SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

*Product Name:* Carbon Dioxide Standard Solution Ampule 10000 mg/l as CO₂

*Catalog Number:* 1427510

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

*Emergency Telephone Numbers:*
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

*MSDS Number:* M01163
*Chemical Name:* Not applicable
*CAS Number:* Not applicable
*Additional CAS No. (for hydrated forms):* Not applicable
*Chemical Formula:* Not applicable
*Chemical Family:* Not applicable
*Intended Use:* Standard solution

2. HAZARDS IDENTIFICATION

*GHS Classification:*
  *Hazard categories:* Not applicable

*GHS Label Elements:*
  Not applicable

*Hazard statements:*
  Not applicable

*Precautionary statements:*
  Not applicable

*HMIS:*
  *Health:* 0
  *Flammability:* 0
  *Reactivity:* 0
  *Protective Equipment:* X - See protective equipment, Section 8.

*NFPA:*
  *Health:* 0
  *Flammability:* 0
  *Reactivity:* 0
  *Symbol:* Not applicable

*WHMIS Hazard Classification:* Not applicable
*WHMIS Symbols:* Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

*Hazardous Components according to GHS:*
  *Potassium Acid Phthalate*

*CAS Number:* 877-24-7
*Chemical Formula:* C₈H₃KO₄
*GHS Classification:* Acute Tox 5, H303; Acute Tox. Derm. 4, H312; Eye Irrit. 2A, H319
*Percent Range (Trade Secret):* 1.0 - 10.0
*Percent Range Units:* weight / weight
*PEL:* 15 mg/m³ as total dust; 5 mg/m³ as respirable dust
The following list contains the Material Safety Data Sheets you requested. Please scroll down to view the requested MSDS(s).

<table>
<thead>
<tr>
<th>Product</th>
<th>MSDS</th>
<th>Distributor</th>
<th>Format</th>
<th>Language</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1427510</td>
<td>N/A</td>
<td>Hach Company</td>
<td>ROWGHS</td>
<td>English</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Enclosures: 1
TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Not applicable

Formaldehyde

CAS Number: 50-00-0
Chemical Formula: CH₂O
GHS Classification: Flamm. Liq. 4, H227; Acute Tox. 3 -Orl, H301; Acute Tox. 3 -Derm, H311; Skin Corr. 1B, H314; Skin Sens. 1, H317; Acute Tox. 3-Inh, H331; Resp. Sens. 1, H334; Muta. 2, H341; Carc. 2, H351; Repr. 2, H361; STOT Single 1, H370; Aquatic Acute 2, H401
Percent Range (Trade Secret): < 0.1
Percent Range Units: weight / weight
PEL: 0.75 ppm
TLV: 0.3 ppm

WHMIS Symbols: Acute PoisonOther Toxic Effects

Methyl Alcohol

CAS Number: 67-56-1
Chemical Formula: CH₃OH
GHS Classification: Flamm. Liq. 2, H225; Acute Tox 3 -Orl, H301; Acute Tox 3 -Derm, H311; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Acute Tox 3 -Inh, H331; Muta. 2, H341; Repr. 2, H361; STOT SE1, H370
Percent Range (Trade Secret): < 0.1
Percent Range Units: weight / weight
PEL: 200 ppm
TLV: 200 ppm

WHMIS Symbols: Acute PoisonFlammable / CombustibleOther Toxic Effects

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5
Chemical Formula: H₂O
GHS Classification: Not a dangerous substance according to GHS.
Percent Range (Trade Secret): > 90.0
Percent Range Units: weight / weight
PEL: Not established
TLV: 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: Flush eyes with water.
Skin Contact (First Aid): Wash skin with plenty of water.
Inhalation: None required.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: This product will not burn or explode.
Hazardous Combustion Products: None
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: Absorb spilled liquid with non-reactive sorbent material. Place material in a plastic bag. Mark bag "Non-hazardous trash", and dispose of as normal refuse.

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. Wash thoroughly after handling.
Storage: Keep container tightly closed when not in use.
Flammability Class: Not applicable

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: lab coat
- Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes. Wash thoroughly after handling.

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: Clear, colorless liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

Odor Threshold: Odorless

pH: 4.0

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): 1.001

Viscosity: Not determined

Solubility:
- Water: Miscible
- Acid: Miscible
- Other: Not determined

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

Coefficient of Water / Oil: Not applicable

Melting Point: Not applicable

Decomposition Temperature: Not determined

Boiling Point: 101°C

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Evaporation Rate (water = 1): 0.92

Volatile Organic Compounds Content: Not applicable

Flammable Properties: Material will not burn.

Flash Point: Not applicable

Method: Not applicable
Flammability Limits:
  Lower Explosion Limits: Not applicable
  Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Explosive Properties:
  Not classified according to GHS criteria.
Oxidizing Properties:
  Not classified according to GHS criteria.
Reactivity Properties:
  Not classified 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.

10. STABILITY AND REACTIVITY

  Chemical Stability: Stable when stored under proper conditions.
  Mechanical Impact: None reported
  Static Discharge: None reported.
  Reactivity / Incompatibility: None reported
  Hazardous Decomposition: None reported
  Conditions to Avoid: Heat Evaporation

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 Practically Non-toxic Based on classification principles, the classification criteria are not met.
  Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
  Specific Target Organ Toxicity - Repetent 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. Based on classification principles, the classification criteria are not met.
  This product does NOT contain any IARC listed chemicals.
  This product does NOT contain any NTP listed chemicals.
  This product does NOT contain any OSHA listed carcinogens.
  Symptoms/Effects:
    Ingestion: No Effects Anticipated
    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 ecological data available for this product.
  Ingredient Ecological Information: --
  No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

  EPA Waste ID Number: Not applicable
  Special Instructions (Disposal): Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.
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
--
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.
--
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): Not applicable
California Perchlorate Rule CCR Title 22 Chap 33: Not applicable
16. OTHER INFORMATION


Complete Text of H-phrases referred to in Section 3: Not applicable H312 Harmful in contact with skin. H319 Causes serious eye irritation.

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: 01
Month: October
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 CFR 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
ND - Not Determined
NV - Not Available
w/w - weight/weight
w/v - weight/volume
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.

HACH COMPANY ©2015