

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.11.2010

Revision: 30.11.2010

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

· **Product identifier**

· **Trade name:** BRUNOX® IX 100 - Spray

· **Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the preparation**

High-Tec-long-term corrosion inhibitor Sealing  
Anticorrosion additive

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

BRUNOX Korrosionsschutz GmbH  
Postfach 100127  
85001 Ingolstadt

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

·  
BRUNOX AG  
Tunnelstrasse 6  
CH - 8732 Neuhaus/SG

Tel. +41/ (0)55 285 80 80  
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· **Further information obtainable from:** Abteilung Produktsicherheit: Tel. +41/ (0)79 372 34 44

· **Emergency telephone number:**

Toxikologisches Informationszentrum  
CH - 8030 Zürich, Freiestrasse 16  
Tel. +41/ 044 251 51 51

Notruf - CH - : 145                      Notruf - D - : Giftnotrufzentrale 030 19240  
Notruf - AT - : 01 4064343              EUROPÄISCHE NOTRUFNR. : 112

### 2 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Aerosol 1 H222 Extremely flammable aerosol.

Aquatic Chronic 4 H413 May cause long lasting harmful effects to aquatic life.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Irritant

R38: Irritating to skin.



F+; Extremely flammable

R12: Extremely flammable.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.  
Warning! Pressurized container.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**Label elements****Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

**Code letter and hazard designation of product:**

Xi Irritant

F+ Extremely flammable

N Dangerous for the environment

**Hazard-determining components of labelling:**

Stoddard solvent  
Naphtha (petroleum), hydrotreated heavy

**Risk phrases:**

12 Extremely flammable.

38 Irritating to skin.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases:**

2 Keep out of the reach of children.

16 Keep away from sources of ignition - No smoking.

23 Do not breathe aerosol.

25 Avoid contact with eyes.

36 Wear suitable protective clothing.

51 Use only in well-ventilated areas.

**Special labelling of certain preparations:**

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

Buildup of explosive mixtures possible without sufficient ventilation.

**Classification in accordance with Directive 75/324/EEC: Extremely flammable****Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.

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#### · **Dangerous components:**

CAS: 68512-91-4	Hydrocarbons, C3-4-rich, petroleum distillate	50-100%
EINECS: 270-990-9	 F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	
CAS: 8052-41-3	Stoddard solvent	10-25%
EINECS: 232-489-3	 Xn R65;  Xi R36/38 R10-52  Asp. Tox. 1, H304	
CAS: 64742-47-8	Distillates (petroleum), hydrotreated light	2.5-10%
EINECS: 265-149-8	 Xn R65 R10-66  Asp. Tox. 1, H304	
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	2.5-10%
EINECS: 265-150-3	 Xn R65 R10-66  Asp. Tox. 1, H304	
CAS: 110-82-7	cyclohexane	2.5-10%
EINECS: 203-806-2	 Xn R65;  Xi R38;  F R11;  N R50/53 R67  Flam. Liq. 2, H225;  Asp. Tox. 1, H304;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Skin Irrit. 2, H315; STOT SE 3, H336	
CAS: 107-98-2	1-methoxy-2-propanol	≤2.0%
EINECS: 203-539-1	R10  Flam. Liq. 3, H226	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

## 4 First aid measures

#### · **Description of first aid measures**

##### · **After inhalation:**

In case of unconsciousness place patient stably in side position for transportation.

##### · **After skin contact:**

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

##### · **After eye contact:** Rinse opened eye for several minutes under running water.

##### · **After swallowing:** If symptoms persist consult doctor.

##### · **Information for doctor:**

##### · **Most important symptoms and effects, both acute and delayed**

Nausea

Headache

Dizziness

##### · **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

#### · **Extinguishing media**

· **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

#### · **Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

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Carbon monoxide (CO)

- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### **6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**

Keep away from ignition sources.

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

- **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.

- **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

- **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.

### **7 Handling and storage**

- **Handling:**

- **Precautions for safe handling**

Use only in well ventilated areas.

Keep away from heat and direct sunlight.

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

- **Information about fire - and explosion protection:**

Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurized 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.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

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

Store only in the original receptacle.

Store in a cool location.

Observe official regulations on storing packagings with pressurized containers.

- **Information about storage in one common storage facility:** Store away from oxidizing agents.

- **Further information about storage conditions:**

Store receptacle in a well ventilated area.

Store under lock and key and out of the reach of children.

Keep container tightly sealed.

Do not seal receptacle gas tight.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

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

## 8 Exposure controls/personal protection

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

- **Control parameters**

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

**8052-41-3 Stoddard solvent**OEL (Ireland) 573 mg/m<sup>3</sup>, 100 ppm**110-82-7 cyclohexane**OEL (Ireland) Short-term value: 1030 mg/m<sup>3</sup>, 300 ppm  
Long-term value: 340 mg/m<sup>3</sup>, 100 ppm  
IOELVWEL (Great Britain) Short-term value: 1050 mg/m<sup>3</sup>, 300 ppm  
Long-term value: 350 mg/m<sup>3</sup>, 100 ppm**107-98-2 1-methoxy-2-propanol**OEL (Ireland) Short-term value: 368 mg/m<sup>3</sup>, 100 ppm  
Long-term value: 184 mg/m<sup>3</sup>, 50 ppm  
IOELVWEL (Great Britain) Short-term value: 560 mg/m<sup>3</sup>, 150 ppm  
Long-term value: 375 mg/m<sup>3</sup>, 100 ppm  
Sk

- **Additional information:** The lists valid during the making were used as basis.

- **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:** Filter AX

- **Protection of hands:**



Protective gloves

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.

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- **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

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Aerosol
<b>Colour:</b>	Light brown
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	120°C

- **Flash point:** 41°C

- **Ignition temperature:** 210°C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

<b>Lower:</b>	1.1 Vol %
<b>Upper:</b>	6.0 Vol %

- **Vapour pressure at 20°C:** 2 hPa

- **Density at 20°C:** 0.886 g/cm<sup>3</sup>

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

- **Segregation coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

<b>Dynamic at 20°C:</b>	800 mPas
<b>Kinematic:</b>	Not determined.

- **Solvent content:**

<b>Organic solvents:</b>	7.0 %
<b>VOC (EC)</b>	0.00 %

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**· Other information**

No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Starke Oxidationsmittel/strong oxidising agent
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:**  
**64742-48-9 Naphtha (petroleum), hydrotreated heavy**  
Oral LD50 >5000 mg/kg (rat)  
Dermal LD50 >3000 mg/kg (rab)  
**110-82-7 cyclohexane**  
Oral LD50 12705 mg/kg (rat)
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant

## 12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **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

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- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**  
20 01 26\* oil and fat other than those mentioned in 20 01 25  
20 01 40 metals
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 2 5F Gases.
- **Danger code (Kemler):** -
- **UN-Number:** 1950
- **Packaging group:** -
- **Hazard label:** 2.1
- **Special marking:** Symbol (fish and tree)
- **UN proper shipping name:** 1950 AEROSOLS
- **Tunnel restriction code** D

- **Maritime transport IMDG:**



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** Yes  
Symbol (fish and tree)

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- **Proper shipping name:** AEROSOLS
- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Label:** 2.1
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS, flammable
- **UN "Model Regulation":** UN1950, AEROSOLS, 2.1
- **Special precautions for user:** Warning: Gases.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**



Xi Irritant  
F+ Extremely flammable  
N Dangerous for the environment

- **Hazard-determining components of labelling:**  
Stoddard solvent  
Naphtha (petroleum), hydrotreated heavy
- **Risk phrases:**  
12 Extremely flammable.  
38 Irritating to skin.  
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**  
2 Keep out of the reach of children.  
16 Keep away from sources of ignition - No smoking.  
23 Do not breathe aerosol.  
25 Avoid contact with eyes.  
36 Wear suitable protective clothing.  
51 Use only in well-ventilated areas.
- **Special labelling of certain preparations:**  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.  
Do not pierce or burn, even after use.  
Do not spray on a naked flame or any incandescent material.  
Buildup of explosive mixtures possible without sufficient ventilation.
- **Classification in accordance with Directive 75/324/EEC:** Extremely flammable

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- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### **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.
- 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.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- R10 Flammable.
- R11 Highly flammable.
- R12 Extremely flammable.
- R36/38 Irritating to eyes and skin.
- R38 Irritating to skin.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52 Harmful to aquatic organisms.
- R65 Harmful: may cause lung damage if swallowed.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.

- **Department issuing MSDS:** Abteilung Produktsicherheit

- **Contact:** siehe Seite 1 / see page 1

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent