

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

- 1.1 Product identifier**
Trade name ÖKO-Marker - 500 ml
Unique formula identifier (UFI)
Article number 5509X (div. Farben)
 55090 (weiß)
 55091 (schwarz)
 55092 (neonpink)
 55093 (neonorange)
 55094 (neonrot)
 55095 (neongelb)
 55096 (neongrün)
 55097 (neonblau)
 55099 (neonviolett)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses General use
 Marking paint
- 1.3 Details of the supplier of the safety data sheet**
 econ-systems GmbH
 Alter Postweg 16
 32469 Petershagen
 Germany
 Telephone: +49(0)5707 / 93 90 1-0
 Telefax: +49(0)5707 / 93 90 1-50
 e-mail: info@econ-systems.de
 Website: www.econ-systems.de
e-mail (competent person) info@econ-systems.de (Michael Otling)
- 1.4 Emergency telephone number**

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture**
Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.3	aerosols	1	Aerosol 1	H222,H229

For full text of abbreviations: see SECTION 16.

- 2.2 Label elements**
Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word danger

Pictograms

GHS02



Hazard statements

H222 Extremely flammable aerosol.
 H229 Pressurised container: May burst if heated.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 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 not expose to temperatures exceeding 50 °C/122 °F.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.





SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Identifier	Name of substance	Wt%	Classification acc. to GHS	Pictograms
CAS No 64-17-5 EC No 200-578-6 Index No 603-002-00-5 REACH Reg. No 01-2119457610-43-xxxx	ethanol	25 - < 50	Flam. Liq. 2 / H225	
CAS No 106-97-8 EC No 203-448-7 Index No 601-004-00-0 REACH Reg. No 01-2119474691-32	butane	25 - < 50	Flam. Gas 1 / H220 Press. Gas L / H280	
CAS No 74-98-6 EC No 200-827-9 Index No 601-003-00-5 REACH Reg. No 01-2119486944-21	propane	10 - < 25	Flam. Gas 1 / H220 Press. Gas L / H280	
CAS No 75-28-5 EC No 200-857-2 Index No 601-004-00-0 REACH Reg. No 01-2119485395-27	isobutane	< 1	Flam. Gas 1 / H220 Press. Gas L / H280	

For full text of abbreviations: see SECTION 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

Flammability hazards

Do not spray on an open flame or other ignition source. Protect from sunlight.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
GB	butane	106-97-8	WEL	600	1,450	750	1,810				EH40/2005
GB	ethanol	64-17-5	WEL	1,000	1,920						EH40/2005

Notation

Ceiling-C

STEL

TWA

ceiling value is a limit value above which exposure should not occur

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
ethanol	64-17-5	DNEL	1,900 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
ethanol	64-17-5	DNEL	343 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
ethanol	64-17-5	DNEL	950 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
ethanol	64-17-5	PNEC	0.96 mg/l	aquatic organisms	freshwater	short-term (single instance)
ethanol	64-17-5	PNEC	580 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

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Explosive limits	
Lower explosion limit (LEL)	2.5 vol%
Upper explosion limit (UEL)	15 vol%
Vapour pressure	4,200 hPa at 20 °C
Density	0.722 – 0.723 g/ml (calculated value)
Vapour density	this information is not available
Solubility(ies)	not determined
Viscosity	not relevant (aerosol)
Explosive properties	none
Oxidising properties	none
9.2 Other information	
Temperature class (EU, acc. to ATEX)	T3 (maximum permissible surface temperature on the equipment: 200°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Do not spray on an open flame or other ignition source. Keep away from heat.

Hints to prevent fire or explosion

Protect from sunlight.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

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Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

List of wastes, (Recommendations)

Product residues

16 05 04* Gases in pressure containers (including halons) containing dangerous substances

Packagings

15 01 04 Metallic packaging

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

- | | | |
|------|--------------------------------------------------------------------|------------------------------------------------------------------------------|
| 14.1 | UN number | 1950 |
| 14.2 | UN proper shipping name | AEROSOLS |
| 14.3 | Transport hazard class(es) | |
| | Class | 2 (gases) (aerosol) |
| | Subsidiary risk(s) | 2.1 (flammable) |
| 14.4 | Packing group | not assigned to a packing group |
| 14.5 | Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 | Special precautions for user | |
| | | Provisions for dangerous goods (ADR) should be complied within the premises. |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |
| | | The cargo is not intended to be carried in bulk. |

Information for each of the UN Model Regulations

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Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number 1950
Proper shipping name AEROSOLS
Class 2
Classification code 5F
Danger label(s) 2.1



Special provisions (SP) 190, 327, 344, 625
Excepted quantities (EQ) E0
Limited quantities (LQ) 1 L
Transport category (TC) 2
Tunnel restriction code (TRC) D

International Maritime Dangerous Goods Code (IMDG)

UN number 1950
Proper shipping name AEROSOLS
Class 2.1
Marine pollutant -
Danger label(s) 2.1



Special provisions (SP) 63, 190, 277, 327, 344, 381, 959
Excepted quantities (EQ) E0
Limited quantities (LQ) 1 L
EmS F-D, S-U
Stowage category -

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number 1950
Proper shipping name Aerosols, flammable
Class 2.1
Danger label(s) 2.1



Special provisions (SP) A145, A167
Excepted quantities (EQ) E0
Limited quantities (LQ) 30 kg

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

none of the ingredients are listed

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

none of the ingredients are listed

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

List of pollutants (WFD)			
Name of substance	CAS No	Listed in	Remarks
ethanol		A)	

Legend

A) Indicative list of the main pollutants

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National inventories

Country	Inventory	Status
EU	REACH Reg.	not all ingredients are listed

Legend

REACH Reg. REACH registered substances

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
3.2		Description of the mixture: change in the listing (table)	yes
15.1	Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD): none of the ingredients are listed	Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)	yes
15.1		List of pollutants (WFD): change in the listing (table)	yes
16		Abbreviations and acronyms: change in the listing (table)	yes
16		List of relevant phrases (code and full text as stated in chapter 2 and 3): change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations.
ADN.	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways).
ADR.	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road).
CAS.	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances).
Ceiling-C.	Ceiling value.
CLP.	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
DGR.	Dangerous Goods Regulations (see IATA/DGR).
DNEL.	Derived No-Effect Level.
EC No.	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union).
EH40/2005.	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/).
EINECS.	European Inventory of Existing Commercial Chemical Substances.
ELINCS.	European List of Notified Chemical Substances.
EmS.	Emergency Schedule.
Flam. Gas.	Flammable gas.
Flam. Liq.	Flammable liquid.
GHS.	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations.
IATA.	International Air Transport Association.
IATA/DGR.	Dangerous Goods Regulations (DGR) for the air transport (IATA).
ICAO.	International Civil Aviation Organization.
IMDG.	International Maritime Dangerous Goods Code.
Index No.	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008.
MARPOL.	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant").
NLP.	No-Longer Polymer.
PBT.	Persistent, Bioaccumulative and Toxic.
PNEC.	Predicted No-Effect Concentration.
Ppm.	Parts per million.
Press. Gas.	Gas under pressure.
REACH.	Registration, Evaluation, Authorisation and Restriction of Chemicals.
RID.	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail).
STEL.	Short-term exposure limit.
SVHC.	Substance of Very High Concern.
TWA.	Time-weighted average.
VPvB.	Very Persistent and very Bioaccumulative.
WEL.	Workplace exposure limit.

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

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Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

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.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.