

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

<u>Product</u>	<u>MSDS</u>	<u>Distributor</u>	<u>Format</u>	<u>Language</u>	<u>Quantity</u>
2947553	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

MSDS No: M02594

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: SPADNS2 (Arsenic-Free) Fluoride Reagent
Catalog Number: 2947553

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: M02594
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Mixture
Intended Use: Determination of fluoride

2. HAZARDS IDENTIFICATION

GHS Classification:

Hazard categories: Corrosive to Metals: Met. Corr. 1 Skin Corrosion/Irritation: Skin Corr. 1B Specific Target Organ Toxicity - Single Exposure: STOT SE 3

GHS Label Elements:

DANGER



Hazard statements: May be corrosive to metals. Causes severe skin burns and eye damage. Harmful if swallowed. Harmful if inhaled.

Precautionary statements: Wear protective gloves / protective clothing / eye protection / face protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove victim/person to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Absorb spillage to prevent material damage. Dispose of contents/container according to state, local, federal or national regulations.

HMIS:

Health: 3

Flammability: 0

Reactivity: 0

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

NFPA:

Health: 3

Flammability: 0

Reactivity: 0

Symbol: Not applicable

WHMIS Hazard Classification: Class E - Corrosive material

WHMIS Symbols: Corrosive

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Hydrochloric Acid

CAS Number: 7647-01-0

Chemical Formula: HCl

GHS Classification: Met. Corr. 1, H290; Skin Corr. 1B, H314; STOT SE 3, H335

Percent Range: 10.0 - 20.0

Percent Range Units: weight / weight

PEL: 5 ppm ceiling

TLV: 5 ppm ceiling

WHMIS Symbols: Corrosive

Spadns 2 Non-Toxic Reducing Agent

CAS Number:

Chemical Formula: C₇H₇NO₂

GHS Classification:

Percent Range: < 0.1

Percent Range Units: weight / weight

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

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

WHMIS Symbols: Other Toxic Effects

Zirconium Oxychloride

CAS Number: 7699-43-6

Chemical Formula: ZrOCl₂

GHS Classification: Acute Tox. 5 - Orl, H303; Skin Corr. 1B, H314

Percent Range: < 0.1

Percent Range Units: weight / weight

PEL: 5 mg/m³ (Zr)

TLV: 5 mg/m³ (Zr)

WHMIS Symbols:

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5

Chemical Formula: H₂O

GHS Classification: Not hazardous

Percent Range: 80.0 - 90.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

SPADNS

CAS Number: 23647-14-5

Chemical Formula: C₁₆H₉N₂O₁₁S₃·3Na

GHS Classification: Non-hazardous

Percent Range: < 0.1

Percent Range Units: weight / weight

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

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

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.

Skin Contact (First Aid): Wash skin with plenty of water for 15 minutes. Remove contaminated clothing. Call physician immediately.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, corrosive and toxic gases may be generated by thermal decomposition. Not flammable, but reacts with most metals to form flammable hydrogen gas.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

Extinguishing Media: Use media appropriate to surrounding fire conditions

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: Contact with metals gives off hydrogen gas which is flammable

Hazardous Combustion Products: This material will not burn.

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. Absorb spilled liquid with non-reactive sorbent material.

Clean-up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Dilute with a large excess of water. Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. Filter to remove solids. If permitted by regulation, flush reacted material to the drain with a large excess of water. Otherwise, dispose of in accordance with local, state and federal regulations or laws.

Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when any quantity is spilled. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: 157

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin clothing Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Keep container tightly closed when not in use. Protect from: heat Keep away from: metals

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Have a safety shower nearby. Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splash goggles

Skin Protection: lab coat nitrile gloves

Inhalation Protection: adequate ventilation and / or laboratory fume hood

Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Protect from: heat Keep away from: metals

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: Dark red liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Acidic

Odor Threshold: Not determined

pH: < 0.5

Metal Corrosivity:

Corrosivity Classification: Classified as corrosive to metals.

Steel: Not determined

Aluminum: Not determined

Specific Gravity/ Relative Density (water = 1; air =1): 1.02

Viscosity: Not determined

Solubility:

Water: Miscible

Acid: Not determined

Other: Not determined

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

Coefficient of Water / Oil: Not applicable

Melting Point: < -10 °C (< 14 °F)

Decomposition Temperature: Not determined

Boiling Point: 105 °C (221 °F)

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Evaporation Rate (water = 1): Not determined

Volatile Organic Compounds Content: Not applicable

Flammable Properties: During a fire, corrosive and toxic gases may be generated by thermal decomposition. Not flammable, but reacts with most metals to form flammable hydrogen gas.

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: May react violently in contact with: strong bases oxidizers Incompatible with: metals

Hazardous Decomposition: Contact with metals may release flammable hydrogen gas. Heating to decomposition releases toxic and/or corrosive fumes of: chlorides

Conditions to Avoid: Evaporation Heating to decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available

Toxicologically Synergistic Products: None reported

Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Based on classification principles, the classification criteria are not met.

ATE (mix) Oral LD50 = 1538 mg/Kg

ATE (mix) Inhalation LC50 = 110.5 mg/L/4hr

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: Corrosive to skin.

Eye Damage: Corrosive to eyes.

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

CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Based on classification principles, the classification criteria are not met.

An ingredient of this mixture is: IARC Group 3: Non-classifiable

Hydrochloric acid

This product does NOT contain any NTP listed chemicals.

This product does NOT contain any OSHA listed carcinogens.

Symptoms/Effects:

Ingestion: Causes: burns ulceration of the digestive tract abdominal pain nausea vomiting sedation muscular twitching

Inhalation: Causes: respiratory tract irritation choking difficult breathing teeth erosion

Skin Absorption: None Reported

Chronic Effects: Chronic overexposure may cause erosion of the teeth destruction of any tissue contacted

Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions Impaired pulmonary function such as obstructive airway diseases.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Based on classification principles, not classified as hazardous to the environment.

Ingredient Ecological Information: HCl: 96 hr *Gambusia affinis* LC50 = 282 mg/L; 48 hr Crustaceans LC50 = 240 mg/L; 48 hr Crustaceans EC50 = 100 mg/L; 48 hr *Daphnia magna* = 0.492 mg/L; 72 hr *Daphnia magna* LC80 = 56 mg/L; 72 hr *Selenastrum capricornutum* ErC50 = 0.492 mg/L

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D002

Special Instructions (Disposal): 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. If permitted by regulation, Open cold water tap completely, slowly pour the reacted material to the drain. Flush system with plenty of water. Otherwise, Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility.

Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.

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: Hydrochloric Acid Solution

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Hazard Class: 8

Subsidiary Risk: NA

ID Number: UN1789

Packing Group: II

T.D.G.:

Proper Shipping Name: Hydrochloric Acid Solution

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Hazard Class: 8
Subsidiary Risk: NA
UN Number/PIN: 1789
Packing Group: II

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Hydrochloric Acid Solution

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Hazard Class: 8
Subsidiary Risk: NA
ID Number: UN1789
Packing Group: II

I.M.O.:

Proper Shipping Name: Hydrochloric Acid Solution

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Hazard Class: 8
Subsidiary Risk: NA
ID Number: UN1789
Packing Group: II

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 meets 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): Immediate (Acute) Health Hazard

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): Hydrochloric Acid 5000 lbs.

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Hydrochloric Acid - RQ 5000 lbs.

RCRA: Contains RCRA regulated substances. See Section 13, EPA Waste ID Number.

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: All components either listed or exempt.

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

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. In-house information. Technical Judgment. Outside Testing. NIOSH/OSHA Occupational Health

Guidelines for Chemical Hazards. Cincinnati: Department of Health and Human Services, 1981. Vendor Information. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993.
Complete Text of H phrases referred to in Section 3: H302 Harmful if swallowed. . H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory 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: 14

Month: July

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

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.

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