



SAFETY DATA SHEET

SPECTRUS NX1164

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

1.1. Product identifier

Trade name or designation of the mixture SPECTRUS NX1164

Version number 9.1

Revision date 08/10/2021

Supersedes date 16/04/2020

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

Identified uses Water-based microbial control agent.

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, city Chirchik,

Region Tashkent Republic of Uzbekistan, 111702

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, city Chirchik,
Region Tashkent Republic of Uzbekistan, 111702
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

Skin corrosion/irritation	Category 1C	H314 - Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Skin sensitisation	Category 1A	H317 - May cause an allergic skin reaction.

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term aquatic hazard	Category 1	H410 - Very toxic to aquatic life with long lasting effects.

2.2. Label elements



SAFETY DATA SHEET

SPECTRUS NX1164

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

Contains: Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (CAS 55965-84-9) (15,3 g/l)

Hazard pictograms



Signal word Danger

Hazard statements

- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

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

Response

- P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTRE/doctor.

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	Isothiazolinone in aqueous solution				
Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	1 - < 3	55965-84-9	-	613-167-00-5	
Classification:	Acute Tox. 3;H301, Acute Tox. 2;H310, Skin Corr. 1C;H314, Skin Sens. 1A;H317, Eye Dam. 1;H318, Acute Tox. 2;H330, Aquatic Acute 1;H400(M=100), Aquatic Chronic 1;H410(M=100)				B
Cupric nitrate	< 0,1	3251-23-8 221-838-5	01-2119969290-34	-	
Classification:	Ox. Sol. 1;H271, Met. Corr. 1;H290, Skin Corr. 1B;H314, Eye Dam. 1;H318, Aquatic Acute 1;H400(M=10), Aquatic Chronic 1;H410				

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.
 In case of loss of consciousness, give artificial respiration.
 Get medical attention immediately.



SAFETY DATA SHEET

SPECTRUS NX1164

Skin contact	Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes. Keep eyelids apart. Get medical attention immediately.
Ingestion	Rinse mouth. Do not induce vomiting. Do not give anything to eat or drink. Call a physician or poison control centre immediately.
4.2. Most important symptoms and effects, both acute and delayed	Corrosive effects. May cause allergic skin reaction.
4.3. Indication of any immediate medical attention and special treatment needed	Not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media	
Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	None.
5.2. Special hazards arising from the substance or mixture	Hydrogen chloride, oxides of carbon and nitrogen evolved in fire. Oxides of sulphur 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. It is possible to pass or work near the treated system during product application.
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. Transport and store in approved containers according to applicable national and international regulations.
6.3. Methods and material for containment and cleaning up	Keep spills and clean-up residuals out of municipal sewers and open bodies of water. Absorb the spill with spill pillows or inert solids such as clay or vermiculite. Transfer contaminated materials to suitable containers for disposal. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer in accordance with local procedures, permits and regulations. DO NOT add deactivation solution to the waste pail to deactivate the adsorbed material.
6.4. Reference to other sections	Please refer also to section no. 8 'Exposure controls' for further information.



SAFETY DATA SHEET

SPECTRUS NX1164

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling** Avoid contact with skin and eyes.
 Contains an oxidiser.
 Avoid all contact with reducing agents, oils, greases and organics.
 Use only containers which are compatible with the substance.
- 7.2. Conditions for safe storage, including any incompatibilities** Store containers closed when not in use, away from extreme temperatures.
 Store at temperatures below 35°C
 Product evolves carbon dioxide gas slowly.
 Store upright in original vented container.
 Store samples in plastic bottles only.
 No more than 6 months pressure build-up may rupture glass bottles.
- 7.3. Specific end use(s)** Only for professional and industrial users
 The material which has been in contact with this product can be cleaned with water. Product is typically used on an intermittent basis to control microbiological growth. It may be used in a programme which includes oxidizing biocides and other treatment chemicals. Normal dosage time is 8 hour to 24 hour per application. Interval between applications between 1 day(s) and 1 week(s). Typical shot dosage from 60 to 80 ppm. Proper treatment levels and ways of addition depend on many factors such as microbial contamination, conditions particular for a given installation, and system operating characteristics. The product should be used in accordance with control procedures that SUEZ Water Technologies & Solutions establishes for a specific application.
- Shelf life** 270 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)** Not available.

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Cupric nitrate (CAS 3251-23-8)			
Freshwater	7,8 µg/l	1	
Marine water	5,2 µg/l	1	
Sediment (freshwater)	87 mg/kg	1	
Sediment (marine water)	676 mg/kg	1	
Soil	65 mg/kg	1	
STP	230 µg/l	1	

8.2. Exposure controls

- Appropriate engineering controls** Adequate ventilation to maintain air contaminants below exposure limits.
 Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Splash proof chemical goggles.
 Face shield.
 CEN : EN 166
- Skin protection**
- **Hand protection** Full shoulder length butyl gloves (Protection against unintentional short-term contact)
 Full shoulder length neoprene gloves (Protection against unintentional short-term contact)
 Penetration time: > 480 min
 Coating thickness: 0,5 mm
 CEN : EN 374-1/2/3/4; EN 420
 - **Other** Chemical resistant clothing that ensures full coverage of the hands, arms and body.
 Chemical resistant apron.
 Rubber boots.
 CEN : EN ISO 13688; EN ISO 6530; EN ISO 6529; EN 14605



SAFETY DATA SHEET

SPECTRUS NX1164

Respiratory protection	In case of insufficient ventilation, use a breathing mask with filter type: A2 E2-P2 CEN : EN 140; EN 14387
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 to green
Physical state	Liquid

Odour Slight

Odour threshold Not available.

pH (concentrated product) 3,2

pH in aqueous solution 4,7 (5% SOL.)

Melting point/freezing point -2 °C

Initial boiling point and boiling range Not available.

Flash point Not applicable.

Evaporation rate < 1 (Ether = 1)

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure 18 mm Hg

Vapour pressure temp. 21 °C

Vapour density < 1 (Air = 1)

Relative density 1,03

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 3 cps

Viscosity temperature 21 °C

Explosive properties Not available.

Oxidising properties Not available.

9.2. Other information

Pour point 1 °C

Shelf life 270 days

VOC 0 % (Estimated)

SECTION 10: Stability and reactivity

10.1. Reactivity Not available.

10.2. Chemical stability Material is stable under normal conditions.



SAFETY DATA SHEET

SPECTRUS NX1164

10.3. Possibility of hazardous reactions	Not applicable.
10.4. Conditions to avoid	Protect from freezing.
10.5. Incompatible materials	Avoid contact with strong oxidisers. Avoid all contact with reducing agents, oils, greases and organics.
10.6. Hazardous decomposition products	Hydrogen chloride. Nitrogen oxides (NOx). Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
SPECTRUS NX1164 (Mixture)	Acute Dermal LD50 Rabbit: > 5000 mg/kg Acute Inhalation LC50 Rat: > 13,7 mg/l 4 Hours Acute Oral LD50 Rat: 3810 mg/kg

Components	Test Results
Cupric nitrate (3251-23-8)	Acute Oral LD50 Rat: 940 mg/kg
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)	Acute Dermal LD50 Rabbit: 90 mg/kg Acute Inhalation LC50 Rat: 0,33 mg/l 4 hour Acute Oral LD50 Rat: 67 mg/kg

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
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.
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	Causes digestive tract burns.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Symptoms	Not available.
Mixture versus substance information	None known.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity

Product	Species	Test Results
SPECTRUS NX1164 (CAS Mixture)		
Aquatic		
Crustacea	10% Mortality Daphnia magna	0,6 mg/l, Flow-Thru Bioassay, 48 hour



SAFETY DATA SHEET

SPECTRUS NX1164

Product		Species	Test Results
Fish	LC50	Daphnia magna	2,9 mg/l, Flow-Thru Bioassay, 48 hour
	LC50	Bluegill sunfish	12,1 mg/l, Static Acute Bioassay, 96 hour
		Fathead minnow	6,6 mg/l, Flow-Thru Bioassay, 96 hour
		Rainbow trout	8,7 mg/l, Static Acute Bioassay, 96 hour
			4,6 mg/l, Chronic Bioassay, 14 day
		Sheepshead minnow	20 mg/l, Static Acute Bioassay, 96 hour
	LOEC	Fathead minnow	4 mg/l, Early Life Stage Test, 36 day
	NOEL	Bluegill sunfish	6,5 mg/l, Static Acute Bioassay, 96 hour
		Fathead minnow	2,5 mg/l, Flow-Thru Bioassay, 96 hour
			1,3 mg/l, Early Life Stage Test, 36 day
		Rainbow trout	6,5 mg/l, Static Acute Bioassay, 96 hour
			3,3 mg/l, Chronic Bioassay, 14 day
	Sheepshead minnow	12 mg/l, Static Acute Bioassay, 96 hour	

12.2. Persistence and degradability

The product is anticipated to be rapidly biodegradable based on available data for the individual components.

- COD (mgO₂/g) 14
- BOD 28 (mgO₂/g) 0
- TOC (mg C/g) 15

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log K_{ow})

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) 0,49

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.

Disposal methods/information According to Hazardous Waste Regulations.

EWC (European Waste Code) recommendation : 16 03 05
 16 Wastes not otherwise specified in the list.
 16 03 Off-specification batches and unused products.
 16 03 05 Organic 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 UN3265



SAFETY DATA SHEET

SPECTRUS NX1164

14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1, Mixture))

14.3. Transport hazard class(es)

Class 8

Subsidiary risk -

Tunnel restriction code (E)

14.4. Packing group III

14.5. Environmental hazards Yes

14.6. Special precautions for user Not available.

RID

14.1. UN number UN3265

14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1, Mixture))

14.3. Transport hazard class(es)

Class 8

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 UN3265

14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1, Mixture))

14.3. Transport hazard class(es)

Class 8

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 UN3265

14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1, Mixture))

14.3. Transport hazard class(es)

Class 8

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 UN3265

14.2. UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1, Mixture))

14.3. Transport hazard class(es)

Class 8

Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards

Marine pollutant Yes

Ems F-A, S-B



SAFETY DATA SHEET

SPECTRUS NX1164

14.6. Special precautions for user

Not available.

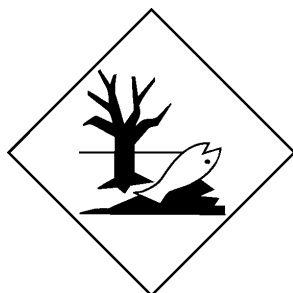
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

Cupric nitrate (CAS 3251-23-8)

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.



SAFETY DATA SHEET

SPECTRUS NX1164

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

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (CAS 55965-84-9)

National regulations Not available.

15.2. Chemical safety assessment Not available.

NSF Registered and/or meets USDA (according to 1998 guidelines): Registration No. – 140985
Category Code(s):
G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products – nonfood contact

- Belgium Registration number: 8306B

Biocides 11: Preservatives for liquid-cooling and processing systems

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
VME: Valeur moyenne d'exposition (Time weighted average)
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

Information on evaluation method leading to the classification of mixture

Safety data sheets of raw materials.

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

H271 May cause fire or explosion; strong oxidiser.
H290 May be corrosive to metals.



SAFETY DATA SHEET

SPECTRUS NX1164

H301 Toxic if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Revision information

SECTION 2: Hazards identification: Prevention
SECTION 2: Hazards identification: Response
SECTION 16: Other information: Further information
HazReg Data: Europe - EU
GHS: Classification

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)
(EU) 2015/830
(EU) No. 528/2012 and amendments (Biocidal Product Regulation)
All active ingredients have been identified/notified for the relevant Product Types according to the First Review Regulation on existing active substances (EU) No. 1451/2007
(EC) No 1272/2008
(EU) No 1357/2014

Further information

Correction in Section: 7