

**Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

**Product name** INIBITOR XR20  
**Pure substance/mixture** Mixture.

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

**Recommended Use** Corrosion and Scale Inhibitor for Central Heating Systems.

**Uses advised against** None known.

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

**Company Information** RDZ Spa  
  
Viale Trento, 101  
33077 Sacile (PN), ITALY

**Telephone** +39 0434.787511  
**Fax** +39 0434.787522

For further information, please contact:

**E-mail Address** info@rdz.it

**1.4 Emergency telephone**

**Emergency telephone** +44 (0) 1928 704 339 (24 hours/ 7 days)

**Section 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

Not classified

**2.2 Label elements**

According to Regulation (EC) No. 1272/2008 (CLP)

**Signal Word**

None

**Hazard Statements**

None

**Precautionary statements**

None

**2.3 Other hazards**

May cause skin and eye irritation. Ingestion may cause irritation of the gastrointestinal tract.

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2 Mixtures**

Chemical Name	EC-No	CAS-No	w/w%	Classification (EU Reg. 1272/2008)	REACH Registration Number
Potassium tetraborate tetrahydrate	215-575-5	12045-78-2	1-5	*	no data available
Disodium molybdate	231-551-7	7631-95-0	1-5	*	01-2119489495-21-XXXX
Sodium Nitrate	231-554-3	7631-99-4	1-3	Ox. Sol. 3 (H272) Acute Tox. 4 (H302)	01-2119488221-41
2,2',2"-nitrilotriethanol	203-049-8	102-71-6	1-10	*	01-2119486482-31-XXXX

For the full text of H-Statements see Section 16

\* Substance with Workplace Exposure Limit. See Section 8.

**Section 4: FIRST AID MEASURES****4.1 Description of first aid measures**

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms develop obtain medical attention.
<b>Skin contact</b>	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. If symptoms develop obtain medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Wash out mouth with water and give 100 - 200 ml of water to drink. If symptoms develop obtain medical attention.
<b>Inhalation</b>	Remove patient from exposure, keep warm and at rest. If symptoms develop obtain medical attention.

**4.2 Most important symptoms and effects, both acute and delayed**

<b>Main Symptoms</b>	May cause skin and eye irritation. Ingestion may cause irritation of the gastrointestinal tract.
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**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	Treat symptomatically.
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**Section 5: FIRE-FIGHTING MEASURES****5.1 Extinguishing media****Suitable Extinguishing Media**

Water spray, Foam, Dry powder, Carbon dioxide (CO<sub>2</sub>).

**5.2 Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Phosphorus oxides.

**5.3 Advice for firefighters**

As in any fire, wear self-contained breathing apparatus and full protective gear. Cool containers / tanks with water spray.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Avoid contact with the skin and the eyes. Avoid inhalation of mists or vapor. Use personal protective equipment.

**6.2 Environmental precautions**

Not required

**6.3 Methods and materials for containment and cleaning up**

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**6.4 Reference to other sections**

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

## Section 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Ensure adequate ventilation. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

Do not eat, drink or smoke during work. Wash thoroughly after handling.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep only in the original container/package in a cool well-ventilated place. Keep away from heat and sources of ignition. Keep away from direct sunlight. Protect from frost.

### 7.3 Specific end use(s)

Corrosion and Scale Inhibitor for Central Heating Systems.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

<b>Chemical Name</b>	<b>Potassium tetraborate tetrahydrate</b> <b>12045-78-2</b>
<b>Spain</b>	TWA: 2 mg/m <sup>3</sup>
<b>Chemical Name</b>	<b>Disodium molybdate</b> <b>7631-95-0</b>
<b>The United Kingdom</b>	TWA: 5 mg/m <sup>3</sup>
<b>France</b>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
<b>Spain</b>	TWA: 0.5 mg/m <sup>3</sup>
<b>Portugal</b>	TWA: 0.5 mg/m <sup>3</sup>
<b>Finland</b>	TWA: 0.5 mg/m <sup>3</sup>
<b>Denmark</b>	TWA: 5 mg/m <sup>3</sup>
<b>Austria</b>	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
<b>Switzerland</b>	TWA: 5 mg/m <sup>3</sup>
<b>Poland</b>	STEL: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>
<b>Norway</b>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
<b>Ireland</b>	TWA: 10 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>
<b>Chemical Name</b>	<b>2,2',2''-nitrioltriethanol</b> <b>102-71-6</b>
<b>Spain</b>	TWA: 5 mg/m <sup>3</sup>
<b>Germany</b>	TWA: 5 mg/m <sup>3</sup> Ceiling / Peak: 20 mg/m <sup>3</sup>
<b>Portugal</b>	TWA: 5 mg/m <sup>3</sup>
<b>Finland</b>	TWA: 5 mg/m <sup>3</sup>
<b>Denmark</b>	TWA: 0.5 ppm TWA: 3.1 mg/m <sup>3</sup>
<b>Austria</b>	STEL 1.6 ppm STEL 10 mg/m <sup>3</sup> TWA: 0.8 ppm TWA: 5 mg/m <sup>3</sup>
<b>Switzerland</b>	STEL: 20 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
<b>Norway</b>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
<b>Ireland</b>	TWA: 5 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available

### 8.2 Exposure controls

**Appropriate engineering controls** Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded.

**Personal protective equipment**

<b>Eye Protection</b>	Goggles (EN 166)
<b>Hand Protection</b>	Protective gloves (EN 374)
<b>Skin and body protection</b>	Long sleeved clothing
<b>Respiratory protection</b>	Not normally required. In case of insufficient ventilation wear suitable respiratory equipment

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental Exposure Controls** Not normally required.

## **Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Aqueous solution
<b>Odor</b>	Barely perceptible
<b>Color</b>	Clear, pale yellow or amber*
<b>Odor Threshold</b>	No information available

\* the colour of the product has no impact on efficacy

<u>Property Values</u>		<u>Remarks • Methods</u>
<b>pH</b>	6.4	@ 25 °C
<b>Melting/freezing point</b>	-2.5 °C	
<b>Freezing Point</b>		No information available
<b>Boiling point/boiling range</b>	104 °C	(at 760 mm Hg)
<b>Flash Point</b>		Not flammable
<b>Evaporation rate</b>		No information available
<b>Flammability (solid, gas)</b>		Not applicable
<b>Flammability Limits in Air</b>		Not flammable
<b>upper flammability limit</b>		
<b>lower flammability limit</b>		
<b>Vapor pressure</b>		No information available
<b>Vapor density</b>		No information available
<b>Relative density</b>	1.10	@ 25 °C
<b>Water solubility</b>		Miscible
<b>Solubility in other solvents</b>		No information available
<b>Partition coefficient:</b>		No information available
<b>n-octanol/water</b>		
<b>Auto-ignition temperature</b>		Not flammable
<b>Decomposition temperature</b>		No information available
<b>Viscosity, kinematic</b>		No information available
<b>Viscosity, dynamic</b>		No information available

<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	Not oxidizing

### 9.2 Other information

No information available

**Section 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

No data available.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

No information available.

**10.4 Conditions to avoid**

Heat, flames and sparks.

**10.5 Incompatible materials**

Oxidizing agents.

**10.6 Hazardous decomposition products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Phosphorous oxides.

**Section 11: TOXICOLOGICAL INFORMATION**

**Inhalation** No known effect based on information supplied.  
**Eye contact** May cause eye irritation.  
**Skin contact** May cause skin irritation.  
**Ingestion** Ingestion may cause irritation of the gastrointestinal tract.

**11.1 Information on toxicological effects**

**Acute toxicity**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Disodium molybdate	4g/kg (Rat)	-	>2080 mg/m <sup>3</sup> (Rat) 4 h
Sodium Nitrate	1267mg/kg (Rat)	-	-
2,2',2"-nitrilotriethanol	4190mg/kg (Rat)	>2000 mg/kg (Rabbit) >16 mL/kg (Rat)	-

**Skin corrosion/irritation** Based on available data, classification criteria are not met.

**Serious eye damage/irritation** Based on available data, classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, classification criteria are not met.

**Mutagenicity** Based on available data, classification criteria are not met.

**Carcinogenicity** Based on available data, classification criteria are not met.

Chemical Name	European Union	IARC
Sodium Nitrate	-	Group 2A
2,2',2"-nitrilotriethanol	-	Group 3

**Reproductive toxicity** Based on available data, classification criteria are not met.

**STOT - Single exposure** Based on available data, classification criteria are not met.

<b>STOT - Repeated exposure</b>	Based on available data, classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, classification criteria are not met.
<b>Other information</b>	No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
2,2',2"-nitrilotriethanol	EC50: 216 mg/L 72 h (Desmodesmus subspicatus) EC50: 169 mg/L 96 h (Desmodesmus subspicatus)	LC50: >1000 mg/L 96 h static (Pimephales promelas)	EC50: 1386 mg/L 24 h (Daphnia magna)

WGK Classification 1

### 12.2 Persistence and degradability

Readily biodegradable.

### 12.3 Bioaccumulative potential

Does not bioaccumulate.

Chemical Name	Bioconcentration factor (BCF)	log Pow
Sodium Nitrate	-	-3.8
2,2',2"-nitrilotriethanol	<3.9	-2.53

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

### 12.6 Other adverse effects

No information available.

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<b>Waste from residues / unused products</b>	Disposal should be in accordance with local, state or national legislation.
<b>Contaminated packaging</b>	Clean container with water. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Section 14: TRANSPORT INFORMATION**

Not classified as hazardous for transport.

	ADR/RID/ADN	ICAO/IATA	IMDG / IMO
14.1 UN Number	-	-	-
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental Hazards	Not Classified	Not Classified	Not Classified
14.6 Special precautions for user	No special precautions are needed in handling this material		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		-	

**Section 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety data sheet complies with the requirements of Regulations (EC) No. 1907/2006 and No. 830/2015

WGK Classification 1

**15.2 Chemical Safety Assessment**

Chemical Safety Assessment has not been carried out.

**Section 16: OTHER INFORMATION**

**Full text of H-Statements referred to under sections 2 and 3**

H272 - May intensify fire; oxidizer  
H302 - Harmful if swallowed

**Issuing Date** 01-Jun-17  
**Revision Date** 27-Jun-2017  
**Revision Note** All sections.

**Disclaimer**

The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures.

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