

## **CORRSHIELD NT4200**

### 1. Identification Product identifier

#### **CORRSHIELD NT4200**

Other means of identification

Recommended use of the chemical and restrictions on use Recommended use Water-based corrosion inhibitor

None.

Restrictions on use Not available.

#### Company/undertaking identification

VEOLIA WATER TECHNOLOGIES & SOLUTIONS AUSTRALIA PTY LTD 103 Raubers Road, Northgate, QLD 4013 Australia C/o Buddle Findlay, Level 18, Hsbc Tower, 188 Quay Street, Auckland, 1010, New Zealand Tel: 1800 064 140 (AUS) 0800 945635 (NZ) Email: vtc.vwts.apacproductregulatory.all@veolia.com

#### **Emergency telephone**

+61-290372994 (Aust) +64-98010034 (NZ)

### 2. Hazard(s) identification

Classification of the hazardous	chemical	
Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Reproductive toxicity	Category 1B
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 3

#### Label elements, including precautionary statements

Corrosion	Health hazard	Exclamation mark

Signal word Danger

Hazard statement(s)

Hazard symbol(s)

May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May damage fertility or the unborn child. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

#### Precautionary statement(s) Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

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# SAFETY DATA SHEET

## CORRSHIELD NT4200

Response	Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.
Storage	Store locked up. Store in corrosive resistant container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental information	None.
Other hazards which do not result in classification	None known.

### 3. Composition/information on ingredients

### Mixtures

unique identifiers	Concentration of ingredients
7632-00-0	10- <30
12179-04-3	5- <10
6834-92-0	5- <10
7631-99-4	5- <10
1310-73-2	1- <5
149-30-4	0.1- <1
	7632-00-0 12179-04-3 6834-92-0 7631-99-4 1310-73-2

#### 4. First-aid measures

#### Description of necessary first aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Personal protection for first-aid responders	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.
Symptoms caused by exposure	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Medical attention and special treatment	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
5. Fire-fighting measures	

Extinguishing media Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.



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Special protective equipment and precautions for fire fighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Hazchem code	None.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.		
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Avoid breathing mist/vapors. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.		
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.		
Methods and materials for	Prevent entry into waterways, sewer, basements or confined areas.		
containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.		
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.		
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.		
7. Handling and storage			
Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.		
Conditions for safe storage, including any incompatibilities	Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in tightly closed container. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).		

### 8. Exposure controls and personal protection

## Control parameters

Follow standard monitoring procedures.

#### **Occupational exposure limits**

Components	Туре	Value	
Boric acid,disodium salt,pentahydrate (CAS 12179-04-3)	TWA	1 mg/m3	
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3	
ACGIH			
Components	Туре	Value	
Boric acid,disodium salt,pentahydrate (CAS 12179-04-3)	STEL	6 mg/m3	
	TWA	2 mg/m3	



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## Date of prepara Previ

US. ACGIH Threshold Lim	it Values	
Components	Туре	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3
UK. EH40 Workplace Expo	osure Limits (WELs)	
Components	Туре	Value
Boric acid,disodium salt,pentahydrate (CAS 12179-04-3)	TWA	1 mg/m3
Sodium hydroxide (CAS 1310-73-2)	STEL	2 mg/m3
Biological limit values	No biological exposure limits noted f	for the ingredient(s).
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.	
ndividual protection measure	s, for example personal protective eq	uipment (PPE)
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.	
Skin protection Hand protection	Wear appropriate chemical resistant	t gloves.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.	
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.	
Thermal hazards	Not available.	
lygiene measures	good personal hygiene measures, s drinking, and/or smoking. Routinely	equirements. Keep away from food and drink. Always observ uch as washing after handling the material and before eating wash work clothing and protective equipment to remove lothing should not be allowed out of the workplace.

#### 9. Physical and chemical properties

Appearance	Liquid	
Physical state	Liquid.	
Form	Liquid.	
Color	Red-purple	
Odor	Slight	
Odor threshold	Not available.	
pH (concentrated product)	11.8	
Melting point/freezing point	-15 °C	
Initial boiling point and boiling range	102 °C	
Flash point	> 93 °C P-M(CC)	
Evaporation rate	< 1 (Ether = 1)	
Flammability (solid, gas)	Not applicable.	
Upper/lower flammability or explosive limits		
Explosive limit - lower (%)	Not available.	
Explosive limit - upper (%)	Not available.	
Vapor pressure	18 mm Hg / 2.4 kPa	
Vapor pressure temp.	21 °C	
Vapor density	< 1 (Air = 1)	
Relative density	1.25	
Relative density temperature	21 °C	



## **CORRSHIELD NT4200**

Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	8 cps
Viscosity temperature	21 °C
Other physical and chemical pa	rameters
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
pH in aqueous solution	10.8 (5% SOL.)
Pour point	-12 °C
VOC	0 % (Calculated)
10. Stability and reactivity	,
Reactivity	May be corrosive to metals.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents. Metals.

No hazardous decomposition products are known.

## 11. Toxicological information

Hazardous decomposition

products

#### Information on possible routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Harmful if swallowed.
Symptoms related to exposure	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Acute toxicity	Harmful if swallowed.	
Product	Species	Test Results
CORRSHIELD NT4200		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	1352 mg/kg (Calculated according to GHS additivity formula (Category 4))
Components	Species	Test Results
2-mercaptobenzothiazole (	CAS 149-30-4)	
Acute		
Dermal		
LD50	Rabbit	> 7950 mg/kg



## **CORRSHIELD NT4200**

Components	Species	Test Results
Oral		
LD50	Rat	3800 mg/kg
Boric acid, disodium salt, pentahydr	ate (CAS 12179-04-3)	
Acute		
Dermal	Dabbit	> 2000 ma/kg
LD50	Rabbit	> 2000 mg/kg
<b>Oral</b> LD50	Rat	2550 mg/kg
Sodium hydroxide (CAS 1310-73-2		2000 mg/kg
Acute	-)	
Dermal		
LD50	Rabbit	1350 mg/kg
Oral		
LD50	Rabbit	> 500 mg/kg
Sodium metasilicate (CAS 6834-92	2-0)	
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	1152 mg/kg
Sodium nitrate (CAS 7631-99-4)		
Acute		
Dermal	<b>-</b>	
LD50	Rabbit	> 5000 mg/kg
Oral	Det	0000
LD50	Rat	3236 mg/kg
Sodium nitrite (CAS 7632-00-0)		
<u>Acute</u> Oral		
LD50	Rat	180 mg/kg
Skin corrosion/irritation		
Serious eye damage/irritation	Causes severe skin burns and eye damage. Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Risk of cancer cannot be exclu	uded with prolonged exposure.
IARC Monographs. Overall I	Evaluation of Carcinogenicity	
2-mercaptobenzothiazole Sodium nitrate (CAS 763 Sodium nitrite (CAS 7632	Izole (CAS 149-30-4)2A Probably carcinogenic to humans.7631-99-4)2A Probably carcinogenic to humans.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not an aspiration hazard.	



## CORRSHIELD NT4200

**Chronic effects** 

Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

### 12. Ecological information

Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Ecotoxicity Product Species **Test Results** Aquatic Crustacea 240 mg/L, 48 hour (pH adjusted) 5% Mortality Daphnia magna LC50 Daphnia magna 390 mg/L, 48 hour (pH adjusted) Fish LC50 4822 mg/L, 96 hour (pH adjusted) Fathead Minnow NOEL Fathead Minnow 1800 mg/L, 96 hour (pH adjusted) Persistence and degradability No data is available on the degradability of any ingredients in the mixture. No data is available on the degradability of any ingredients in the mixture. **Bioaccumulative potential** Mobility in soil No data available for this product. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. 13. Disposal considerations **Disposal methods** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of in accordance with local regulations. Empty containers or liners may retain some **Residual waste** product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. 14. Transport information ADG **UN number** 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE; DISODIUM UN proper shipping name METASILICATE) Transport hazard class(es) 8 Class Subsidiary risk Ш Packing group **Environmental hazards** No Hazchem code 2X Special precautions for user Read safety instructions, SDS and emergency procedures before handling. ΙΑΤΑ 3266 **UN number** 

UN proper shipping name	Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, DISODIUM METASILICATE)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	ll
Environmental hazards	No.
ERG Code	154
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	3266
UN proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, DISODIUM METASILICATE)



## **CORRSHIELD NT4200**

Transport hazard class(es) Class 8 Subsidiary risk Packing group Ш **Environmental hazards** Marine pollutant No. EmS F-A. S-B Special precautions for user Read safety instructions, SDS and emergency procedures before handling. **RQ(SODIUM NITRITE)** Transport in bulk according to Not established. Annex II of MARPOL 73/78 and the IBC Code

ADG



#### IATA; IMDG



### 15. Regulatory information

#### Safety, health and environmental regulations

National regulations

This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals.

Group Standard - Corrosion Inhibitors - Corrosive HSR002547

#### Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

### Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

### Australia Medicines & Poisons Appendix E

Boric acid,disodium salt,pentahydrate (CAS 12179-04-3) Sodium hydroxide (CAS 1310-73-2) Sodium metasilicate (CAS 6834-92-0) Sodium nitrite (CAS 7632-00-0)

#### Australia Medicines & Poisons Appendix F

Sodium hydroxide (CAS 1310-73-2) Sodium metasilicate (CAS 6834-92-0) Sodium nitrite (CAS 7632-00-0)

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## **CORRSHIELD NT4200**

Australia Medicines & Poisons Appendix G	
Poisons schedule number not allocated.	
Australia Medicines & Poisons Appendix H	
Poisons schedule number not allocated. Australia Medicines & Poisons Appendix I	
Poisons schedule number not allocated.	
Australia Medicines & Poisons Appendix J	
Poisons schedule number not allocated.	
Australia Medicines & Poisons Appendix K	
Poisons schedule number not allocated.	
Australia Medicines & Poisons Schedule 10	
Sodium hydroxide (CAS 1310-73-2)	
Sodium metasilicate (CAS 6834-92-0) Australia Medicines & Poisons Schedule 2	
Sodium nitrite (CAS 7632-00-0)	
Australia Medicines & Poisons Schedule 3	
Poisons schedule number not allocated.	
Australia Medicines & Poisons Schedule 4	
Poisons schedule number not allocated.	
Australia Medicines & Poisons Schedule 5	
Sodium hydroxide (CAS 1310-73-2) Sodium metasilicate (CAS 6834-92-0)	
Sodium nitrite (CAS 7632-00-0)	
Australia Medicines & Poisons Schedule 6	
Sodium hydroxide (CAS 1310-73-2)	
Sodium metasilicate (CAS 6834-92-0)	
Sodium nitrite (CAS 7632-00-0) Australia Medicines & Poisons Schedule 7	
Sodium nitrite (CAS 7632-00-0)	
Australia Medicines & Poisons Schedule 8	
Poisons schedule number not allocated.	
Australia Medicines & Poisons Schedule 9	
Poisons schedule number not allocated.	
Australia National Pollutant Inventory (NPI): Threshold qu	antity
Boric acid, disodium salt, pentahydrate (CAS 12179-04-3)	10 TONNES/YR Threshold Category: 1
Sodium nitrate (CAS 7631-99-4) Sodium nitrite (CAS 7632-00-0)	15 TONNES/YR Threshold Category: 3 15 TONNES/YR Threshold Category: 3
High Volume Industrial Chemicals (HVIC)	13 TONNES/TR Threshold Category. 5
Boric acid, disodium salt, pentahydrate (CAS 12179-04-3)	1000 - 9999 TONNES See the regulation for additional
	information.
Sodium hydroxide (CAS 1310-73-2)	> 1000000 TONNES See the regulation for additional information.
Sodium metasilicate (CAS 6834-92-0)	10000 - 99999 TONNES See the regulation for additional information.
Sodium nitrate (CAS 7631-99-4)	1000 - 9999 TONNES See the regulation for additional
luur estetien et Orene Deuleting Ochetenese (Oretenes (De	information.
	phibited imports) Regulations 1956, Schedule 10, as amended)
Not listed. National Pollutant Inventory (NPI) substance reporting list	
Not listed.	
Prohibited Carcinogenic Substances	
Not regulated.	
Prohibited Substances (National Model Regulation for the NOHSC:1005 (1994) as amended)	control of Workplace Hazardous Substances, Schedule 2
Not listed.	
Resricted Importation of Organochlorine Chemicals (Cust	oms(Prohibited Imports) Regulations 1956, Schedule 9)
Not listed.	



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Restricted Carcinogenic S	ubstances	
Not regulated.		
International regulations		
Stockholm Convention		
Not applicable. Rotterdam Convention		
Not applicable. Kyoto protocol		
Not applicable. Montreal Protocol		
Not applicable. Basel Convention		
Not applicable.		
International Inventories		
Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
	onents of this product comply with the inventory requirements administered by the re components of the product are not listed or exempt from listing on the inventor	
NSF Registered and/or meets	Registration No. – 141181	

NSF Registered and/or meets	Registration No. – 141181
USDA (according to 1998	Category Code(s):
guidelines):	G5 Cooling and retort water treatment products G7 Boiler, steam line treatment products – nonfood contact

### 16. Other information

Issue date	02-March-2021
Revision date	18/02/2023
Key abbreviations or acronyms used	AICIS: Australian Inventory of Industrial Chemicals.
References:	No data available
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or guality specification. The information relates only to the specific

not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



## **CORRSHIELD NT4200**

Revision information	Product and Company Identification: Product Registration Numbers
	Composition/information on ingredients: Component information
	First-aid measures: Symptoms caused by exposure
	Handling and storage: Precautions for safe handling
	Handling and storage: Conditions for safe storage, including any incompatibilities
	Disposal considerations: Residual waste
	Transport Information: Material Transportation Information
	Regulatory information: National regulations
	Other information: Disclaimer
	GHS: Classification

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