



Be Right™

# SAFETY DATA SHEET

Issue Date 23-Feb-2024

Revision Date 23-Feb-2024

Version 1.3

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## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Obsolete Item Statement This product is Obsolete and is no longer manufactured

**Product identifier**

Product Code(s) 2266349-MY

Safety data sheet number M00998

Product Name Mehlich 2 Soil Extractant Concentrate

Contains Contains Acetic acid, Ammonium chloride, Hydrofluoric acid, Ammonium fluoride

**Recommended use of the chemical and restrictions on use**

Recommended Use Soil Testing.

Uses advised against No information available

**Details of the supplier of the safety data sheet**

Manufacturer Address Hach Company, P.O. Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

**Emergency telephone number**

+1 (303) 623-5716 - 24 Hour Service +1 (515)232-2533 - 8am - 4pm CST  
Chemtrec 1-800-424-9300

E-mail address seasia@hach.com

## Section 2: HAZARDS IDENTIFICATION

**GHS Classification**

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

**Label elements**



Signal word - Danger

**Hazard statements**

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

**Precautionary statements**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

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

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P363 - Wash contaminated clothing before reuse

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P405 - Store locked up

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

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

P310 - Immediately call a POISON CENTER or doctor/physician

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

**Other Hazards Known**

No information available

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

**Section 4: FIRST AID MEASURES**

**Description of necessary first aid measures**

**General advice** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Inhalation** Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical attention.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.

**Ingestion** Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.

**For emergency responders**

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use

barrier to give mouth-to-mouth resuscitation.

**Most important symptoms/effects, acute and delayed**

**Symptoms** Burning sensation.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

## Section 5: FIRE FIGHTING MEASURES

**Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

**Explosive properties**

Not classified according to GHS criteria.

**Hazardous combustion products** This material will not burn.

**Specific/special fire-fighting measures**

**Specific/special fire-fighting measures** No information available.

**Special protective equipment and precautions for fire-fighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**For emergency responders** Use personal protective equipment as required.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Reference to other sections** See section 8 for more information.

See section 13 for more information.

## Section 7: HANDLING AND STORAGE

### Preventive measures for safe handling

#### **Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

### Precautions for safe handling

#### **General hygiene considerations**

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

#### **Incompatible materials**

Oxidizing agent. Acids. Bases.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure Limits**

#### **Legend**

See section 16 for terms and abbreviations

### Appropriate engineering controls

#### **Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### **Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

#### **Hand protection**

Wear suitable gloves. Impervious gloves.

#### **Eye/face protection**

Face protection shield.

#### **Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

#### **General hygiene considerations**

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

#### **Environmental exposure controls**

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

#### **Thermal hazards**

None under normal processing.



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**Upper explosion limit**  
**Lower explosion limit**

No data available  
No data available

**Flammable properties**

**Flash point**

No data available

**Flammability Limit in Air**

**Upper flammability limit:**  
**Lower flammability limit:**

No data available  
No data available

**Oxidizing properties**

No data available.

**Bulk density**

No data available

## Section 10: STABILITY AND REACTIVITY

**Reactivity**

Not applicable. Corrosive to metal.

**Chemical stability**

**Stability**

Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None  
**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**Hazardous polymerization**

None under normal processing.

**Conditions to avoid**

**Conditions to avoid**

Exposure to air or moisture over prolonged periods.

**Incompatible materials**

**Incompatible materials**

Oxidizing agent. Acids. Bases.

**Hazardous decomposition products**

Carbon dioxide. Carbon monoxide.

## Section 11: TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Inhalation**

Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

**Eye contact**

Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact** May cause irritation.

**Ingestion** Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

**Symptoms** Redness. Burning. May cause blindness. Coughing and/ or wheezing.

**Acute toxicity**  
Based on available data, the classification criteria are not met

**Mixture**  
No data available.

**Ingredient Acute Toxicity Data**  
No data available.

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

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

**Acute Toxicity Estimations (ATE)**

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

<b>ATEmix (oral)</b>	6,849.00
<b>ATEmix (dermal)</b>	2,157.00
<b>ATEmix (inhalation-dust/mist)</b>	21.00

**Skin corrosion/irritation**  
May cause skin irritation.

**Mixture**  
No data available.

**Ingredient Skin Corrosion/Irritation Data**  
No data available.

**Serious eye damage/eye irritation**  
Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Mixture**  
No data available.

**Ingredient Eye Damage/Eye Irritation Data**  
No data available.

**Respiratory or skin sensitization**  
Based on available data, the classification criteria are not met.

**Mixture**  
No data available.

**Ingredient Sensitization Data**  
No data available.

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**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

No data available.

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Group 3 - Not classifiable as a human carcinogen
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

No data available.

**Mixture invivo Data**

No data available.

**Substance invivo Data**

No data available.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

No data available.



## Section 12: ECOLOGICAL INFORMATION

### Ecotoxicity

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

### Mixture

**Aquatic Acute Toxicity**  
No data available.

**Aquatic Chronic Toxicity**  
No data available.

### Substance

**Aquatic Acute Toxicity**  
No data available.

**Aquatic Chronic Toxicity**  
No data available.

### Persistence and degradability

**Mixture**  
No data available.

**Bioaccumulation**  
MATERIAL DOES NOT BIOACCUMULATE.

**Mixture**  
No data available.

**Partition coefficient** Not applicable

### Mobility

**Soil Organic Carbon-Water Partition Coefficient** Not applicable

### Other adverse effects

No information available

## Section 13: DISPOSAL CONSIDERATIONS

### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## Section 14: TRANSPORT INFORMATION

**Note:** No special precautions necessary.

### IMDG

**UN number or ID number** UN1760  
**IMDG Technical Name** (Acetic Acid/Hydrofluoric Acid Mixture)  
**Transport hazard class(es)** 8

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**Packing Group** II  
**Marine pollutant** Not applicable  
**Special precautions for user** Not applicable

**ADR**

**UN number or ID number** UN1760  
**Proper shipping name** Corrosive Liquid, N.O.S.  
**ADR Technical Name** (Acetic Acid/Hydrofluoric Acid Mixture)  
**Transport hazard class(es)** 8  
**Packing Group** II  
**Environmental hazards** Not applicable  
**Special Provisions** None

**IATA**

**UN number or ID number** UN1760  
**Proper shipping name** Corrosive Liquid, N.O.S.  
**IATA Technical Name** (Acetic Acid/Hydrofluoric Acid Mixture)  
**Transport hazard class(es)** 8  
**Packing group** II  
**Environmental hazards** Not applicable  
**Special Provisions** None  
**ERG Code** 154

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

**Section 15: REGULATORY INFORMATION**

**Regulatory information**

**National regulations**

**Malaysia**

No applicable information was found

See section 8 for national exposure control parameters

**International Inventories**

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

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**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

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## Section 16: OTHER INFORMATION

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

### Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed

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in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 23-Feb-2024

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**Revision Note** None

**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**