

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

Printing date 24.04.2017

V - 7

Revision: 24.04.2017

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

- **1.1 Product identifier**
- **Trade name:** VIGON® EFM Aerosol
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Cleaning agent/ Cleaner
- **Uses advised against** None
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
ZESTRON  
...a Business Division of Dr.O.K.Wack Chemie GmbH  
Bunsenstrasse 6  
D - 85053 Ingolstadt  
Tel. +49 841 63590 Fax +49 841 63540  
www.zestron.com  
info@ZESTRON.com  
  
BLT Circuit Services Ltd  
Brome Industrial Estate  
GB - IP23 7HN Eye, Suffolk  
Phone +44 1379 870 870 Fax +44 1379 870 970  
www.bltcircuitservices.co.uk  
sales@blt.keme.co.uk
- **Further information obtainable from:** Safety department
- **1.4 Emergency telephone number:** During business hours: +49 841 63523

**SECTION 2: Hazards identification**

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



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.  
STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS02, GHS07, GHS09
- **Signal word** Danger
- **Hazard-determining components of labelling:**  
Naphtha (petroleum), hydrotreated light
- **Hazard statements**  
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.  
H315 Causes skin irritation.

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H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

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

P280 Wear protective gloves / eye protection.

P273 Avoid release to the environment.

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

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

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

· **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 the substances with nonhazardous additions.

· **Dangerous components:**

EC number: 921-024-6 Reg.nr.: 01-2119475514-35	Naphtha (petroleum), hydrotreated light ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	25-50%
CAS: 74-98-6 EINECS: 200-827-9	propane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	20-50%
CAS: 106-97-8 EINECS: 203-448-7	butane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	20-50%
CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 02-2119752543-38-0000 01-2119457558-25-xxxx	propan-2-ol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	5-<10%
CAS: 107-98-2 EINECS: 203-539-1 Reg.nr.: 01-2119457435-35	1-methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	1-5%

· **SVHC** None

· **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**

· **General information:**

Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately remove any clothing soiled by the product.

Immediately wash with water and soap and rinse thoroughly.

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- If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:** Do not induce vomiting; call for medical help immediately.
  - **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:**  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.  
Alcohol resistant foam
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Keep away from ignition sources.
- **6.2 Environmental precautions:**  
Do not allow to penetrate the ground/soil.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb liquid components with liquid-binding material.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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.
- **Information about fire - and explosion protection:**  
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.  
Do not spray onto a naked flame or any incandescent material.
- **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.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
- **7.3 Specific end use(s)** No further relevant information available.

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

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

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

**106-97-8 butane**

WEL	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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**67-63-0 propan-2-ol**

WEL	Short-term value: 1250 mg/m <sup>3</sup> , 500 ppm Long-term value: 999 mg/m <sup>3</sup> , 400 ppm
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**107-98-2 1-methoxy-2-propanol**

WEL	Short-term value: 560 mg/m <sup>3</sup> , 150 ppm Long-term value: 375 mg/m <sup>3</sup> , 100 ppm Sk
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· **DNELs**

**Naphtha (petroleum), hydrotreated light**

Inhalative	DNEL system. effects (long-term)	2035 mg/m <sup>3</sup> (Worker)
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**67-63-0 propan-2-ol**

Inhalative	DNEL local effects (long-term)	500 mg/m <sup>3</sup> (Worker)
	DNEL system. effects (long-term)	89 mg/m <sup>3</sup> (Consumer)

· **PNECs**

**67-63-0 propan-2-ol**

PNEC	140.9 mg/l (fresh water)
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- **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **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.  
Avoid contact with the eyes and skin.

- **Respiratory protection:** Not necessary if room is well-ventilated.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Nitrile rubber, NBR

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

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application.

· **Penetration time of glove material**

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

· **Eye protection:** Tightly sealed goggles**SECTION 9: Physical and chemical properties**· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

**Form:** Aerosol  
**Colour:** Colourless  
Clear

· **Odour:** Specific type· **Odour threshold:** Not determined· **pH-value:** Void· **Change in condition****Melting point/freezing point:** Undetermined.**Initial boiling point and boiling range:** -44 °C· **Flash point:** -97 °C· **Ignition temperature:** 425 °C· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.· **Explosion limits:**

**Lower:** 1.7 Vol %  
**Upper:** 10.9 Vol %

· **Vapour pressure at 20 °C:** 8300 hPa· **Density:** Not determined.· **Solubility in / Miscibility with water:**

Insoluble.

· **Viscosity:****Dynamic:** Not determined**Kinematic:** Not determined· **9.2 Other information** No further relevant information available.**SECTION 10: Stability and reactivity**· **10.1 Reactivity** No further relevant information available.· **10.2 Chemical stability**· **Thermal decomposition / conditions to be avoided:**

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.· **10.4 Conditions to avoid** No further relevant information available.

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- **10.5 Incompatible materials:** Store away from oxidising agents.
- **10.6 Hazardous decomposition products:**  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

**Naphtha (petroleum), hydrotreated light**

Oral	LD50	>5840 mg/kg (rat)
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**106-97-8 butane**

Inhalative	LC50/4 h	658 mg/l (rat)
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**67-63-0 propan-2-ol**

Oral	LD50	5840 mg/kg (rat) (OECD Prüfrichtlinie 401)
Dermal	LD50	13900 mg/kg (rabbit) (OECD Prüfrichtlinie 402)
Inhalative	LC50/6 h	> 25 mg/l (rat) (OECD Prüfrichtlinie 403)

**107-98-2 1-methoxy-2-propanol**

Oral	LD50	7200 mg/kg (rat)
Dermal	LD50	13000 mg/kg (rabbit)
Inhalative	LC50	4600 - 10000 mg/l (leuciscus idus)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

- **12.1 Toxicity**

- **Aquatic toxicity:**

**67-63-0 propan-2-ol**

LC50/96h	9640 mg/l (Pimephales promelas)
EC50/72h	> 100 mg/l (Scenedesmus subspicatus)
LC50/24h	9714 mg/l (daphnia magna)
EC50	> 100 mg/l (Bacteria)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.

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- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
  - **Recommendation** Disposal must be made according to official regulations.
- |   |
|---|
| · <b>European waste catalogue</b>   |
| 16 05 04* gases in pressure containers (including halons) containing hazardous substances |
- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1950
- **14.2 UN proper shipping name**
- **ADR** 1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
- **IMDG** AEROSOLS (Naphtha (petroleum), hydrotreated light),
- **IATA** MARINE POLLUTANT AEROSOLS, flammable
- **14.3 Transport hazard class(es)**
- **ADR**
- **Class** 2 5F Gases.
- **Label** 2.1
- **IMDG, IATA**
- **Class** 2.1
- **Label** 2.1
- **14.4 Packing group**
- **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:** Product contains environmentally hazardous substances:  
Naphtha (petroleum), hydrotreated light
- **Marine pollutant:** Yes  
Symbol (fish and tree)
- **Special marking (ADR):** Symbol (fish and tree)

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<ul style="list-style-type: none"><li>· <b>14.6 Special precautions for user</b></li><li>· <b>Danger code (Kemler):</b></li><li>· <b>EMS Number:</b></li><li>· <b>Stowage Code</b></li> <li>· <b>Segregation Code</b></li></ul>	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. 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.
<ul style="list-style-type: none"><li>· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li></ul>	Not applicable.
<ul style="list-style-type: none"><li>· <b>Transport/Additional information:</b></li></ul>	
<ul style="list-style-type: none"><li>· <b>ADR</b></li><li>· <b>Limited quantities (LQ)</b></li><li>· <b>Excepted quantities (EQ)</b></li> <li>· <b>Transport category</b></li><li>· <b>Tunnel restriction code</b></li></ul>	1L Code: E0 Not permitted as Excepted Quantity 2 D
<ul style="list-style-type: none"><li>· <b>IMDG</b></li><li>· <b>Limited quantities (LQ)</b></li><li>· <b>Excepted quantities (EQ)</b></li></ul>	1L Code: E0 Not permitted as Excepted Quantity
<ul style="list-style-type: none"><li>· <b>UN "Model Regulation":</b></li></ul>	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**  
P3a FLAMMABLE AEROSOLS  
E2 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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.

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· **Relevant phrases**

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

- Flam. Gas 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas C: Gases under pressure – Compressed gas
- Flam. Liq. 2: Flammable liquids – Category 2
- Flam. Liq. 3: Flammable liquids – Category 3
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- 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

· **\* Data compared to the previous version altered.**