



**Be Right™**

# SAFETY DATA SHEET

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

Revision Date 10-Jun-2020

Version 3.1

## Section 1: IDENTIFICATION

### Product identifier

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

### Other means of identification

**Product Code(s)** 2974649

**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** No information available

### 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

**Other Hazards Known**  
None

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Not applicable

**Mixture**

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**

<b>General advice</b>	No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	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

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Hazardous combustion products</b>	This material will not burn.
<b>Special protective equipment for</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout

fire-fighters 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** Pick up and transfer to properly labeled containers.

**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

**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.

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	No special protective equipment required.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	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.
<b>Thermal hazards</b>	None under normal processing.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	aqueous solution
<b>Color</b>	colorless
<b>Odor</b>	None
<b>Odor threshold</b>	No data 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>	NaN (Air = 1)	
<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 data available	
<b>Dynamic viscosity</b>	No data available	
<b>Kinematic viscosity</b>	No data 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

#### **Solubility in other solvents**

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

**Other Information**

**Metal Corrosivity**

**Steel Corrosion Rate**  
**Aluminum Corrosion Rate**

No data available  
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**  
**Lower explosion limit**

No data available  
No data available

**Flammable properties**

**Flash point**

No data available

**Flammability Limit in Air**  
**Upper flammability limit**  
**Lower flammability limit**

No data available  
No data available

**Oxidizing properties**

No data available.

**Bulk density**

No data available

**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.

**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**

None known based on information supplied.

## 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**

No data available.

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	500 mg	4 hours	Not corrosive or irritating to skin	ECHA (The European Chemicals Agency)

**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**

No data available.

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**

No data available.

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.

**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**

No data available.

<b>Chemical name</b>	<b>Endpoint type</b>	<b>Reported dose</b>	<b>Exposure time</b>	<b>Toxicological effects</b>	<b>Key literature references and sources for data</b>
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**

#### **Unknown aquatic toxicity**

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

#### Product Ecological Data

#### **Aquatic Acute Toxicity**

No data available.

#### **Aquatic Chronic Toxicity**

No data available.

#### Ingredient Ecological Data

#### **Aquatic Acute Toxicity**

No data available.



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)
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

UN/ID no

Not regulated

Hazard Class

Not regulated

Packing Group

Not regulated

Marine pollutant

Not applicable

#### Special precautions for user

Not applicable

#### ADR

UN/ID no

Not regulated

Proper shipping name

Not regulated

Hazard Class

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.

**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/NDL</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/NDL** - 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:

<b>NIOSH IDLH</b>	<i>Immediately Dangerous to Life or Health</i>
<b>ACGIH</b>	ACGIH (American Conference of Governmental Industrial Hygienists)
<b>NDF</b>	<i>no data</i>

<b>TWA</b>	TWA (time-weighted average)	<b>STEL</b>	STEL (Short Term Exposure Limit)
<b>Ceiling</b>	Ceiling Limit Value	<b>MAC</b>	Maximum Allowable Concentration
<b>X</b>	Listed	<b>Vacated</b>	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

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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

**Revision Date** 10-Jun-2020

**Restrictions on use** None

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**