulations for special waste.

European waste catalog

The listed (n) waste number (s) according to the European Waste Catalogue (EWC), are a recommendation. A final decision must be taken in agreement with the regional waste management company.

16 05 04* gases in pressure containers, containing hazardous substances (including halons)

Uncleaned packaging:

Recommendation: Disposal according to official regulations.



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14 Transport information

14.1 UN number

· ADR/RID, ADN, IMDG, ICAO/IATA UN1950

14.2 UN proper shipping name

· ADR/RID, ADN AEROSOLS
IMDG AEROSOLS
· ICAO/IATA AEROSOLS, flammable

14.3 Transport hazard class(es)

· ADR/RID, ADN, IMDG, ICAO/IATA 2.1

Classification code

· ADR/RID, ADN 5F

Special Provisions

· ADR/RID, ADN 190, 327, 344, 625
· IMDG 63, 190, 277, 327, 344, 959
· ICAO/IATA A145, A167, A802

14.4 Packing group

none

14.5 Environmental hazards

none

14.6 Special precautions for user

EmS F-D, S-U

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15 Regulatory information

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

EU-Regulations

None

National Regulations

Germany: Wassergefährdungsklasse (WGK)

Water hazard class: slightly hazardous to water (WGK 1) Classification according to VwVwS

15.2 Chemical safety assessment: No data available



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16 Other information

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Revision notes

* Changes since the last version

Abbreviations

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

Title for H and EUH indications (Number and text)

H220 Extremely flammable gas.

H222 Extremely flammable aerosol.

H225 Highly flammable liquid and vapour.

H229 Pressurised container: May burst if heated.

H280 Contains gas under pressure; may explode if heated.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Methods of evaluating information referred to in Article 9 of Regulation (EC) No 1272/2008 for the purpose of classification

Classification based on the components