



Be Right™

SAFETY DATA SHEET

Issue Date 04-May-2018

Revision Date 10-Feb-2025

Version 2.7

Page 1 / 13

1. IDENTIFICATION

Product identifier

Product Name Hardness Indicator Reagent (1 mg/l Hardness)

Other means of identification

Product Code(s) 2255453

Safety data sheet number M00597

Recommended use of the chemical and restrictions on use

Recommended Use Indicator for hardness. Water Analysis.

Uses advised against Consumer use.

Restrictions on use Not determined.

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

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Warning



Hazard statements

EN / EGHS

Page 1 / 13

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 2 / 13

H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical attention
P362 - Take off contaminated clothing and wash before reuse
P280 - Wear protective gloves, protective clothing, eye protection, and face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical attention

Other Hazards Known

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Family No information available.
Chemical nature No information available.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Propanoic acid	79-09-4	1 - 5%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

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

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	No information available.
Hazardous combustion products	This material will not burn.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

U.S. 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. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
--------------------	--

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

Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so.
----------------------------------	---

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	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Reference to other sections	See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
--------------------------------	---

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Flammability class	Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Propanoic acid CAS#: 79-09-4	TWA: 10 ppm	(vacated) TWA: 10 ppm (vacated) TWA: 30 mg/m ³	TWA: 10 ppm TWA: 30 mg/m ³ STEL: 15 ppm STEL: 45 mg/m ³

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. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

Eye/face protection

If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Wash contaminated clothing before reuse.

General Hygiene Considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance aqueous solution
Odor Vinegar

Color dark red
Odor threshold No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	2.5	@ 20 °C
Melting point / freezing point	~ -1 °C / 30.2 °F	
Initial boiling point and boiling range	98 °C / 208.4 °F	

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 5 / 13

Evaporation rate No data available
Vapor pressure 23.702 mm Hg / 3.16 kPa at 25 °C / 77 °F
Relative vapor density 0.62
Specific gravity - VALUE 1 1.004
Partition coefficient Not applicable
Soil Organic Carbon-Water Partition Coefficient Not applicable
Autoignition temperature No data available
Decomposition temperature No data available
Dynamic viscosity No data available
Kinematic viscosity No data available

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Corrosive to metals

Steel Corrosion Rate No data available
Aluminum Corrosion Rate No data available

Volatile Organic Compounds (VOC) Content

See ingredients information below

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Propanoic acid	79-09-4	No data available	X

Explosive properties

Upper explosion limit No data available
Lower explosion limit No data available

Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limit: No data available
Lower flammability limit: No data available

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 6 / 13

Oxidizing properties

No data available.

Bulk density

No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

No information available.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye contact	Causes serious eye irritation.
Skin contact	Causes skin irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms Redness. May cause redness and tearing of the eyes.

Acute toxicity

Based on available data, the classification criteria are not met

Mixture

No data available.

Ingredient Acute Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
---------------	---------------	---------------	---------------	-----------------------	--

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 7 / 13

Propanoic acid (1 - 5%) CAS#: 79-09-4	Rat LD ₅₀	2600 mg/kg	None reported	None reported	IUCLID
---	-------------------------	------------	---------------	---------------	--------

Unknown Acute Toxicity

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

Acute Toxicity Estimations (ATE)

ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

Classification based on data available for ingredients. Irritating to skin.

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Propanoic acid (1 - 5%) CAS#: 79-09-4	Open Irritation Test	Rabbit	495 mg	None reported	Corrosive to skin	RTECS

Serious eye damage/irritation

Classification based on data available for ingredients. Irritating to eyes.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Propanoic acid (1 - 5%) CAS#: 79-09-4	Standard Draize Test	Rabbit	0.99 mg	None reported	Corrosive to eyes	RTECS

Respiratory or skin sensitization

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

Mixture

No data available.

Ingredient Sensitization Data

No data available.

Chemical name	Test method	Species	Results	Key literature references and sources for data
Propanoic acid (1 - 5%) CAS#: 79-09-4	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	IUCLID

STOT - single exposure

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

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 8 / 13

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.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Propanoic acid	79-09-4	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	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.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Propanoic acid (1 - 5%) CAS#: 79-09-4	Mutation in microorganisms	<i>Salmonella typhimurium</i>	6.667 mg/plate	None reported	Negative	RTECS

Mixture *in vivo* Data

No data available.

Substance *in vivo* Data

No data available.

Reproductive toxicity

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

Mixture

No data available.

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 9 / 13

Ingredient Reproductive Toxicity Data

No data available.

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Unknown aquatic toxicity

0% of the mixture consists of components(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.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Propanoic acid (1 - 5%) CAS#: 79-09-4	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	51.0 mg/L	IUCLID
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Propanoic acid (1 - 5%) CAS#: 79-09-4	48 Hours	<i>Daphnia magna</i>	EC ₅₀	45.8 mg/L	IUCLID

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Mixture

No data available.

Mixture

No data available.

Partition coefficient

Not applicable

Mobility

Soil Organic Carbon-Water Partition Coefficient

Not applicable

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 10 / 13

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.

US EPA Waste Number No data available

Special instructions for 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. Open cold water tap completely, slowly pour the reacted material to the drain. Flush system with plenty of water.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

Note: No special precautions necessary.

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.

15. REGULATORY INFORMATION

National Inventories

For Inventory status, "complies" means, listed on the inventory, exempted or otherwise complies.

TSCA Complies
DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECI Complies
PICCS Does not comply
TCSI Complies
AICS Complies
NZIoC Complies

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

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 11 / 13

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Propanoic acid 79-09-4	5000 lb	-	-	X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Propanoic acid 79-09-4	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Propanoic acid 79-09-4	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Propanoic acid	180.0940	21 CFR 184.1081

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments

None

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 12 / 13

Additional information

Global Automotive Declarable Substance List (GADSL)

Not applicable

NFPA and HMIS Classifications

NFPA	Health hazards - 2	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 2	Flammability - 0	Physical hazards - 0	Personal protection - X - I

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	Environmental Protection Agency
ERMA	ERMA (New Zealand 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	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)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed 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.

Product Code(s) 2255453
Issue Date 04-May-2018
Version 2.7

Product Name Hardness Indicator Reagent (1 mg/l Hardness)
Revision Date 10-Feb-2025
Page 13 / 13

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 04-May-2018

Revision Date 10-Feb-2025

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.

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 ©2025

End of Safety Data Sheet