

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>
c20c380	N/A	Hach Company	OSHA	English	1

Total Enclosures: 1

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

MSDS No: M01788

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Cleaning solution for liquid junctions

Catalog Number: C20C380

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: M01788

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Hazard: Causes irritation. Experimental carcinogen. Harmful if swallowed

Date of MSDS Preparation:

Day: 29

Month: April

Year: 2007

2. COMPOSITION / INFORMATION ON INGREDIENTS

Thiourea

CAS No.: 62-56-6

TSCA CAS Number: 62-56-6

Percent Range: < 10.0

Percent Range Units: weight / weight

LD50: Oral rat LD50 = 125 mg/kg

LC50: None reported

TLV: 3 mg/m³ Partículas respirables; 10 mg/m³ Partículas inhalables

PEL: 5 mg/m³ Respirable Fraction; 15 mg/m³ Total Dust

Hazard: Toxic. Harmful if swallowed Experimental carcinogen.

Hydrochloric Acid

CAS No.: 7647-01-0

TSCA CAS Number: 7647-01-0

Percent Range: < 0.5

Percent Range Units: weight / weight

LD50: Oral rabbit LD50 = 900 mg/kg

LC50: Inhalation rat LC50 = 3124 ppm/1 hour

TLV: 5 ppm ceiling

PEL: 5 ppm ceiling

Hazard: Causes burns.

Demineralized Water

CAS No.: 7732-18-5

TSCA CAS Number: 7732-18-5

Percent Range: 85.0 - 95.0
Percent Range Units: weight / weight
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Colorless liquid

Odor: Odorless

CAUSES EYE IRRITATION

POSSIBLE CANCER HAZARD: MAY CAUSE CANCER BASED ON ANIMAL DATA

HMIS:

Health: 2

Flammability: 0

Reactivity: 0

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

NFPA:

Health: 2

Flammability: 0

Reactivity: 0

Symbol: None

Potential Health Effects:

Eye Contact: Causes irritation

Skin Contact: Causes skin irritation. May cause allergic reaction

Skin Absorption: None reported

Target Organs: None reported

Ingestion: May be harmful if swallowed May cause: bone marrow changes blood changes

Target Organs: Bone marrow Liver Thyroid

Inhalation: May cause: irritation of nose and throat

Target Organs: None reported

Medical Conditions Aggravated: Pre-existing: Skin conditions

Chronic Effects: Chronic overexposure may cause liver damage bone abnormalities with damage to blood forming tissues a goiter

Cancer / Reproductive Toxicity Information:

This product does NOT contain any OSHA listed carcinogens.

An ingredient of this mixture is: IARC Group 2B: Experimental Carcinogen

Thiourea

An ingredient of this mixture is: NTP Listed Group 2B: Experimental Carcinogen

Thiourea

Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen. an experimental teratogen.

Toxicologically Synergistic Products: None reported

4. FIRST AID

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. Call physician immediately.

Ingestion (First Aid): Give large quantities of water or milk. Induce vomiting by sticking finger down throat. Call physician immediately. Never give anything by mouth to an unconscious person.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, this product decomposes to form toxic gases.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Hazardous Combustion Products: This material will not burn.
Fire / Explosion Hazards: None reported
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
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.

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: Releases of this material may contaminate the environment. Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment. Dike the spill to contain material for later disposal.
Clean-up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Dispose of material in an E.P.A. approved hazardous waste facility. Decontaminate the area of the spill with a soap solution.
Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: a gallon or more of liquid is spilled. If conditions warrant, increase the size of the evacuation.
Special Instructions (for accidental release): Product is regulated as RCRA hazardous waste. Mixture contains a component which is regulated as a hazardous air pollutant. Mixture contains a component which is regulated as a water pollutant.
304 EHS RQ (40 CFR 355): Not applicable
D.O.T. Emergency Response Guide Number: None

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin clothing Use with adequate ventilation. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.
Storage: Store away from: oxidizers Keep container tightly closed when not in use.
Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splash goggles

Skin Protection: disposable latex gloves lab coat

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin clothing Use with adequate ventilation. Wash thoroughly after handling. Keep away from: oxidizers

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Colorless liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Odorless

pH: ~1

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: ~102 °C

Melting Point: ~0 °C

Specific Gravity (water = 1): ~1

Evaporation Rate (water = 1): Not determined

Volatile Organic Compounds Content: Not determined

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

Solubility:

Water: Miscible

Acid: Not determined

Other: Not determined

Metal Corrosivity:

Steel: Not determined

Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Evaporation Extreme temperatures Contact with oxidizers

Reactivity / Incompatibility: Incompatible with: acrolein

Hazardous Decomposition: In a fire, can release toxic fumes of: nitrogen oxides sulfur oxides

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: None reported

LC50: None reported

Dermal Toxicity Data: None reported

Skin and Eye Irritation Data: None reported

Mutation Data: Thiourea: DNA inhibition human fibroblast 60 mmol/L. DNA inhibition human HeLa cell 140 mmol/L. DNA inhibition human lymphocyte 20 mmol/L.

Reproductive Effects Data: Thiourea: Oral rat 240 mg/kg female 12 days after conception - specific developmental abnormalities. Oral rat 1 g/kg female 12 days after conception - post-implantation mortality.

Ingredient Toxicological Data: Thiourea: Oral rat LD50 = 125 mg/kg. Hydrochloric Acid: Oral rabbit LD50 = 900 mg/kg; Inhalation rat LC50 = 3124 ppm/1 hour.

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: D002

Special Instructions (Disposal): Dispose of material in an E.P.A. approved hazardous waste facility.

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.

14. TRANSPORT INFORMATION

D.O.T.:

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

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DOT Hazard Class: NA

DOT Subsidiary Risk: NA

DOT ID Number: NA

DOT Packing Group: NA

I.C.A.O.:

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

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ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

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I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: NA

I.M.O. 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 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
Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

Thiourea

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Thiourea 10 lbs. 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.

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: WARNING - This product contains a chemical known to the State of California to cause cancer.

Identification of Prop. 65 Ingredient(s): Thiourea

California Perchlorate Rule CCR Title 22 Chap 33:

Trade Secret Registry:

National Inventories:

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

TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Cleaning solution

References: CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Technical Judgment. Vendor Information. EU Occupational Exposure Limits On Line.

Revision Summary: Updates in Section(s) 14,

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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