

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/30/2010

Reviewed on 11/30/2010

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
Fax +41/ (0)55 285 80 81
E-mail: office@brunox.com

· **Information department:** 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 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

68512-91-4	Hydrocarbons, C3-4-rich, petroleum distillate	50-100%
	⚠ H220; ⚠ H280	
8052-41-3	Stoddard solvent	10-25%
	⚠ H304	
64742-47-8	Distillates (petroleum), hydrotreated light	2.5-10%
	⚠ H304	
64742-48-9	Naphtha (petroleum), hydrotreated heavy	2.5-10%
	⚠ H304	
110-82-7	cyclohexane	2.5-10%
	⚠ H225; ⚠ H304; ⚠ H400; H410; ⚠ H315; H336	
107-98-2	1-methoxy-2-propanol	≤2.0%
	⚠ H226	

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3 Hazards identification**· Classification of the substance or mixture**

GHS02 Flame

H222 Extremely flammable aerosol.

H413 May cause long lasting harmful effects to aquatic life.

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

Irritant

Irritating to skin.



Extremely flammable

Extremely flammable.



Dangerous for the environment

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

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of international guidelines.

Warning! Pressurized container.

· Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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

The product has been classified and marked in accordance with directives on hazardous materials.

· Code letter and hazard designation of product:

Irritant

Extremely flammable

Dangerous for the environment

· Hazard-determining components of labelling:

Stoddard solvent

Naphtha (petroleum), hydrotreated heavy

· Risk phrases:

Extremely flammable.

Irritating to skin.

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

· Safety phrases:

Keep out of the reach of children.

Keep away from sources of ignition - No smoking.

Do not breathe aerosol.

Avoid contact with eyes.

Wear suitable protective clothing.

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, i.e. electric lights. Do not pierce or burn, even after use.

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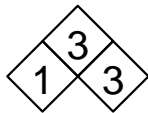
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Do not spray on a naked flame or any incandescent material.
Buildup of explosive mixtures possible without sufficient ventilation.

- **Classification in accordance with Directive 75/324/EEC:** Extremely flammable
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 3

- **HMIS-ratings (scale 0 - 4)**

HEALTH	1
FIRE	3
REACTIVITY	3

Health = 1
Fire = 3
Reactivity = 3

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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:** CO₂, 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:
Carbon monoxide (CO)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

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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 protection against explosions and fires:

Do not spray on 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 receptacle tightly sealed.

Do not gas tight seal receptacle.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

· Specific end use(s) No further relevant information available.**8 Exposure controls/personal protection****· Additional information about design of technical systems:** No further data; see item 7.

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Control parameters**Components with limit values that require monitoring at the workplace:****8052-41-3 Stoddard solvent**

PEL 2900 mg/m³, 500 ppm
REL Short-term value: C 1800* mg/m³
Long-term value: 350 mg/m³
*15-min
TLV 525 mg/m³, 100 ppm

110-82-7 cyclohexane

PEL 1050 mg/m³, 300 ppm
REL 1050 mg/m³, 300 ppm
TLV 344 mg/m³, 100 ppm

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

REL Short-term value: 540 mg/m³, 150 ppm
Long-term value: 360 mg/m³, 100 ppm
TLV Short-term value: 553 mg/m³, 150 ppm
Long-term value: 369 mg/m³, 100 ppm

Additional information: The lists that were valid during the creation 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.

Breathing equipment: 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.

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.

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· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:

Aerosol

Color:

Light brown

· Odor:

Characteristic

· Odour threshold:

Not determined.

· pH-value:

Not determined.

· Change in condition

Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

120°C (248°F)

· Flash point:

41°C (106°F)

· Ignition temperature:

210°C (410°F)

· Decomposition temperature:

Not determined.

· Auto igniting:

Product is not selfigniting.

· Danger of explosion:

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:

1.1 Vol %

Upper:

6.0 Vol %

· Vapor pressure at 20°C (68°F):

2 hPa (2 mm Hg)

· Density at 20°C (68°F):

0.886 g/cm³ (7.394 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.

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

· Viscosity:

Dynamic at 20°C (68°F):

800 mPas

Kinematic:

Not determined.

· Solvent content:

Organic solvents:

7.0 %

VOC content:

7.0 %

· Other information

No further relevant information available.

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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 that are 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 internally approved calculation methods for preparations:
Irritant

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior 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 (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
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**



- **Hazard class:** 2.1
- **Identification number:** UN1950
- **Packing group:** -
- **Proper shipping name (technical name):** AEROSOLS, flammable
- **Label:** 2.1

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



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

- **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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· **Propper shipping name:** AEROSOLS

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 2.1

· **UN/ID Number:** 1950

· **Label:** 2.1

· **Packaging group:** -

· **Propper 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**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

110-82-7 cyclohexane

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

110-82-7 cyclohexane

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.

· Hazard symbols:Irritant
Extremely flammable
Dangerous for the environment**· Hazard-determining components of labelling:**Stoddard solvent
Naphtha (petroleum), hydrotreated heavy**· Risk phrases:**Extremely flammable.
Irritating to skin.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**· Safety phrases:**Keep out of the reach of children.
Keep away from sources of ignition - No smoking.
Do not breathe aerosol.
Avoid contact with eyes.
Wear suitable protective clothing.
Use only in well-ventilated areas.**· Special labeling of certain preparations:**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.
Do not spray on a naked flame or any incandescent material.
Buildup of explosive mixtures possible without sufficient ventilation.**· 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.

· 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
DOT: US Department of Transportation
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)
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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