

SAFETY DATA SHEET

Issue Date 20-Jun-2016 Revision Date 20-Jun-2016 Version 2

Section 1: Identification: Product identifier and chemical identity

Product identifier

Product Name Ethylene Glycol 1 Reagent

Product Code(s) 2183668

Other means of identification

Safety data sheet number M00103

Component of Kits or Sets 2186400; 2186400RGT; 2446900; 2446900K

Raw Material/Pure Substance Mixture

Chemical NameNot applicableAlternate CAS NumberNot applicableNIOSH (RTECS) NumberNone reported

Recommended use of the chemical and restrictions on use

Recommended Use Determination of Glycol.

Uses advised against No information available

Details of manufacturer or importer

Manufacturer AddressSupplierHach CompanyHach Control

P.O.Box 389 Loveland, CO 80539 USA

(970) 669-3050

Hach Company 10/15 Howleys Road Notting Hill VIC 3168 Tel: 1300 887 735

Emergency telephone number

13 11 26

Section 2: Hazard(s) identification

GHS - Classification

Oxidising solids	Category 2
Serious eye damage/eye irritation	Category 2A - (H319)

Label elements

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Signal word - Danger

Hazard statements

H272 - May intensify fire; oxidiser H319 - Causes serious eye irritation

EU Specific Hazard Statements

Not applicable

Precautionary statements

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P220 - Keep/Store away from clothing/ combustible materials

P221 - Take any precaution to avoid mixing with combustibles

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards

Harmful to aquatic life

No information available

Section 3: Composition and information on ingredients, in accordance with Schedule 8

Substance

Not applicable

<u>Mixture</u>

Chemical Name	CAS No	EC No
Sodium Sulfate 70 - 80%	7757-82-6	231-820-9
Potassium Periodate 20 - 30%	7790-21-8	232-196-0

Section 4: FIRST AID MEASURES

Emergency telephone number

Poisons Information Centre, Australia: 13 11 26

Poisons Information Centre, New Zealand: 0800 764 766

Description of first aid measures

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General advice In case of accident or being unwell, seek medical advice immediately (show directions for

use or safety data sheet if possible).

Inhalation IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms

persist, call a doctor.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. If symptoms persist, call a doctor.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin

with water/shower. If symptoms persist, call a doctor.

Ingestion IF SWALLOWED: Rinse mouth. If symptoms persist, call a doctor.

Self-protection of the first aider

Use personal protective equipment as required. Ensure that medical personnel are aware

of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION

Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

Section 5: Firefighting measures

Suitable Extinguishing Media

Suitable Extinguishing Media Carbon dioxide. Dry chemical. Water.

Specific hazards arising from the chemical

Specific hazards arising from the

chemical

May react violently with:. Strong acids. Strong bases. aluminum / aluminum compounds.

Hazardous combustion products sodium monoxide. sulfur oxides. iodine compounds. potassium oxides.

Special protective actions for fire-fighters

Special protective equipment for

fire-fighters

Wear fire/flame resistant/retardant clothing.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Remove all sources of ignition. Do not touch or walk

through spilled material. Ventilate affected area. Use personal protective equipment as

required.

Other Information Use personal protective equipment as required.

Environmental precautions

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Avoid release to the environment. 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. Cover with plastic sheet to prevent

spreading.

Methods for cleaning up

Take necessary precautions in observance of pertinent physical hazards. Take up

mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations. See section 8 for more information. See section 13 for more information.

Section 7: Handling and storage, including how the chemical may be safely used

Precautions for safe handling

Do not breathe dust/fume/gas/mist/vapours/spray.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or

smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area

and clothing is recommended.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store away from other materials. Keep away from heat, sparks, flame and other sources of

ignition (i.e. pilot lights, electric motors and static electricity).

Incompatible materials May react violently in contact with:. oxidizable material. Aluminium. Magnesium. ammonium

perchlorate.

Materials to avoid Strong oxidising agents. Strong acids. Strong bases.

Section 8: Exposure controls and personal protection

Control parameters

Exposure Limits

Chemical Name	CAS No	Australia
Sodium Sulfate 70 - 80%	7757-82-6	NDF
Potassium Periodate 20 - 30%	7790-21-8	NDF

Biological occupational exposure limits

Chemical Name	CAS No	Australia
Sodium Sulfate 70 - 80%	7757-82-6	NDF
Potassium Periodate 20 - 30%	7790-21-8	NDF

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See section 16 for terms and abbreviations Legend

Appropriate engineering controls

Engineering Controls Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear tight sealing safety googles and/or face protection shield.

Skin and body protection Wear protective gloves and protective clothing. Wear fire/flame resistant/retardant clothing.

Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation Respiratory protection

wear respiratory protection.

Do not allow into any sewer, on the ground or into any body of water. Local authorities **Environmental exposure controls**

should be advised if significant spillages cannot be contained.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Solid Physical state

Gas Under Pressure Not classified according to GHS criteria

Appearance crystalline Colour White to yellow

Odour Not applicable Odour threshold No data available

Property Values Remarks • Method

Molecular weight No data available

5% Solution pН 5.75

Melting point/freezing point > 370 °C / 698 °F

Boiling point / boiling range

Not applicable **Evaporation rate** Vapour pressure Not applicable Vapor density (air = 1) Not applicable

Specific gravity (water = 1 / air = 1) 2.76

Partition Coefficient (n-octanol/water) No data available **Soil Organic Carbon-Water Partition**

Coefficient

Autoignition temperature

No data available

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Decomposition temperatureNo data available

Dynamic viscosityNot applicableKinematic viscosityNot applicable

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Slightly soluble	> 0.1 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	<u>Solubility</u>	Solubility Temperature
Acid	Slightly soluble	> 0.1 mg/L	25 °C / 77 °F

Particle Size No information available

Particle Size Distribution No information available

Other Information

Metal Corrosivity

Not classified as corrosive to metal according to GHS criteria

Steel Corrosion Rate Not applicable

Aluminum Corrosion Rate Not applicable

Volitale Organic Compounds (VOC) Content Not applicable.

Bulk density No data available

Explosive properties Not classified according to GHS criteria.

Explosion data No data available

Upper explosion limit No data available

Lower explosion limit No data available

Flammable properties During a fire, irritating and highly toxic gases may be generated

by thermal decomposition. Oxidiser. May cause fire.

Flammability Limit in Air

Upper flammability limit: No data available

Lower flammability limit: No data available

Flash point Not applicable

Method No information available

Oxidising properties Classified as an oxidizer according to GHS criteria.

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GHS Oxidizer Classification Solid - Category 2, H272

Test methodDepartment of Transportation (DOT) Oxidizer Test **Sample/Cellulose mean burn time**4:1 Sample/Cellulose mean burn time = 181.8 seconds

Reference/Cellulose mean burn time 3:7 Potassium bromat/Cellulose mean burn time = 91.8 seconds

Reactivity propeties Not classified as self-reactive, pyrophoric, self-heating or emitting

flammable gases in contact with water according to GHS criteria.

Section 10: STABILITY AND REACTIVITY

Reactivity

Reactivity propeties Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in

contact with water according to GHS criteria.

Chemical stability

Stability Stable under normal conditions

Explosion data

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature

No data available

Sensitivity to Mechanical Impact

None.

Sensitivity to Static Discharge

None.

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerisation Hazardous polymerisation does not occur.

Conditions to avoid

Conditions to avoid Excess moisture. Extreme temperatures. Contact with heat, sparks, open flames or other

ignition sources.

Incompatible materials

Incompatible materials May react violently in contact with:. oxidizable material. Aluminium. Magnesium. ammonium

perchlorate.

Materials to avoid Strong oxidising agents. Strong acids. Strong bases.

Hazardous Decomposition Products

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Heating to decomposition releases:. Oxygen. sulfur oxides. iodine compounds.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Information on Likely Routes of Exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available

Symptoms No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 12,821.00 mg/kg

Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium Sulfate	> 10000 mg/kg (Rat)	-	-

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

Serious eye damage/eye irritation

Respiratory or skin sensitisation

Germ cell mutagenicity

Carcinogenicity

No information available.

No information available.

No information available.

No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Information on Likely Routes of Exposure

Product Information	Causes serious eye irritation.	

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Inhalation	No known effect based on information supplied.
Eye contact	Severely irritating to eyes.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.
Aggravated Medical Conditions	Eye disorders.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	No information available.

Product Acute Toxicity Data

Oral Exposure Route

Dermal Exposure Route

Inhalation (Dust/Mist) Exposure Route

No data available

No data available

No data available

No data available

Inhalation (Gas) Exposure Route

No data available

Unknown Acute Toxicity

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

The following values are calculated based on chapter 3.1 of the GHS document

	ATEmix (oral)	12,821.00 mg/kg
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Ingredient Acute Toxicity Data

Oral Exposure Route Toxicological data for ingredients is not indicative of likely harm.

Dermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

Toxicological data for ingredients is not indicative of likely harm.

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

Sensitization Information

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Product Sensitization Data

Skin Sensitization Exposure Route No data available.

Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure RouteToxicological data for ingredients is not indicative of likely harm.

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route No data available.

Dermal Exposure Route No data available.

Inhalation (Dust/Mist) Exposure Route No data available.

Inhalation (Vapor) Exposure Route No data available.

Inhalation (Gas) Exposure Route No data available.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route Toxicological data for ingredients is not indicative of likely harm.

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium Sulfate	7757-82-6	=	-	-	-
Potassium Periodate	7790-21-8	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of	X - Present
Labour)	

<u>Product Carcinogenicity Data</u>

No data available

Oral Exposure Route No data available

Dermal Exposure Route No data available

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Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Carcinogenicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Product Germ Cell Mutagenicity invitro Data

No data available.

<u>Ingredient Germ Cell Mutagenicity invitro Data</u>

No data available

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Germ Cell Mutagenicity invivo Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Oral Exposure Route No data available

Dermal Exposure RouteNo data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Reproductive Toxicity Data

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Oral Exposure Route

Chemical Name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
Sodium Sulfate	Mouse	14000 mg/kg	4 days	Effects on Newborn	RTECS (Registry of Toxic
(70 - 80%)	TD_Lo			Other neonatal measures or	Effects of Chemical
CAS#: 7757-82-6				effects	Substances)

Dermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Based on the classification principles, not classified as hazardous to the environment.

Unknown Aquatic Toxicity 0 % of the mixture consists of components(s) of unknown hazards to the aquatic

environment.

Product Ecological Data

Aquatic toxicity

Fish No data available

Crustacea No data available

Algae No data available

Terrestrial toxicity

Soil No data available

Vertebrates No data available

Invertebrates No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data	
Sodium Sulfate (70 - 80%) CAS#: 7757-82-6	96 hours	None reported	LC50	56 mg/L	IUCLID (The International Uniform Chemical Information Database)	
Chemical Name	Exposure	Species	Endpoint	Reported	Key literature references and sources for data	
	time		type	dose	Sources for data	

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Crustacea

	Chemical Name	Exposure	Species	Endpoint	Reported	Key literature references and
I		time		type	dose	sources for data
Ī	Sodium Sulfate	48 Hours	Daphnia magna	EC ₅₀	3150 mg/L	IUCLID (The International
-	(70 - 80%)					Uniform Chemical Information
-	CAS#: 7757-82-6					Database)

Algae No data available

Terrestrial toxicity

Soil No data available

Vertebrates No data available

Invertebrates No data available

Other Information

Persistence and degradability

None known.

Product Biodegradability Data

No data available.

Ingredient Biodegradability Data

No data available

Bioaccumulation

None known.

Product Bioaccumulation Data

No data available.

Ingredient Bioaccumulation Data

No data available

Additional information

<u>Product Information</u> No data available

Partition Coefficient (n-octanol/water)

No data available

Ingredient Information

Chemical Name	Partition Coefficient (n-octanol/water)	Method
Sodium Sulfate (70 - 80%)	log K _{ow} = -3	No information available
CAS#: 7757-82-6		

Mobility

Mobility in soil: Moderate to low mobility. If available, see ingredient data below.

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Product Information No data available

Soil Organic Carbon-Water Partition Coefficient No data available

Ingredient Information

Chemical Name	Soil Organic Carbon-Water Partition	Method
	Coefficient	
Sodium Sulfate	log K _{oc} = -1.4	Estimation through KOCWIN v2.00 part
(70 - 80%)		of the Estimation Programs Interface
CAS#: 7757-82-6		(EPI) Suite™

Additional information

Water solubility

Product Information

Water solubility classification	<u>Water solubility</u>	Water Solubility Temperature
Slightly soluble	> 0.1 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Sodium Sulfate (70 - 80%) CAS#: 7757-82-6	Completely soluble	160000 mg/L	20 °C	68 °F
Potassium Periodate (20 - 30%) CAS#: 7790-21-8	Soluble	> 1000 mg/L	25 °C	77 °F

Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not re-use container. Working in a well-ventilated area,. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal.

Section 14: TRANSPORT INFORMATION

ADG Not regulated

IATA Not regulated

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IMDG Not regulated

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available

Section 15: REGULATORY INFORMATION

Regulatory information

National regulations

Australia

Model Work Health and Safety Regulations

[NOHSC:2011(2003] National Code of Practice for the Preparation of Material Safety Data Sheets

Labelling of Workplace Hazardous Chemicals Code of Practice

See section 8 for national exposure control parameters

National pollutant inventory

Not subject to reporting

Banned and/or restricted

No Products Listed.

International Inventories

TSCA Complies Complies DSL/NDSL Complies INSQ **EINECS/ELINCS** Complies **ENCS** Complies **IECSC** Complies **KECL** Complies Complies **PICCS** Complies **TCSI** Complies **AICS** Complies **NZIoC**

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

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

INSQ - National Inventory of Chemical Substances in Mexico

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

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

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Export Notification requirements Not applicable

Section 16: Any other relevant information

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

NIOSH IDLH Immediately Dangerous to Life or Health

ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)

NDF no data

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

X Listed Vacated te regulations.

SKN* Skin designation SKN+ Skin sensitisation
RSP Respiratory sensitisation ** Hazard Designation
C Carcinogen R Reproductive toxicant

M mutagen

Issue Date 20-Jun-2016

Revision Date 20-Jun-2016

Revision Note New SDS.

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

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