

SAFETY DATA SHEET

CORTROL OS5310

1. Chemical product and company identification

Product name CORTROL OS5310

Recommended use and Limitations on use

Recommended use Water based dissolved oxygen scavenger/ metal passivator.

Company/undertaking identification

PT SUEZ WATER TECHNOLOGIES AND SOLUTIONS
INDONESIA

South Quarter, Tower A, 18th Floor
Unit F-G, Jl. RA Kartini Kav 8, Cilandak Barat
Jakarta Selatan 12430, Indonesia
Tel: +62 21 80669678

Emergency telephone

001-803-017-9114 (Indonesia)

+1 703-527-3887 (US)

2. Hazards identification

GHS classification

Physical hazards	Flammable liquids	Category 3
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3

Label elements

Pictogram



Signal word

Danger

Hazard statement

Flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause damage to organs. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTER/doctor. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use for extinction.

Storage

Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

SAFETY DATA SHEET

CORTROL OS5310

Supplemental information None.

3. Composition / information on ingredients

Substance or mixture Mixtures

Chemical property

Chemical name	CAS Number	Concentration (%)
N,N Diethylhydroxylamine	3710-84-7	10 - 30

4. First aid measures

First aid measures for different exposure routes

Inhalation	Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. 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. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms and effects Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Personal protection for first-aid responders Take off all contaminated clothing immediately. 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. Wash contaminated clothing before reuse.

Notes to physician Provide general supportive measures and treat symptomatically. Thermal 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 under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media	Water fog. Dry chemical powder.
Extinguishing media to avoid	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials.
Protection of fire-fighters	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

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.

SAFETY DATA SHEET

CORTROL OS5310

Spill clean-up methods

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. 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: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. 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

Handling

Technical measures Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Local and general ventilation Explosion-proof general and local exhaust ventilation.

Precautions Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Take precautionary measures against static discharges. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid release to the environment.

Safe handling advice Avoid prolonged exposure. Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the SDS.

Storage

Technical measures Store locked up. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

Suitable storage conditions Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Keep container tightly closed. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

Incompatible materials Strong oxidizing agents. For further information, please refer to section 10 of the SDS.

Safe packaging materials Keep in original container.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
N,N Diethylhydroxylamine (CAS 3710-84-7)	TWA	2 ppm

Engineering measures Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) 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. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Personal protective equipment

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Hand protection Wear appropriate chemical resistant gloves.

Eye protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear appropriate chemical resistant clothing.

SAFETY DATA SHEET

CORTROL OS5310

Hygiene measures When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Liquid
Physical state	Liquid.
Form	Not available.
Color	Colorless to light yellow
Odor	Strong odor
Odor threshold	Not available.
pH (concentrated product)	11.3 Neat
pH in aqueous solution	10.6 (5% Solution)
pH	Not available.
Melting point/freezing point	-15 °C
Boiling point, initial boiling point, and boiling range	100 °C
Flash point	48 °C P-M(CC)
Auto-ignition temperature	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	18 mmHg
Vapor pressure temp.	21 °C
Vapor density	> 1
Evaporation rate	Not available.
Relative density	1
Relative density temperature	21 °C
Density	Not available.
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.
Viscosity	22 mPa.s
Viscosity temperature	21 °C
Pour point	-12 °C
Other data	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.997
VOC (Weight %)	29 % CALCULATED

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

SAFETY DATA SHEET

CORTROL OS5310

Stability	Not available.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological information

Acute toxicity

Product	Species	Test Results
CORTROL OS5310 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Inhalation</i>		
LC50	Rat	> 20 mg/l, 4 Hour, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)

Components	Species	Test Results
N,N Diethylhydroxylamine (CAS 3710-84-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	1300 mg/kg
<i>Inhalation</i>		
LC50	Rat	9.5 mg/L, 4 Hour
<i>Oral</i>		
LD50	Rat	2190 mg/kg

Routes of exposure	Inhalation. Skin contact. Eye contact.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer. This product is not expected to cause respiratory sensitization.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not available.
Toxic to reproduction	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not available.
Aspiration hazard	Not an aspiration hazard. Based on available data, the classification criteria are not met.
Chronic effects	Prolonged inhalation may be harmful.
Other information	Not available.

SAFETY DATA SHEET

CORTROL OS5310

12. Ecological information

Ecotoxicological data

Product	Species	Test Results
CORTROL OS5310 (CAS Mixture)		
LC50	Fathead Minnow	420 mg/L, Acute Toxicity, 96 hour, (Estimated)
Aquatic		
Crustacea	Daphnia magna	308 mg/L, Acute Toxicity, 48 hour, (Estimated)

Ecotoxicity Harmful to aquatic life with long lasting effects.

Bioaccumulation

Mobility in soil No data available for this product.

Other hazardous effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
Nutrients: N= 40 mg/g

Environmental fate Harmful to aquatic life with long lasting effects.

Persistence and degradability

- COD (mgO2/g)	687
- TOC (mg C/g)	146

13. Disposal considerations

Local disposal regulations 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.

14. Transport information

IATA

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (N,N Diethylhydroxylamine)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Not available.

IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (N,N Diethylhydroxylamine)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

SAFETY DATA SHEET

CORTROL OS5310

IATA; IMDG



15. Regulatory information

Applicable regulations

Additional information is given in the Safety Data Sheet.

CWC (Law of RI No. 9 of 2008 re: Prohibition on the Use of Chemicals as Chemical Weapon)

Not regulated.

CWC (Law of RI No. 9 of 2008 re: Prohibition on the Use of Chemicals as Chemical Weapon, March 10, 2008)

Not regulated.

Dangerous Substances that Must be Registered (Regulation of the Minister of Health of the Republic of Indonesia)

Not regulated.

Import and Distribution Control of Hazardous Materials (Minister of Trade Regulation No. 75/M-DAG/PER/10/2014, Annex I)

Not listed.

Precursor Chemicals (Ministry of Industry and Trade Decree No. 647/MPP/Kep/10/2004 concerning Regulation on Import of Precursors, Attachment 1)

Not regulated.

Prohibited Substances (Government Regulation No. 74 of 2001 regarding Management of Hazardous and Poisonous Substances, Attachment II, Table 1)

Not regulated.

Restricted Substances (Government Regulation No. 74 of 2001 regarding Management of Hazardous and Poisonous Substances, Attachment II, Table 2)

Not regulated.

Toxic and Hazardous Materials List (Decree of the Ministry of Industry on the Safeguarding of Toxic and Hazardous Materials in Industrial Plants, No. 148/M/SK/4/1985)

Not regulated.

Hazardous Substances Approved for Use (Government Regulation No. 74 of 2001 regarding Management of Hazardous and Poisonous Substances, Attachment I)

Listed substances

Not regulated.

Listed substances / Allowed until 2040

Not regulated.

16. Other information

Issued by Not available.

Disclaimer Not available.

Issue date Sep-17-2012

Revision date 27/09/2018

Legend to abbreviations and acronyms used in the SDS Not available.

References and sources for data used to compile the SDS Not available.

Revision information This document has undergone significant changes and should be reviewed in its entirety.

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