

SAFETY DATA SHEET

HYPERSPERSE MDC150

1. Identification

Product identifier	HYPERSPERSE MDC150
Other means of identification	None.
Recommended use of the chemical and restrictions on use	
Recommended use	Reverse Osmosis Antiscalant
Recommended restrictions	None known.

Company/undertaking identification

SUEZ Water Technologies & Solutions Singapore Pte. Ltd.
10, Tanjong Penjuru Crescent
608973
Singapore
Tel: (65) 6268 4366

Emergency telephone

+(65)-31581349/800-101-2201 (Singapore)

+1 703-527-3887 (US)

2. Hazards identification

GHS classification

Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 2B
Environmental hazards	Not classified.	

GHS label elements, including precautionary statements

Pictograms	None.
Signal word	Warning
Hazard statements	Causes eye irritation.

Precautionary statement

Prevention	Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray.
Response	Rinse mouth. Rinse skin with water/shower. IF IN EYES: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Rinse cautiously with water for several minutes. IF ON SKIN (or hair): If skin irritation occurs: IF SWALLOWED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
Storage	Store in a closed container.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Other hazards which do not result in classification None known.

Supplemental information Safety data sheet available on request.

3. Composition/information on ingredients

Substance or mixture Mixtures
The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

SAFETY DATA SHEET

HYPERSPERSE MDC150

Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
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/effects, acute and delayed	Irritation of eyes.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
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.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Spill cleanup methods	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. 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	Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection	
Control parameters/Occupational exposure limits	No exposure limits noted for ingredient(s).
Appropriate engineering control measures	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.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).

SAFETY DATA SHEET

HYPERSPERSE MDC150

Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	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	Amber to dark brown
Odor	Slight
Odor threshold	Not available.
pH (concentrated product)	2.5 Neat
pH in aqueous solution	2.8 (5% Solution)
Melting point/freezing point	-15 °C
Initial boiling point and boiling range	104 °C
Flash point	Not available.
Evaporation rate	Slower than Ether
Flammability (solid, gas)	Not applicable.
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
Relative density	1.16
Relative density temperature	21 °C
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other data	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.159
VOC (Weight %)	0 % CALCULATED

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Not available.

SAFETY DATA SHEET

HYPERSPERSE MDC150

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Not available.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Acute toxicity	Not known.

Product	Species	Test Results
HYPERSPERSE MDC150 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)

Symptoms	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary 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.
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.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
HYPERSPERSE MDC150 (CAS Mixture)		
	LC50	Fathead Minnow
		13139 mg/L, Static Renewal Bioassay, 96 hour
	NOEL	Fathead Minnow
		7500 mg/L, Static Renewal Bioassay, 96 hour
Aquatic		
Crustacea	LC50	Daphnia magna
		3634 mg/L, Static Renewal Bioassay, 48 hour

SAFETY DATA SHEET

HYPERSPERSE MDC150

Product	Species	Test Results
	NOEL Daphnia magna	2500 mg/L, Static Renewal Bioassay, 48 hour

Bioaccumulative potential

Mobility in soil

No data available.

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.

Environmental fate

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

13. Disposal considerations

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

14. Transport information

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III)

Not regulated.

Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule)

Not regulated.

Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)

Not regulated.

Chemical Weapons Prohibition (Act)

Not applicable.

Environmental Protection and Management (Hazardous Substances) Regulations

Not applicable.

Environmental Public Health Act

Not applicable.

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region

Australia

Canada

Inventory name

Australian Inventory of Chemical Substances (AICS)

Domestic Substances List (DSL)

On inventory (yes/no)*

Yes

Yes

SAFETY DATA SHEET

HYPERSPERSE MDC150

Country(s) or region	Inventory name	On inventory (yes/no)*
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)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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).

16. Other information

Issued by	Not available.
Prepared by	Not available.
Disclaimer	Not available.
Issue date	Apr-27-2010
Revision date	28/06/2018
Revision information	GHS: Classification

* Trademark of SUEZ. May be registered in one or more countries.