

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

Printing date 02.04.2017

Version number 7

Revision: 02.04.2017

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

- **1.1 Product identifier**
- **Trade name:** BRUNOX® Top-Lock® (AEROSOL)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category**
PC2 Adsorbents
PC14 Metal surface treatment products
PC24 Lubricants, greases, release products
- **Process category**
PROC7 Industrial spraying
PROC11 Non industrial spraying
PROC17 Lubrication at high energy conditions in metal working operations
PROC18 General greasing /lubrication at high kinetic energy conditions
- **Environmental release category**
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
- **Application of the substance / the mixture**
Hightec spray for metal fittings
Lubricant
Anticorrosion additive
Screw loosening agent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BRUNOX Korrosionsschutz GmbH
Adlzreiterstrasse 13, 85051 Ingolstadt
Postfach 100127 , 85001 Ingolstadt

Tel. + 49/ (0) 841 961 29 04
Fax + 49/ (0) 841 961 29 13
E-mail: office@brunox.com
www.brunox.com

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Trade name: BRUNOX® Top-Lock® (AEROSOL)

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BRUNOX AG
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CH - 8732 Neuhaus/SGTel. +41/ (0)55 285 80 80
Fax +41/ (0)55 285 80 81E-mail: office@brunox.com
www.brunox.swiss· **Further information obtainable from:** Abteilung Produktsicherheit: Tel. +41/ (0)79 372 34 44· **1.4 Emergency telephone number:**

Toxikologisches Informationszentrum

CH - 8030 Zürich, Freiestrasse 16

Tel. +41/ 044 251 51 51

Notruf - CH, STIZ : 145

Notruf - D - : Giftnotrufzentrale 030 19240

Notruf - BE - : 070 -245 245

EUROPÄISCHE NOTRUFNR. : 112

Notruf - GB - : 844 892 0111

Notruf - IE - : + 353 1 837 9964 (medical professionals); + 353 1 809 2166 (public)

Notruf - IS - : + 354 543 22 22

Notruf - JP - : + 81 72 727 2499; + 81 29 852 9999

Notruf - NZ - : 0800 764 766

Notruf - PK - : + 92 21 9920509; + 92 21 35686535

Notruf - PH - : + 632 524 10 78; + 632 544 84 00; local 2311

Notruf - SA - : + 966 146 77 353, + 966 3 8155 646; Ext. 280, 282, 283

Notruf - TH - : + 66 201 1086

Notruf - UAE - : 800 424

Notruf - ZA - : + 27 824 910 160

SECTION 2: Hazards identification· **2.1 Classification of the substance or mixture**· **Classification according to Regulation (EC) No 1272/2008**

GHS02 flame

Aerosol 2 H223-H229 Flammable aerosol. Pressurised container: May burst if heated.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

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

The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms

GHS02

· Signal word Warning**· Hazard-determining components of labelling:**

Distillates (petroleum), hydrotreated light

· Hazard statements

H223-H229 Flammable aerosol. 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.

P103 Read label before use.

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.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

· 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: 64742-47-8	Distillates (petroleum), hydrotreated light	50-100%
EINECS: 265-149-8	⚠ Asp. Tox. 1, H304	
Reg.nr.: 01-2119456620-43-XXXX		
CAS: 68608-26-4	sulfonic acids, petroleum, sodium salts	2.5-<10%
Reg.nr.: 01-2119527859-22-XXXX	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 124-38-9	carbon dioxide	2.5-<10%
EINECS: 204-696-9	⚠ Press. Gas (Liq.), H280	
CAS: 123-95-5	Dermol BS	0.1-≤2%
EINECS: 204-666-5	substance with a Community workplace exposure limit	

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- **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:** Seek medical treatment.
- **After inhalation:**
Take affected persons into fresh air and keep quiet.
Seek medical treatment in case of complaints.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**
Nausea
Headache
Dizziness
Gastric or intestinal disorders
- **Hazards** Danger of pneumonia.
- **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed or in case of vomiting, danger of entering the lungs.
Later observation for pneumonia and pulmonary oedema.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Foam
Fire-extinguishing powder
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources.
Wear protective equipment. Keep unprotected persons away.

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- **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:** 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**
Keep away from heat and direct sunlight.
Use only in well ventilated areas.
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Use explosion-proof apparatus / fittings and spark-proof tools.
Keep ignition sources away - Do not smoke.
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 only in the original receptacle.
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidising agents.
- **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Store under lock and key and out of the reach of children.
Keep container tightly sealed.
- **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.

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· 8.1 Control parameters**· Ingredients with limit values that require monitoring at the workplace:****CAS: 124-38-9 carbon dioxide**WEL (Great Britain) Short-term value: 27400 mg/m³, 15000 ppm
Long-term value: 9150 mg/m³, 5000 ppmWES (Australia) Short-term value: 54000 mg/m³, 30000 ppm
Long-term value: 9000 *22500 mg/m³, 5000 *12500 ppm
*in coal minesWES (New Zealand) Short-term value: 54000 mg/m³, 30000 ppm
Long-term value: 9000 mg/m³, 5000 ppm**CAS: 123-95-5 Dermol BS**WES (New Zealand) Long-term value: 10* mg/m³
*inhalable dust: no asbestos, <1% free silica**· Additional information:** The lists valid during the making were used as basis.**· 8.2 Exposure controls****· Personal protective equipment:****· General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· Respiratory protection:

Filter A/P2

Filter AX

· Protection of hands:

Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.

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

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 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: Not required.

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SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - **Form:** Aerosol
 - **Colour:** Clear
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
 - **Melting point/freezing point:** Undetermined.
 - **Initial boiling point and boiling range:** 175 °C (347 °F)
- **Flash point:** 79 °C (174 °F)
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 210 °C (410 °F)
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Not determined.
- **Explosion limits:**
 - **Lower:** 0.5 Vol %
 - **Upper:** 6.5 Vol %
- **Vapour pressure at 20 °C (68 °F):** 2 hPa (2 mm Hg)
- **Density at 20 °C (68 °F):** 0.83 g/cm³ (6.926 lbs/gal)
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
 - **Dynamic at 20 °C (68 °F):** 6 mPas
 - **Kinematic:** Not determined.
- **Solvent content:**
 - **Organic solvents:** 0.5 %
 - **VOC (EC)** 0.00 %
 - **Solids content:** 2.0 %

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- **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:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Danger of bursting.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide
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:**
CAS: 123-95-5 Dermol BS
Oral LD50 32000 mg/kg (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Bei längeren und/oder häufigem Hautkontakt sind Reizerscheinungen möglich.
Prolonged skin contact will result in defatting of the skin, leading to irritation, and in some cases, dermatitis.
- **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** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** insoluble in water
- **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.
- **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**
Must be specially treated adhering to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**
HP 3 Flammable
HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR/RID/ADN, IMDG, IATA** UN1950
- **14.2 UN proper shipping name**
- **ADR/RID/ADN** 1950 AEROSOLS
- **IMDG** AEROSOLS
- **IATA** AEROSOLS, flammable
- **14.3 Transport hazard class(es)**
- **ADR/RID/ADN**



- **Class** 2 5F Gases.

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· Label	2.1
· IMDG, IATA	
	
· Class	2.1
· Label	2.1
· 14.4 Packing group	
· ADR/RID/ADN, IMDG, IATA	Void
· 14.5 Environmental hazards:	
· Marine pollutant:	NEIN No
· 14.6 Special precautions for user	Warning: Gases.
· Danger code (Kemler):	-
· EMS Number:	F-D,S-U
· Stowage Code	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.
· Segregation Code	
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· Transport category	2
· Tunnel restriction code	D
· IMDG	
· Limited quantities (LQ)	1L

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- **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity
- **IATA** IATA/ICAO-PAX: 203
IATA/ICAO-CAO: 203
- **UN "Model Regulation":** UN 1950 AEROSOLS, 2.1

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** P3b FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **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**
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.
- **Department issuing SDS:** Abteilung Produktsicherheit
- **Contact:** siehe Seite 1 / see page 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 européen sur le transport 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)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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Aerosol 2: Aerosols – Category 2
Press. Gas (Liq.): Gases under pressure – Liquefied gas
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1

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

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