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Version: 10.1
Effective date: 31/08/2020
Previous Date: 25/03/2019

SAFETY DATA SHEET

CORRSHIELD NT4292 (IronShield NT 270)

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

1.1. Product identifier

Trade name or designation of the mixture CORRSHIELD NT4292 (IronShield NT 270)

Version number 10.1

Revision date 31/08/2020

Supersedes date 25/03/2019

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

Identified uses Corrosion inhibitor

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

JV Process and Water Chemicals LLC

Address: Street V. Kadirov 10, Chirchik city,
Tashkent Region, Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

Email address: info@pwch.uz

www.pwch.uz

1.4. Emergency telephone number

Multilingual emergency number (24/7)

Street V. Kadirov 10, Chirchik city,
Tashkent Region,
Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
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2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Sodium nitrite



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Hazard pictograms



Signal word

Warning

Hazard statements

H302 Harmful if swallowed.
 H319 Causes serious eye irritation.
 H400 Very toxic to aquatic life.

Precautionary statements

Prevention

P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage

Not available.

Disposal

Not available.

Supplemental label information

None.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description Sodium nitrite, aqueous solution

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Sodium nitrite	25 - < 50	7632-00-0 231-555-9	01-2119471836-27	007-010-00-4	

Classification: Ox. Sol. 3;H272, Acute Tox. 3;H301, Eye Irrit. 2;H319, Aquatic Acute 1;H400

The classification of the above substance(s) is given, including the hazard class, category code and hazard statements which are assigned in accordance with their physicochemical, health and environmental hazards. Please refer to section 16 where the full text of each relevant H-statement is listed.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Move to fresh air.
Skin contact Wash off with plenty of water.
Eye contact Immediately flush eye(s) with plenty of water.
 Get medical attention if irritation persists after washing.
Ingestion Rinse mouth.
 Do not give anything to eat or drink.
 Do not induce vomiting.
 Call a physician or poison control centre immediately.

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

Irritant effects.

4.3. Indication of any immediate medical attention and special treatment needed

Not available.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Flood with water.
Use of CO₂ or foam may not be effective.

Unsuitable extinguishing media Not available.

5.2. Special hazards arising from the substance or mixture Oxides of nitrogen evolved in fire.

5.3. Advice for firefighters

Special protective equipment for firefighters Self contained breathing apparatus. (CEN : EN 137)
Protective clothing (CEN : EN 469)
Protective gloves (CEN : EN 659)
Helmet (CEN : EN 443)

Special fire fighting procedures Use standard firefighting procedures and consider the hazards of other involved materials.
Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear protective clothing, gloves and safety goggles.

For emergency responders Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Prevent from entering sewers or the immediate environment.
Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

6.3. Methods and material for containment and cleaning up Absorb onto inert material and dispose of according to Hazardous Waste Regulations.

6.4. Reference to other sections Please refer also to section no. 8 'Exposure controls' for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Contains an oxidiser.
Avoid all contact with reducing agents, oils, greases, organics and acids.

7.2. Conditions for safe storage, including any incompatibilities Keep away from oxidisable and combustible materials.
Store containers closed when not in use.

7.3. Specific end use(s) Only for professional and industrial users

Shelf life 720 Days

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Sodium nitrite (CAS 7632-00-0)			
Long-term, Systemic, Inhalation	2 mg/m ³	500	
Short-term, Systemic, Inhalation	2 mg/m ³	500	



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Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Sodium nitrite (CAS 7632-00-0)			
Freshwater	5,4 µg/l	100	
Intermittent releases	5,4 µg/l	100	
Marine water	6,16 µg/l	1000	
Sediment (freshwater)	19,5 µg/kg		
Sediment (marine water)	22,3 µg/kg		
Soil	0,000733 mg/kg		
STP	21 mg/l	10	

8.2. Exposure controls

Appropriate engineering controls Ensure good ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Splash proof chemical goggles.
CEN : EN 166

Skin protection

- Hand protection Nitrile gloves (Protection against unintentional short-term contact)
Coating thickness: 0.4 mm
Neoprene gloves (Protection against unintentional short-term contact)
Coating thickness: 0.5 mm
PVC gloves (Protection against unintentional short-term contact)
Coating thickness: 0.7 mm
Penetration time: 480 min
CEN : EN 374-1/2/3/4; EN 420

- Other Protective clothing.
CEN : EN ISO 13688; EN ISO 6529; EN 14605

Respiratory protection In case of insufficient ventilation, use a breathing mask with filter type: P2
CEN : EN 140; EN 143; EN 149

Thermal hazards Not available.

Environmental exposure controls Prevent from entering in public sewers or the immediate environment.
Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Colour Pale yellow

Physical state Liquid

Odour Mild

Odour threshold Not available.

pH (concentrated product) 8,4 Neat

pH in aqueous solution Not available.

Melting point/freezing point < -20 °C

Initial boiling point and boiling range 104 °C

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.



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Vapour pressure	18 mmHg
Vapour pressure temp.	21 °C
Vapour density	< 1
Relative density	1,29
Relative density temperature	21 °C
Solubility	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	
Shelf life	720 Days
VOC	0 % Estimated

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Not applicable.
10.4. Conditions to avoid	No special requirement.
10.5. Incompatible materials	Avoid contact with strong reducing agents. Avoid contact with combustible materials. Do not mix with nitrosating agents (forms nitrosamines). Avoid contact with strong acids.
10.6. Hazardous decomposition products	Oxides of nitrogen evolved in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
CORRSHIELD NT4292 (IronShield NT 270) (Mixture)	Acute Dermal LD50 Rabbit: > 2000 mg/kg (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: 450 mg/kg (Calculated according to GHS additivity formula)
Components	Test Results
Sodium nitrite (7632-00-0)	Acute Oral LD50 Rat: 180 mg/kg
Acute toxicity	Harmful if swallowed.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.



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Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Information on likely routes of exposure	
Ingestion	Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhoea.
Inhalation	May cause irritation to the respiratory system.
Skin contact	May be irritating to the skin.
Eye contact	Causes serious eye irritation.
Symptoms	Not available.
Aspiration hazard	Based on available data, the classification criteria are not met.
Mixture versus substance information	None known.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity

Product	Species	Test Results	
CORRSHIELD NT4292 (IronShield NT 270) (CAS Mixture)			
Aquatic			
Crustacea	LC50	Daphnia magna	470 mg/l, Static Renewal Bioassay, 96 hour
	NOEL	Daphnia magna	310 mg/l, Static Renewal Bioassay, 96 hour
Fish	LC50	Fathead minnow	930 mg/l, Static Renewal Bioassay, 96 hour
	NOEL	Fathead minnow	620 mg/l, Static Renewal Bioassay, 96 hour

Components	Species	Test Results	
Sodium nitrite (CAS 7632-00-0)			
Aquatic			
Fish	LC50	Fish	0,56 - 1,78 mg/l, 96 hour

12.2. Persistence and degradability

- COD (mgO₂/g) 92 (calculated data)

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log K_{ow}) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Contaminated packaging According to Hazardous Waste Regulations.

EWC (European Waste Code) recommendation : 15 01 10
 15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
 15 01 Packaging (including separately collected municipal packaging waste).
 15 01 10 Packaging containing residues of or contaminated by dangerous substances.
 Depending on the origin and state of the waste, other EWC numbers may be applicable too.



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Disposal methods/information According to Hazardous Waste Regulations.

EWC (European Waste Code) recommendation : 16 03 03
16 Wastes not otherwise specified in the list.
16 03 Off-specification batches and unused products.
16 03 03 Inorganic wastes containing dangerous substances.
Depending on the origin and state of the waste, other EWC numbers may be applicable too.

SECTION 14: Transport information

ADR

14.1. UN number UN3082
14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite, Mixture)
14.3. Transport hazard class(es)
Class 9
Subsidiary risk -
Tunnel restriction code (-)
14.4. Packing group III
14.5. Environmental hazards Yes
14.6. Special precautions for user Not available.

RID

14.1. UN number UN3082
14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite, Mixture)
14.3. Transport hazard class(es)
Class 9
Subsidiary risk -
14.4. Packing group III
14.5. Environmental hazards Yes
14.6. Special precautions for user Not available.

ADN

14.1. UN number UN3082
14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite, Mixture)
14.3. Transport hazard class(es)
Class 9
Subsidiary risk -
14.4. Packing group III
14.5. Environmental hazards Yes
14.6. Special precautions for user Not available.

IATA

14.1. UN number UN3082
14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite, Mixture)
14.3. Transport hazard class(es)
Class 9
Subsidiary risk -
14.4. Packing group III
14.5. Environmental hazards Yes
ERG Code Not available.
14.6. Special precautions for user Not available.

IMDG

14.1. UN number UN3082



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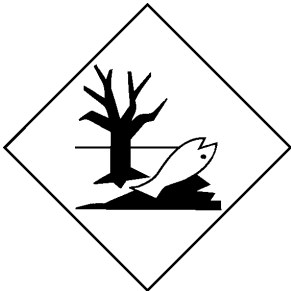
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14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite, Mixture)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
14.6. Special precautions for user	Not available.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	This substance/mixture is not intended to be transported in bulk.

ADN; ADR; IATA; IMDG; RID



Marine pollutant



SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.



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Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Sodium nitrite (CAS 7632-00-0)

National regulations Not available.

15.2. Chemical safety assessment Not available.

NSF Registered and/or meets USDA (according to 1998 guidelines):
Registration No. – 152413
Category Code(s):
G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products – nonfood contact

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

List of abbreviations

EC-No: European Commission Number
COD: Chemical Oxygen Demand
IATA: International Air Transport Association
CAS: Chemical Abstract Service.
CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
CEN: European Committee for Standardization (Comité Européen de Normalisation).
TWA: Time Weighted Average.
STEL: Short-term Exposure Limit.
LD50: Lethal Dose 50%.
LC50: Lethal Concentration 50%.
EC50: Effective Concentration 50%.
NOEL: No observed effect level.
BOD: Biochemical oxygen demand.
TOC: Total Organic Carbon.
ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route).
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).
IMDG Code: International Maritime Dangerous Goods Code.
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).

References Safety data sheets of raw materials.



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Information on evaluation method leading to the classification of mixture	The physical, health and environmental hazards of this mixture are assessed by applying the classification criteria for each hazard class or differentiation in Parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008 (CLP).
Full text of any H-statements not written out in full under Sections 2 to 15	H272 May intensify fire; oxidiser. H301 Toxic if swallowed. H319 Causes serious eye irritation. H400 Very toxic to aquatic life.
Revision information	SECTION 2: Hazards identification: Response Composition / Information on Ingredients: Disclosure Overrides SECTION 8: Exposure controls/personal protection: - Hand protection SECTION 11: Toxicological information: Carcinogenicity SECTION 11: Toxicological information: Skin corrosion/irritation SECTION 11: Toxicological information: Germ cell mutagenicity SECTION 11: Toxicological information: Reproductive toxicity SECTION 11: Toxicological information: Respiratory or skin sensitisation SECTION 11: Toxicological information: Specific target organ toxicity - repeated exposure SECTION 11: Toxicological information: Specific target organ toxicity - single exposure SECTION 16: Other information: Further information HazReg Data: Europe - EU
Training information	Provide training on safe handling while considering the type of application and exposure scenarios.
Based on EC Directive / Regulations	(EC) No 1907/2006 (REACH) (EC) No 1272/2008 (EU) No 1357/2014 (EU) 2015/830
Further information	Correction in Section: 2,8,11,16