

# SAFETY DATA SHEET

## AQUAMAX HT20

### 1. Chemical product and company identification

**Product name** AQUAMAX HT20  
**Recommended use and Limitations on use**  
**Recommended use** Desalination evaporation

#### 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

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
<b>Environmental hazards</b>	Not classified.	

#### Label elements

##### Pictogram



**Signal word** Danger  
**Hazard statement** Causes skin irritation. Causes serious eye damage.

#### Precautionary statement

**Prevention** Wash thoroughly after handling. Wear eye protection/face protection. Wear protective gloves.  
**Response** IF ON SKIN: Wash with plenty of water. 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/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.  
**Storage** Store away from incompatible materials.  
**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Supplemental information** None.

### 3. Composition / information on ingredients

**Substance or mixture** Mixtures

#### Chemical property

Chemical name	CAS Number	Concentration (%)
Tetrasodium (1-hydroxyethylidene)bisphosphonate	3794-83-0	10 - 30
Sodium hydroxide	1310-73-2	<= 10

# SAFETY DATA SHEET

## AQUAMAX HT20

### 4. First aid measures

#### First aid measures for different exposure routes

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms and effects</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
<b>Personal protection for first-aid responders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### 5. Fire-fighting measures

<b>Extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Extinguishing media to avoid</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards</b>	During fire, gases hazardous to health may be formed.
<b>Special fire fighting procedures</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Protection of fire-fighters</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions</b>	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.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Spill clean-up methods</b>	<p>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.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p>

### 7. Handling and storage

#### Handling

<b>Technical measures</b>	Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Local and general ventilation</b>	Provide adequate ventilation.
<b>Precautions</b>	Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing.
<b>Safe handling advice</b>	Avoid prolonged exposure. Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the SDS.

#### Storage

<b>Technical measures</b>	Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).
<b>Suitable storage conditions</b>	Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).
<b>Incompatible materials</b>	For further information, please refer to section 10 of the SDS.

# SAFETY DATA SHEET

## AQUAMAX HT20

Safe packaging materials      Keep in original container.

### 8. Exposure controls/personal protection

#### Exposure limits

Indonesia. OELs (Minister of Manpower and Transmigration Regulation No. Per.13/MEN/X/2011 concerning Threshold Limit Values, Annex II)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

#### Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

#### Engineering 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. Eye wash fountain and emergency showers are recommended.

#### Personal protective equipment

**Respiratory protection**      In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand protection**              Wear appropriate chemical resistant gloves.

**Eye protection**                Wear safety glasses with side shields (or goggles) and a face shield.

**Skin and body protection**    Wear appropriate chemical resistant clothing.

#### Hygiene measures

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

**Physical state**                  Liquid.

**Form**                                Not available.

**Color**                                Not available.

**Odor**                                Not available.

**Odor threshold**                Not available.

**pH (concentrated product)**    10.8

**pH in aqueous solution**        11.4 (5% SOL.)

**pH**                                 Not available.

**Melting point/freezing point**   -6 °C

**Boiling point, initial boiling point, and boiling range**    100 °C

**Flash point**                        > 100 °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 mm Hg

**Vapor pressure temp.**            21 °C

# SAFETY DATA SHEET

## AQUAMAX HT20

Vapor density	< 1 (Air = 1)
Evaporation rate	< 1 (Ether = 1)
Relative density	1.21
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	24 cps
Viscosity temperature	21 °C
Pour point	-3 °C
Other data	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.211
VOC (Weight %)	0 % (Calculated)

### 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Not available.
Conditions to avoid	None.
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	Not known.	
<b>Product</b>	<b>Species</b>	<b>Test Results</b>
AQUAMAX HT20 (CAS Mixture)		
<b>Acute</b>		
<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)
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Sodium hydroxide (CAS 1310-73-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	1350 mg/kg
<i>Oral</i>		
LD50	Rabbit	> 500 mg/kg

# SAFETY DATA SHEET

## AQUAMAX HT20

Components	Species	Test Results
Tetrasodium (1-hydroxyethylidene)bisphosphonate (CAS 3794-83-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	990 mg/kg
<b>Routes of exposure</b>	Inhalation. Skin contact. Eye contact.	
<b>Symptoms</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.	
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer. This product is not expected to cause respiratory sensitization.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Not available.	
<b>Toxic to reproduction</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not an aspiration hazard.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful.	
<b>Other information</b>	Not available.	

## 12. Ecological information

### Ecotoxicological data

Product	Species	Test Results
AQUAMAX HT20 (CAS Mixture)		
	LC50	Fathead Minnow
		> 5000 mg/L, Acute Toxicity, 96 hour, (Estimated)
	NOEL	Fathead Minnow
		3160 mg/L, Acute Toxicity, 96 hour, (Estimated)
<b>Aquatic</b>		
Crustacea	LC50	Daphnia magna
		2940 mg/L, Acute Toxicity, 48 hour, (Estimated)
	NOEL	Daphnia magna
		1720 mg/L, Acute Toxicity, 48 hour, (Estimated)

<b>Ecotoxicity</b>	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.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in soil</b>	No data available for this product.
<b>Other hazardous effects</b>	Nutrients: P=25,5 mg/g
<b>Environmental fate</b>	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.
<b>Persistence and degradability</b>	

- COD (mgO<sub>2</sub>/g) 175

# SAFETY DATA SHEET

## AQUAMAX HT20

- BOD 5 (mgO <sub>2</sub> /g)	0 (calculated data)
- BOD 28 (mgO <sub>2</sub> /g)	4 (calculated data)
- Closed Bottle Test (% Degradation in 28 days)	1 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days)	4 (calculated data)
- TOC (mg C/g)	64,8

### 13. Disposal considerations

**Local disposal regulations** 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

#### 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)**

Sodium hydroxide (CAS 1310-73-2)

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

#### Listed substances

Sodium hydroxide (CAS 1310-73-2)

**Listed substances / Allowed until 2040**

Not regulated.

### 16. Other information

<b>Issued by</b>	Not available.
<b>Disclaimer</b>	Not available.
<b>Issue date</b>	Aug-29-2013

# SAFETY DATA SHEET

## AQUAMAX HT20

---

<b>Revision date</b>	26/09/2018
<b>Legend to abbreviations and acronyms used in the SDS</b>	Not available.
<b>References and sources for data used to compile the SDS</b>	Not available.
<b>Revision information</b>	Physical & Chemical Properties: Multiple Properties

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