

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

Printing date 01.02.2021

Version number 2

Revision: 05.02.2020

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

- **1.1 Product identifier**
- **Trade name:** **BRUNOX® Bremsenreiniger 500ml**
- **Article number:** BR0,50TCLEAN
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Sector of Use**
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC9a Coatings and paints, thinners, paint removers
- **Process category**
PROC7 Industrial spraying
PROC11 Non industrial spraying
- **Application of the substance / the mixture** Cleaner solvent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BRUNOX Korrosionsschutz GmbH
Adlzreiterstrasse 13
DE – 85051 Ingolstadt
Tel. + 49 / (0) 841 961 29 04
Fax + 49 / (0) 841 961 29 04
E-mail: office@brunox.com

BRUNOX AG
Tunnelstrasse 6
CH – 8732 Neuhaus
Tel. + 41 / (0) 55 285 80 80
Fax + 41 / (0) 55 285 80 81
E-mail: office@brunox.com
- **Further information obtainable from:**
Abteilung Produktesicherheit, während den Bürozeiten; Tel. + 49 / (0) 841 961 29 04
- **1.4 Emergency telephone number:**
Toxikologisches Informationszentrum
CH – 8030 Zürich, Freiestrasse 16
Tel. + 41 / (0) 44 251 51 51

Notruf – CH (STIZ): 145
Notruf – AT: 01 4064343
Notruf – BE: 070 – 245 245
Notruf – DE: Giftnotrufzentrale 030 19240
Europäische Notrufnr.: 112

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.

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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:**

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

· **Hazard statements**

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

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

· **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.

P260 Do not breathe spray.

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

P501 Dispose of contents / container in accordance with regional regulations.

· **Additional information:**

Buildup of explosive mixtures possible without sufficient ventilation.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

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

· **Dangerous components:**

EC number: 921-024-6 Reg.nr.: 01-2119475514-35	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	75-≤100%
	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Skin Irrit. 2, H315; STOT SE 3, H336	

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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 (Comp.), H280	5-<10%
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	2.5-<5%
CAS: 124-38-9 EINECS: 204-696-9	carbon dioxide ⚠ Press. Gas (Liq.), H280	2.5-<5%
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	<2.5%

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

aliphatic hydrocarbons	≥30%
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· **Additional information:**

The content of Benzene (EINECS-Nr. 200-753-7) in the ingredients is less than 0,1% (Note P Annex IA 1272/2008 EU), so the classification as carcinogen need not to apply.
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.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor 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:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters -**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
- **6.2 Environmental precautions:**
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:**
Dispose contaminated material as waste according to item 13.

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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.

Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

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.

· **Storage class:** 2 B

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Additional information about design of technical facilities:** No further data; see item 7.

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

106-97-8 butane

WEL	Short-term value: 1810 mg/m ³ , 750 ppm
	Long-term value: 1450 mg/m ³ , 600 ppm
	Carc (if more than 0.1% of buta-1.3-diene)

124-38-9 carbon dioxide

WEL	Short-term value: 27400 mg/m ³ , 15000 ppm
	Long-term value: 9150 mg/m ³ , 5000 ppm

· **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.

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.

Filter A2/P3

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· **Protection of hands:**

Protective gloves

· **Material of gloves**

Butyl rubber, BR

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.

· **Penetration time of glove material**

Butyl rubber gloves with a thickness of 0.4 mm are resistant to:

Acetone: 480 min

Butyl acetate: 60 min

Ethyl acetate: 170 min

Xylene: 42 min

Butyl rubber gloves with a thickness of 0.4 mm are solvent resistant for 42- 480 minutes. As protective measure, we recommend that users and responsible persons for work safety assume solvent resistance length of 42 minutes. Considering the data in section 3 of this SDS, one can assume longer resistance length in particular cases.

· **Eye protection:** Not required.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Aerosol
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	Not applicable, as aerosol.

· **Flash point:** Not applicable, as aerosol.· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:** 470 °C (878 °F)· **Decomposition temperature:** Not determined.· **Explosive properties:** Not determined.· **Explosion limits:**

· Lower:	1.7 Vol %
· Upper:	12 Vol %

· **Density at 20 °C (68 °F):** 0.7 g/cm³ (5.8 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.

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· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	96.9 %
VOC (EC)	---
	678.6 g/l
· VOC-EU%	96.94 %
· Solids content:	0.0 %
· 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** 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 toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

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

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50 / 4 h	>20 mg/m ³ (rat)

- **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.
- **Additional toxicological information:**
- **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.

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

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

EC50 / 48 h 3 mg/l (daphnia magna / Wasserfloh)

EC50 / 72 h 30 mg/l (Pseudokirchneriella Subcapitata)

LC50 / 96 h 11.4 mg/l (oncorhynchus mykiss / Regenbogenforelle)

· **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.

· Ecotoxicological effects:

· **Remark:** Toxic for 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.

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

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

08 01 11* waste paint and varnish containing organic solvents or other hazardous substances

15 01 04 metallic packaging

15 01 10* packaging containing residues of or contaminated by hazardous substances

· Uncleaned packaging:

· Recommendation:

Disposal must be made according to official regulations.

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, MARINE POLLUTANT

· IATA

AEROSOLS, flammable

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· 14.3 Transport hazard class(es)

· ADR



· Class 2 5F Gases.
· Label 2.1

· IMDG



· Class 2.1
· Label 2.1

· IATA



· Class 2.1
· Label 2.1

· 14.4 Packing group

· ADR, IMDG, IATA not regulated

· 14.5 Environmental hazards:

· Marine pollutant: Yes
Symbol (fish and tree)

· Special marking (ADR): Symbol (fish and tree)

· 14.6 Special precautions for user

· Hazard identification number (Kemler code):

Warning: Gases.

· EMS Number:

-

· Stowage Code

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 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E0

· Transport category

Not permitted as Excepted Quantity

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· Tunnel restriction code	D
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	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
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **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.

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **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.**
- H304 **May be fatal if swallowed and enters airways.**
- H315 **Causes skin irritation.**
- H336 **May cause drowsiness or dizziness.**
- H411 **Toxic to aquatic life with long lasting effects.**

· **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)*
- IATA-DGR: *Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*
- ICAO: *International Civil Aviation Organisation*
- ICAO-TI: *Technical Instructions by the "International Civil Aviation Organisation" (ICAO)*
- 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)*
- VOC: *Volatile Organic Compounds (USA, EU)*

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*LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**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**Skin Irrit. 2: Skin corrosion/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.*

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