



SAFETY DATA SHEET SPECTRUS OX 1272

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

1.1. Product identifier

Product name SPECTRUS OX 1272

Product number 14364

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

Identified uses Biocide

1.3. Details of the supplier of the safety data sheet

Supplier

Univar
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
sds@univar.com
+44 1274 267306

1.4. Emergency telephone number

Emergency Contact Number SGS - +32 (0)3 575 55 55 (24h)
(Outside Office Hours)

Sds No. 14364

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Met. Corr. 1 - H290

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318

Environmental hazards Aquatic Acute 1 - H400

Classification (67/548/EEC or 1999/45/EC) C;R34. N;R50. R31.

2.2. Label elements

Pictogram



Signal word

Danger

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Hazard statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H400 Very toxic to aquatic life.
Precautionary statements	P234 Keep only in original container. P260 Do not breathe vapour/ spray. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405 Store locked up. P406 Store in corrosive resistant/... container with a resistant inner liner. P501 Dispose of contents/ container in accordance with national regulations.
Contains	SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE, SODIUM HYDROXIDE

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE			10-30%
CAS number: 7681-52-9	EC number: 231-668-3	REACH registration number: 01-2119488154-34-XXXX	
M factor (Acute) = 10	M factor (Chronic) = 1		
Classification		Classification (67/548/EEC or 1999/45/EC)	
Met. Corr. 1 - H290		C;R34 R31 N;R50	
Skin Corr. 1B - H314			
Eye Dam. 1 - H318			
STOT SE 3 - H335			
Aquatic Acute 1 - H400			
Aquatic Chronic 1 - H410			
SODIUM HYDROXIDE			1-5%
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27-XXXX	
Classification		Classification (67/548/EEC or 1999/45/EC)	
Met. Corr. 1 - H290		C; R35	
Skin Corr. 1A - H314			
Eye Dam. 1 - H318			

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Keep affected person warm and at rest. Get medical attention immediately.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention.

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Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Generates toxic gas in contact with acid. Chlorine.
Ingestion	Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.
Skin contact	Chemical burns.
Eye contact	Causes burns. Risk of serious damage to eyes. May cause permanent damage if eye is not immediately irrigated.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire. Extinguish with the following media: Water spray.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Dry product is combustible Toxic to aquatic life with long lasting effects.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Chlorine. Oxygen.

5.3. Advice for firefighters

Protective actions during firefighting	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Contain and collect extinguishing water.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate ventilation.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Contain and collect extinguishing water.
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6.4. Reference to other sections

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Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapours and spray/mists. Provide adequate ventilation. Contact with acids liberates toxic gas. Chlorine.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Protect from freezing and direct sunlight. Store in tightly-closed, original container in a well-ventilated place. Store away from the following materials: Acids. Flammable/combustible materials. Ammonia. May be corrosive to metals.

Storage class Corrosive storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

SODIUM HYPOCHLORITE SOLUTION, ... % Cl ACTIVE (CAS: 7681-52-9)

Ingredient comments	No exposure limits known for ingredient(s).
DNEL	Industry - Inhalation; Long term : 1.55 mg/m ³ Industry - Inhalation; Short term : 3.1 mg/m ³ Consumer - Inhalation; Long term : 1.55 mg/m ³ Consumer - Inhalation; Short term : 3.1 mg/m ³
PNEC	- Sediment (Freshwater); 0.00021 mg/l - Sediment (Marinewater); 0.000042 mg/l - Intermittent release; 0.00026 mg/l - STP; 0.03 mg/l

SODIUM HYDROXIDE (CAS: 1310-73-2)

Ingredient comments	WEL = Workplace Exposure Limits
DNEL	Consumer - Inhalation; Long term local effects: 1 mg/m ³ Workers - Dermal; Short term local effects: 2 mg/kg/day Workers - Inhalation; Short term local effects: 2 mg/m ³ Workers - Inhalation; Long term local effects: 1 mg/m ³

8.2. Exposure controls

Protective equipment



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Appropriate engineering controls	Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Wear tight-fitting, chemical splash goggles or face shield. EN 166
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material. Butyl rubber. Polyvinyl chloride (PVC). EN 374
Other skin and body protection	Wear rubber apron. Wear rubber footwear.
Hygiene measures	Provide eyewash station and safety shower. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Eating, smoking and water fountains prohibited in immediate work area.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/145/143/149

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Yellow. to Amber.
Odour	Chlorine.
Odour threshold	Data lacking.
pH	pH (concentrated solution): 12
Melting point	-26°C
Initial boiling point and range	99°C @
Flash point	> 100°C PMCC (Pensky-Martens closed cup).
Evaporation rate	< 1 (diethyl ether = 1)
Upper/lower flammability or explosive limits	Data lacking.
Vapour pressure	18 mm Hg @ 21°C
Vapour density	< 1
Relative density	~ 1.2
Solubility(ies)	Soluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Data lacking.
Decomposition Temperature	Data lacking.
Viscosity	6 cP @ 21°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

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9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Generates toxic gas in contact with acid.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. The stability of the solution decreases under the action of heat, light and in the presence of impurities (traces of iron, nickel, copper, cobalt, aluminum, manganese)

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Generates toxic gas in contact with acid.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong acids. Amines. contact with metals may result in decomposition with the formation of Oxygen

10.6. Hazardous decomposition products

Hazardous decomposition products Oxygen. hypochlorous acid Chlorine.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May cause chemical burns in mouth, oesophagus and stomach.

Skin contact Causes burns.

Eye contact Causes burns. Causes serious eye damage.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 1,100.0
mg/kg)

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 2,000.0
mg/kg)

Species Rat

Acute toxicity - inhalation

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Acute toxicity inhalation 10,500.0
(LC₅₀ vapours mg/l)

Species Rat

ATE inhalation (vapours mg/l) 10,500.0

Skin corrosion/irritation

Skin corrosion/irritation Corrosive to skin.

Serious eye damage/irritation

Serious eye damage/irritation Corrosive

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Irritating to respiratory system.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard None.

Inhalation May cause damage to mucous membranes in nose, throat, lungs and bronchial system. May cause respiratory system irritation.

Ingestion May cause chemical burns in mouth, oesophagus and stomach.

Skin contact May cause serious chemical burns to the skin.

Eye contact Causes burns. Causes serious eye damage.

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Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >500 mg/kg, Oral, Rabbit

Skin corrosion/irritation

Animal data Corrosive.

Serious eye damage/irritation

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Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Dust is severely irritating to the upper respiratory system. Dust may irritate the respiratory system. May cause coughing and difficulties in breathing.

Ingestion May cause burns in mucous membranes, throat, oesophagus and stomach. Causes burns.

Skin contact May cause serious chemical burns to the skin. Corrosive. Prolonged contact causes serious tissue damage.

Eye contact Causes burns. A single exposure may cause the following adverse effects: Corneal damage. Visual disturbances, including blurred vision.

SECTION 12: Ecological Information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Ecotoxicity Very toxic to aquatic life with long lasting effects.

SODIUM HYDROXIDE

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

12.1. Toxicity

Toxicity Very toxic to aquatic life.

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SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Toxicity	Very toxic to aquatic organisms.
<u>Acute aquatic toxicity</u>	
LE(C)₅₀	$0.01 < L(E)C_{50} \leq 0.1$
M factor (Acute)	10
Acute toxicity - fish	LC ₅₀ , 96 hours: 0.06 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 0.141 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 0.04 mg/l, Scenedesmus subspicatus
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	1
Chronic toxicity - fish early life stage	NOEC, 28 days: 0.04 mg/l, Freshwater fish

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Acute toxicity - fish	LC ₅₀ , 96 hours: 33-189 mg/l mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 40-240 mg/l mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability Substance is inorganic.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Persistence and degradability	Not applicable. Substance is inorganic.
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SODIUM HYDROXIDE

Persistence and degradability	The product contains only inorganic substances which are not biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	Not available.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Partition coefficient	: -3.42

SODIUM HYDROXIDE

Bioaccumulative potential	The product is not bioaccumulating.
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Partition coefficient No information available.

12.4. Mobility in soil

Mobility The product is soluble in water.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Mobility The product is soluble in water.

SODIUM HYDROXIDE

Mobility The product is water-soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Results of PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulating and toxic (PBT) or very persistent nor very bioaccumulating (vPvB).

SODIUM HYDROXIDE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SODIUM HYPOCHLORITE SOLUTION, ... % CI ACTIVE

Other adverse effects Not known.

SODIUM HYDROXIDE

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Do not puncture or incinerate, even when empty. Waste is classified as hazardous waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

UN No. (ADR/RID) 1791

UN No. (IMDG) 1791

UN No. (ICAO) 1791

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UN No. (ADN) 1791

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYPOCHLORITE SOLUTION

Proper shipping name (IMDG) HYPOCHLORITE SOLUTION

Proper shipping name (ICAO) HYPOCHLORITE SOLUTION

Proper shipping name (ADN) HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID classification code C9

ADR/RID label 8

IMDG class 8

ICAO class/division 8

ADN class 8

Transport labels



14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ADN packing group II

ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS F-A, S-B

ADR transport category 2

Emergency Action Code 2X

Hazard Identification Number (ADR/RID) 80

Tunnel restriction code (E)

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

Transport in bulk according to Not determined.

Annex II of MARPOL 73/78
and the IBC Code

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SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 453/2010 of 20 May 2010.
This product may impact SEVESO storage regulations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	17/05/2016
Revision	01
SDS number	14364
Version number	1.000
SDS status	Approved.
Signature	Jitendra Panchal
Risk phrases in full	R31 Contact with acids liberates toxic gas. R34 Causes burns. R35 Causes severe burns. R36 Irritating to eyes. R50 Very toxic to aquatic organisms.
Hazard statements in full	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.