



**Be Right™**

# SAFETY DATA SHEET

This safety data sheet complies with the requirements of:  
SS586: 2008 (2014)

**Issue Date** 20-Aug-2020

**Revision Date** 20-Aug-2020

**Version** 3.2

## Section 1: IDENTIFICATION

### Product identifier

**Product Name** 442TM Natural Water Standard Solution

### Other means of identification

**Product Code(s)** 2974749

**Proper shipping name** Not regulated

**Safety data sheet number** M02716

**Raw Material/Pure Substance** Mixture

### Recommended use of the chemical and restrictions on use

**Recommended Use** Standard solution.

**Uses advised against** Consumer use

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Hach Company P.O.Box 389 Loveland,  
CO 80539 USA +1(970) 669-3050

#### Supplier

HACH SEA Headquarters  
1 Science Park Road, #05-09, East Wing, The Capricorn, Singapore Science Park II,  
Singapore 117528

### Emergency telephone number

Chemtrec 1-800-424-9300

## Section 2: HAZARDS IDENTIFICATION

### Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

### Hazard statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

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**Other Hazards Known**

None

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Family** Mixture

**Substance**

Not applicable

**Mixture**

**Chemical nature** aqueous solution.

Chemical name	Formula	EC No.	CAS No.	Percent Range
Sodium sulfate	Na <sub>2</sub> SO <sub>4</sub>	231-820-9	7757-82-6	<0.01%

### Section 4: FIRST AID MEASURES

**Description of first aid measures**

**General advice** No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.

**Inhalation** Remove to fresh air.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** See Section 11 for additional Toxicological Information.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

### Section 5: FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** No information available.

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**Hazardous combustion products** This material will not burn.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

### Environmental precautions

**Environmental precautions** See Section 12 for additional ecological information.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## Section 7: HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

### Occupational exposure limits

### Biological occupational exposure limits

Chemical name	CAS No.	Singapore
Sodium sulfate <0.01%	7757-82-6	NDF

### Appropriate engineering controls

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

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**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Wear suitable gloves.

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

**Skin and body protection** No special protective equipment required.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical state** Liquid  
**Appearance** aqueous solution  
**Color** colorless  
**Odor** None  
**Odor threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	~ 7	
<b>Melting point/freezing point</b>	~ 0 °C / 32 °F	
<b>Boiling point / boiling range</b>	~ 100 °C / 212 °F	
<b>Evaporation rate</b>	1 (water = 1)	
<b>Vapor pressure</b>	23.777 mm Hg / 3.17 kPa at 25 °C / 77 °F	
<b>Vapor density (air = 1)</b>	No data available	
<b>Specific gravity (water = 1 / air = 1)</b>	1.0040	
<b>Partition Coefficient (n-octanol/water)</b>	Not applicable	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	Not applicable	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Kinematic viscosity</b>	No information available	

### Solubility(ies)

#### **Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	> 10000 mg/L	25 °C / 77 °F

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#### Solubility in other solvents

Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
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#### Other Information

##### Metal Corrosivity

**Steel Corrosion Rate** No data available  
**Aluminum Corrosion Rate** No data available

##### Volatile Organic Compounds (VOC) Content

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sodium sulfate	7757-82-6	No data available	-

##### Explosive properties

**Upper explosion limit** Not applicable  
**Lower explosion limit** Not applicable

##### Flammable properties

**Flash point** No data available

##### Flammability Limit in Air

**Upper flammability limit** No data available  
**Lower flammability limit** No data available

##### Oxidizing properties

No data available.

##### Bulk density

Not applicable

## Section 10: STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

**Stability** Stable under normal conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** None  
**Sensitivity to Static Discharge** None.

#### Possibility of Hazardous Reactions

**Possibility of Hazardous Reactions** None under normal processing.

#### Hazardous polymerization

None under normal processing.

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**Conditions to avoid**  
**Conditions to avoid**

None known based on information supplied.

**Incompatible materials**  
**Incompatible materials**

Strong oxidizing agents, strong acids, and strong bases.

**Hazardous Decomposition Products**  
No information available.

## Section 11: TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

#### Product Information

**Inhalation** No known effect based on information supplied.

**Eye contact** No known effect based on information supplied.

**Skin contact** No known effect based on information supplied.

**Ingestion** No known effect based on information supplied.

**Symptoms** No information available.

#### Acute toxicity

Based on available data, the classification criteria are not met

#### **Product Acute Toxicity Data**

No data available.

#### **Ingredient Acute Toxicity Data**

No data available.

#### **Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

#### **Acute Toxicity Estimations (ATE)**

<b>ATEmix (oral)</b>	No information available
<b>ATEmix (dermal)</b>	No information available
<b>ATEmix (inhalation-dust/mist)</b>	No information available
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

#### **Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

#### **Product Skin Corrosion/Irritation Data**

No data available.

#### **Ingredient Skin Corrosion/Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
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Sodium sulfate (<0.01%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA (The European Chemicals Agency)
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**Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

**Product Serious Eye Damage/Eye Irritation Data**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium sulfate (<0.01%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA (The European Chemicals Agency)

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Product Sensitization Data**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium sulfate (<0.01%) CAS#: 7757-82-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	HSDB (Hazardous Substances Data Bank)

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Product Specific Target Organ Toxicity Single Exposure Data**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

No data available.

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Product Specific Target Organ Toxicity Repeat Dose Data**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Product Carcinogenicity Data**

No data available.

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#### Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Sodium sulfate	7757-82-6	-	-	-	-

#### Legend

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Does not apply
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA (Occupational Safety and Health Administration of the US Department of Labor)</b>	Does not apply

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Product Germ Cell Mutagenicity invitro Data

No data available.

#### Ingredient Germ Cell Mutagenicity invitro Data

No data available.

#### Product Germ Cell Mutagenicity invivo Data

No data available.

#### Ingredient Germ Cell Mutagenicity invivo Data

No data available.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### Product Reproductive Toxicity Data

No data available.

#### Ingredient Reproductive Toxicity Data

Test data reported below.

#### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfate (<0.01%) CAS#: 7757-82-6	Mouse TD <sub>Lo</sub>	14000 mg/kg	4 days	<b>Effects on Newborn</b> Other neonatal measures or effects	RTECS (Registry of Toxic Effects of Chemical Substances)

#### Aspiration hazard

Based on available data, the classification criteria are not met.

## Section 12: ECOLOGICAL INFORMATION

#### Ecotoxicity

Based on available data, the classification criteria are not met.

#### Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

#### Product Ecological Data



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**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Ingredient Ecological Data**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<0.01%) CAS#: 7757-82-6	96 hours	None reported	LC <sub>50</sub>	56 mg/L	IUCLID (The International Uniform Chemical Information Database)

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<0.01%) CAS#: 7757-82-6	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	3150 mg/L	IUCLID (The International Uniform Chemical Information Database)

**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Product Biodegradability Data**

No data available.

**Bioaccumulation**

**Product Bioaccumulation Data**

No data available.

**Partition Coefficient (n-octanol/water)**

Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

**Other adverse effects**

No information available.

**Section 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Do not reuse empty containers.

## Section 14: TRANSPORT INFORMATION

**Note:** No special precautions necessary.

### IMDG

<b>UN/ID no</b>	Not regulated
<b>Hazard Class</b>	Not regulated
<b>Packing Group</b>	Not regulated
<b>Marine pollutant</b>	Not applicable
<b>Special precautions for user</b>	Not applicable

### ADR

<b>UN/ID no</b>	Not regulated
<b>Proper shipping name</b>	Not regulated
<b>Hazard Class</b>	Not regulated
<b>Packing Group</b>	Not regulated
<b>Environmental hazard</b>	Not applicable
<b>Special precautions for user</b>	None

### IATA

<b>UN/ID no</b>	Not regulated
<b>Hazard Class</b>	Not regulated
<b>Packing Group</b>	Not regulated
<b>Environmental hazard</b>	Not applicable
<b>Special precautions for user</b>	None

### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies. If the item is part of a reagent set or kit the classification would change to the following: UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III. If the item is not regulated, the Chemical Kit classification does not apply.

## Section 15: REGULATORY INFORMATION

### Regulatory information

#### Singapore

#### **Arms and Explosives Act**

Not applicable.

#### **Chemical Weapons Prohibition Act**

Not applicable.

#### **Environmental Protection and Management (Hazardous Substances) Regulations**

Not applicable.

#### **Environmental Public Health Act**

Dispose of waste product or used containers according to local regulations.

#### **Fire Safety (Petroleum and Flammable Materials) Regulations**

Not applicable.

#### **Hazardous Waste (Control of Export, Import and Transit) Act**

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

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**Misuse of Drugs Act**

Not applicable.

**POISON**

Not applicable.

**Strategic Goods (Control) Act**

Not applicable.

**Workplace Safety and Health Act**

Comply with the health and safety at work laws.

**Pre-employment screening and appropriate health surveillance**

Not applicable

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>Existing substances</b>	Complies
<b>PICCS</b>	Complies
<b>TCSI</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**TCSI** - Taiwan Chemical Substances Inventory

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**Section 16: OTHER INFORMATION**

**Classification Guidance Used**

Product is a mixture classified and labelled according to EC1272/2008.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

SVHC: Substances of Very High Concern for Authorization:

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NIOSH IDLH  
ACGIH  
NDF

*Immediately Dangerous to Life or Health*  
ACGIH (American Conference of Governmental Industrial Hygienists)  
*no data*

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 20-Aug-2020

**Revision Date** 20-Aug-2020

**Restrictions on use** For Laboratory Use Only.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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**End of Safety Data Sheet**