$The following \ list \ contains \ the \ Material \ Safety \ Data \ Sheets \ you \ requested. \ Please \ scoll \ down \ to \ view \ the \ requested \\ MSDS(s).$

Product	MSDS	Distributor	Format	Language	Quantity
1457799	N/A	Hach Company	ROWGHS	English	1

Total Enclosures: 1

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

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ascorbic Acid **Catalog Number:** 1457799

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

MSDS Number: M00075 Chemical Name: Not applicable CAS Number: Not applicable

Additional CAS No. (for hydrated forms): Not applicable

Not applicable

Chemical Formula: Not applicable Chemical Family: Not applicable Intended Use: Laboratory Reagent

Emergency Telephone Numbers: (Medical and Transportation)

(303) 623-5716 24 Hour Service (515)232-2533 8am - 4pm CST

MSDS No: M00075

2. HAZARDS IDENTIFICATION

This mixture is not classified as hazardous per GHS (UN publication ST/SG/AC.10/36/Add.3)

GHS Classification:

Hazard categories: Not applicable

GHS Label Elements: Not applicable

Hazard statements: Not applicable Precautionary statements: Not applicable

HMIS: Health: 0 Flammability: 1 Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:
Health: 0
Flammability: 1
Reactivity: 0
Symbol: Not app

Symbol: Not applicable

WHMIS Hazard Classification: Not applicable

WHMIS Symbols: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS: No Ascorbic Acid

> CAS Number: 50-81-7 Chemical Formula: C₆H₈O₆ GHS Classification: Not applicable Percent Range (Trade Secret): > 99.0

Percent Range Units: weight / weight

PEL: 15 mg/m³ as total dust; 5 mg/m³ as respirable dust **TLV:** 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Not applicable

Other component

CAS Number: Not applicable Chemical Formula: Not applicable. GHS Classification: Not applicable Percent Range (Trade Secret): < 1.0 Percent Range Units: weight / weight

PEL: Not establishedTLV: Not established

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician if irritation develops.

Skin Contact (First Aid): Remove contaminated clothing. Wash skin with soap and plenty of water. Call physician if irritation develops.

Inhalation: Remove to fresh air.

Ingestion (First Aid): Give large quantities of water. Never give anything by mouth to an unconscious person. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: Can burn in fire, releasing toxic vapors. Material is not classified as flammable according to GHS criteria

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

Extinguishing Media: Carbon dioxide Dry chemical. Water. Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: May react violently with: strong oxidizers

Hazardous Combustion Products: Toxic fumes of: carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Stop spilled material from being released to the environment.

Clean-up Technique: If permitted by regulation, Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution. Otherwise, Pick up spill for disposal and place in a closed container Dispose of in accordance with local, state and federal regulations or laws.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Keep away from: oxidizers

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields Skin Protection: disposable latex gloves lab coat Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes Do not breathe: dust Wash thoroughly after handling. Keep away

from: oxidizers *TLV*: Not established *PEL*: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to light yellow crystals

Physical State: Solid

Molecular Weight: Not applicable

Odor: Sweet

Odor Threshold: Not available

pH: 5% solution = 2.3
Metal Corrosivity:

Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.

Steel: Not determined Aluminum: Not determined

Specific Gravity/Relative Density (water = 1; air =1): 1.65

Viscosity: Not determined

Solubility:

Water: Soluble Acid: Not determined

Other: Soluble in alcohol, glycerol

Partition Coefficient (n-octanol / water): Not applicable

Coefficient of Water / Oil: Not applicable

Melting Point: 192 °C (378 °F)

Decomposition Temperature: Not determined

Boiling Point: Not applicable Vapor Pressure: Not applicable Vapor Density (air = 1): Not applicable Evaporation Rate (water = 1): Not applicable

Volatile Organic Compounds Content: Not applicable

Flammable Properties: Can burn in fire, releasing toxic vapors. Material is not classified as flammable according to GHS

criteria.

Flash Point: Not applicable Method: Not applicable Flammability Limits:

Lower Explosion Limits: Not applicable Upper Explosion Limits: Not applicable Autoignition Temperature: Not available Explosive Properties:

Not classified according to GHS criteria.

Oxidizing Properties:

Not classified according to GHS criteria.

Reactivity Properties:

Not classifed as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

Gas under Pressure:

Not classified according to GHS criteria.

Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Mechanical Impact: None reported *Static Discharge:* None reported.

Reactivity / Incompatibility: Incompatible with: oxidizers alkalies copper iron

Hazardous Decomposition: Heating to decomposition releases toxic fumes of carbon monoxide and carbon dioxide.

Conditions to Avoid: Excess moisture

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.

Toxicologically Synergistic Products: None reported

Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data

ATE Oral Rat LD50 = 11901 mg/kg

Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification

criteria are not met.

Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification

criteria are not met.

Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met.

Eye Damage: Based on classification principles, the classification criteria are not met. Sensitization: Based on classification principles, the classification criteria are not met.

CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity

or reproductive toxicity data found.

IARC Listed: No NTP Listed: No O.S.H.A. Listed: No Symptoms/Effects:

Ingestion: Very large doses may cause: gastrointestinal tract irritation diarrhea

Inhalation: No effects anticipated
Skin Absorption: No effects anticipated
Chronic Effects: No effects anticipated
Medical Conditions Aggravated: None reported

12. ECOLOGICAL INFORMATION

Product Ecological Information: No information available on this product. **Ingredient Ecological Information:** No ingredient information available.

CEPA statement: Ascorbic Acid: Not Persistent, bioaccumulative or inherently toxic to aquatic organisms. CEPA statement: Magnesium Sulfate: Persistent, not bioaccumulative or inherently toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Work in an approved fume hood. Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. *Empty Containers:* Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (*Disposal*): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must

be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA Subsidiary Risk: NA ID Number: NA Packing Group: NA

T.D.G.:

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA Subsidiary Risk: NA UN Number/PIN: NA Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA Subsidiary Risk: NA ID Number: NA Packing Group: NA

I.M.O.

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA Subsidiary Risk: NA ID Number: NA Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product does not meet the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): This product is not hazardous under 29 CFR.1910.1200 and therefore is not covered by Title III under SARA.

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

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302 (EHS) TPQ (40 CFR 355): Not applicable 304 CERCLA RQ (40 CFR 302.4): Not applicable 304 EHS RQ (40 CFR 355): Not applicable Clean Water Act (40 CFR 116.4): Not applicable RCRA: Contains no RCRA regulated substances.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status: Some ingredients are not listed or exempt.

China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Vendor Information. In-house information. Technical Judgment.

Complete Text of H phrases referred to in Section 3: Not applicable

Revision Summary: . . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 24 **Month:** June **Year:** 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable w/w - weight/weight
ND - Not Determined w/v - weight/volume
NV - Not Available v/v - volume/volume

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.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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