



Be Right™

SAFETY DATA SHEET

Issue Date 02-Aug-2019

Revision Date 10-Feb-2025

Version 9.6

Page 1 / 16

1. IDENTIFICATION

Product identifier

Product Name Arsenic Reagent #5

Other means of identification

Product Code(s) 2798199

Safety data sheet number M01157

UN/ID no UN3077

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent.

Uses advised against Consumer use.

Restrictions on use For Laboratory Use Only.

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)

Aquatic Acute Toxicity	Category 1
Chronic aquatic toxicity	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Warning



Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 2 / 16

Hazard statements

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

P273 - Avoid release to the environment

P391 - Collect spillage

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

Other Hazards Known

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Name	Zinc
Chemical Family	Element.
Formula	Zn
CAS No	7440-66-6
Chemical nature	Element.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Zinc	7440-66-6	90 - 100%	-
Nickel	7440-02-0	<0.1%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11 for additional Toxicological Information.

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	zinc oxide.
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.
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Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation.
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Environmental precautions

Environmental precautions	See Section 12 for additional ecological information.
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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	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.
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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

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 4 / 16

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Nickel CAS#: 7440-02-0	TWA: 1.5 mg/m ³ inhalable particulate matter	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.015 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.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

No special protective equipment required.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

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	Solid	Color	Blue to gray
Appearance	powder	Odor threshold	Not applicable
Odor	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	65.40 g/mole	
pH	No data available	
Melting point / freezing point	419 °C / 786.2 °F	
Initial boiling point and boiling range	907 °C / 1664.6 °F	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	7.14	
Partition coefficient	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	500 °C / 932 °F	
Decomposition temperature	907.22 °C / 1664.996 °F	
Dynamic viscosity	Not applicable	

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 5 / 16

Kinematic viscosity Not applicable

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Insoluble	< 0.1 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acids	Soluble	> 1000 mg/L	25 °C / 77 °F
Aqueous alkaline solutions	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Corrosive to metals

Steel Corrosion Rate
Aluminum Corrosion Rate

Not applicable
Not applicable

Volatile Organic Compounds (VOC) Content

This Product is by Weight 100% an Individual Pure Chemical Substance

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Zinc	7440-66-6	Not applicable	-
Nickel	7440-02-0	No data available	-

Explosive properties

Upper explosion limit
Lower explosion limit

No data available
No data available

Flammable properties

Flash point

Not applicable

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

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stable under normal conditions.

Explosion data

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 6 / 16

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Possibility of hazardous reactions
None under normal processing.

Hazardous polymerization
Hazardous polymerization does not occur.

Conditions to avoid
None known based on information supplied.

Incompatible materials
Strong oxidizing agents, strong acids, and strong bases.

Hazardous decomposition products
zinc oxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation No known effect based on information supplied.
Eye contact No known effect based on information supplied.
Skin contact No known effect based on information supplied.
Ingestion No known effect based on information supplied.

Symptoms No information available.

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

Mixture
No data available.

Ingredient Acute Toxicity Data
Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Nickel (<0.1%) CAS#: 7440-02-0	Rat	> 9000 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)
Not applicable

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

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 7 / 16

ATEmix (inhalation-gas)	No information available
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Skin corrosion/irritation

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

Mixture

If available, see ingredient data below.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	Standard Draize Test	Human	0.300 mg	72 hours	Mild skin irritant	RTECS

Serious eye damage/irritation

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

Mixture

If available, see ingredient data below.

Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	100 mg	24 hours	Mild eye irritant	ECHA

Respiratory or skin sensitization

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

Mixture

No data available.

Ingredient Sensitization Data

Test data reported below.

Skin Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	ECHA
Nickel (<0.1%) CAS#: 7440-02-0	Based on human experience	Human	Confirmed to be a skin sensitizer	Initial Risk Assessment Report

Respiratory Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Nickel (<0.1%) CAS#: 7440-02-0	Based on human experience	Human	Confirmed to be a respiratory sensitizer	Initial Risk Assessment Report

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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	Mouse TD _{Lo}	5000 mg/kg	None reported	Kidney, Ureter, or Bladder Liver Hepatitis (hepatocellular necrosis), diffuse Lungs, Thorax, or Respiration Respiratory depression	RTECS
Nickel (<0.1%) CAS#: 7440-02-0	Rat LD _{Lo}	200 mg/kg	None reported	Nutritional and Gross Metabolic Weight loss or decreased weight gain Behavioral Somnolence (general depressed activity)	RTECS

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	Human TC _{Lo}	0.59 mg/L	4 hours	Skin and Appendages Sweating	RTECS
Nickel (<0.1%) CAS#: 7440-02-0	Rat TC _{Lo}	0.5 mg/L	None reported	None reported	Initial Risk Assessment Report

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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	Human TC _{Lo}	70 mg/kg	70 days	Biochemical Other changes	RTECS

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
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Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 9 / 16

Zinc (90 - 100%) CAS#: 7440-66-6	Human TC _{Lo}	0.0024 mg/L	1825 days	Blood Normocytic anemia, Changes in serum composition (e.g. TP, bilirubin, cholesterol)	RTECS
Nickel (<0.1%) CAS#: 7440-02-0	Rat TC _{Lo}	0.0001 mg/L	1 days	Liver Impaired liver function tests Blood Changes in serum composition (e.g. TP, bilirubin, cholesterol) Changes in erythrocyte (RBC) count	RTECS

Carcinogenicity

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

Mixture

No data available.

Ingredient Carcinogenicity Data

Test data reported below.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Zinc	7440-66-6	-	-	-	-
Nickel	7440-02-0	-	Group 2B	Reasonably Anticipated	X

Legend

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

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	Mouse	12.6 mg/kg	46 weeks	Gastrointestinal Tumors	ERMA

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Nickel (<0.1%) CAS#: 7440-02-0	Guinea pig TC _{Lo}	0.015 mg/L	91 weeks	Lungs, Thorax, or Respiration Tumors Bronchiogenic carcinoma	RTECS

Germ cell mutagenicity

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

Mixture invitro Data

No data available.

Substance invitro Data

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
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Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 10 / 16

Zinc (90 - 100%) CAS#: 7440-66-6	Mammalian gene cell mutation	Mouse lymphoma	12.13 mg/L	3 hours	Negative	ECHA
Nickel (<0.1%) CAS#: 7440-02-0	Morphological transformation	Hamster kidney	400 mg/L	None reported	Positive test result for mutagenicity	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.

Ingredient Reproductive Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	Rat NOAEL	15 mg/kg	7 days	No reproductive or developmental toxic effects observed	ECHA
Nickel (<0.1%) CAS#: 7440-02-0	Rat TD _{Lo}	158 mg/kg	Multiple generations	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus) Fetal death	RTECS

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

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

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
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Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 11 / 16

Zinc (90 - 100%) CAS#: 7440-66-6	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	0.14 mg/L	GESTIS
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Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	48 Hours	<i>Daphnia magna</i>	EC ₅₀	0.07 mg/L	GESTIS

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Zinc (90 - 100%) CAS#: 7440-66-6	96 hours	<i>Pseudokirchneriella subcapitata</i>	EC ₅₀	0.03 mg/L	GESTIS

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Mixture

No data available.

Mixture

No data available.

Partition coefficient

No data available

Mobility

Soil Organic Carbon-Water Partition Coefficient

No data available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment 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.

US EPA Waste Number

D001, D003

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel 7440-02-0	-	Included in waste streams: F006, F039	-	-

Special instructions for disposal

Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

14. TRANSPORT INFORMATION

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 12 / 16

DOT

UN/ID no	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
DOT Technical Name	Zinc
Transport hazard class(es)	9
Packing Group	III
Emergency Response Guide Number	171

TDG

UN/ID no	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
TDG Technical Name	Zinc
Transport hazard class(es)	9
Packing Group	III

IATA

UN number or ID number	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
IATA Technical Name	Zinc
Transport hazard class(es)	9
Packing group	III
ERG Code	9L
Special Provisions	A3, A803
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Zinc), 9, III

IMDG

UN number or ID number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
IMDG Technical Name	Zinc
Transport hazard class(es)	9
Packing Group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 966, 967, 969
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc), 9, III, Marine pollutant

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

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 13 / 16

KECI	Complies
PICCS	Complies
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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Zinc (CAS #: 7440-66-6)	1.0
Nickel (CAS #: 7440-02-0)	0.1

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 contains the following substances which are regulated 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
Zinc 7440-66-6	-	X	X	-
Nickel 7440-02-0	-	X	X	-

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Zinc 7440-66-6	1000 lb	-	RQ 454 kg final RQ RQ 1000 lb final RQ
Nickel 7440-02-0	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

Chemical name	TSCA 12(b)
Zinc (90 - 100%) CAS#: 7440-66-6	Section 6

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 14 / 16

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Nickel (CAS #: 7440-02-0)	Carcinogen



WARNING: This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer.

For more information, go to <http://www.P65Warnings.ca.gov>

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
Zinc 7440-66-6	X	X	X
Nickel 7440-02-0	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Nickel	-	21 CFR 184.1537

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

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thresholds
Nickel 7440-02-0	Declarable Substance (FI)	0.1 %

NFPA and HMIS Classifications

NFPA	Health hazards - 0	Flammability - 1	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 0	Flammability - 1	Physical hazards - 0	Personal protection - X - 1

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

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Issue Date 02-Aug-2019

Revision Date 10-Feb-2025

Revision Note None

Disclaimer

Product Code(s) 2798199
Issue Date 02-Aug-2019
Version 9.6

Product Name Arsenic Reagent #5
Revision Date 10-Feb-2025
Page 16 / 16

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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End of Safety Data Sheet



Be Right™

SAFETY DATA SHEET

Issue Date 16-Aug-2018 Revision Date 28-Feb-2025

Version 4.9

Page 1 / 14

1. IDENTIFICATION

Product identifier

Product Name Arsenic Test Strips

Other means of identification

Product Code(s) 2800100

Safety data sheet number M01892

UN/ID no UN2025

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Test strip.

Uses advised against None.

Restrictions on use For Laboratory Use Only.

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)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Specific target organ toxicity (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Danger

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 2 / 14



Hazard statements

H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H332 - Harmful if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P270 - Do not eat, drink or smoke when using this product
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant
P280 - Wear protective gloves, protective clothing, eye protection, and face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P361 + P364 - Take off immediately all contaminated clothing and wash it before reuse
P405 - Store locked up
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment

Other Hazards Known

Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Family Mixture.
Chemical nature Test strip.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Cellulose	9004-34-6	90 - 100%	-
Mercury bromide (HgBr ₂)	7789-47-1	1 - 5%	-

4. FIRST AID MEASURES

Description of first aid measures

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

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.

Eye contact	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing.
Skin contact	Get immediate medical advice/attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	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 and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing.

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	May vaporize to form Mercury vapor. Bromides.
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.
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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. Evacuate personnel to safe areas. Avoid generation of dust. Do not breathe dust.

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	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. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid generation of dust. Do not eat, drink or smoke when using this product.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.
Flammability class	Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Cellulose CAS#: 9004-34-6	TWA: 10 mg/m ³	TWA: 15 mg/m ³ TWA: 5 mg/m ³ (vacated) TWA: 15 mg/m ³ (vacated) TWA: 5 mg/m ³ (vacated) STEL: 10 mg/m ³	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust TWA: 1 mg/m ³
Mercury bromide (HgBr ₂) CAS#: 7789-47-1	TWA: 0.025 mg/m ³ Hg Sk*	(vacated) Ceiling: 0.1 mg/m ³	IDLH: 10 mg/m ³ Hg Ceiling: 0.1 mg/m ³ Hg TWA: 0.05 mg/m ³ except Organo alkyls Hg vapor

Appropriate engineering controls

Engineering Controls	Showers Eyewash stations Ventilation systems.
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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	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.
General Hygiene Considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 5 / 14

not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

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	Solid
Appearance	Paper
Odor	None
Color	white
Odor threshold	No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	No data available	
Partition coefficient	$\log K_{ow} \sim 0$	
Soil Organic Carbon-Water Partition Coefficient	$\log K_{oc} \sim 0$	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

Solubility(ies)

Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
No information available	No data available	No information available

Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
None reported	No information available	No data available	No information available

Other information

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 6 / 14

Corrosive to metals

Steel Corrosion Rate
Aluminum Corrosion Rate

No data available
No data available

Volatile Organic Compounds (VOC) Content

Not applicable

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Cellulose	9004-34-6	No data available	-
Mercury bromide (HgBr ₂)	7789-47-1	No data available	-

Explosive properties

Upper explosion limit
Lower explosion limit

No data available
No data available

Flammable properties

Flash point

Not applicable

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

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

Excessive heat.

Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

Hazardous decomposition products

Mercury. Bromides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Harmful by inhalation.
Eye contact	No known effect based on information supplied.
Skin contact	Toxic in contact with skin.
Ingestion	Harmful if swallowed.
Symptoms	Coughing and/ or wheezing.

Acute toxicity

Harmful if swallowed
Toxic in contact with skin
Harmful if inhaled

Mixture

No data available.

Ingredient Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Mercury bromide (HgBr ₂) (1 - 5%) CAS#: 7789-47-1	Rat LD ₅₀	40 mg/kg	None reported	None reported	GESTIS

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Mercury bromide (HgBr ₂) (1 - 5%) CAS#: 7789-47-1	Rat LD ₅₀	.? mg/kg	None reported	None reported	GESTIS

Unknown Acute Toxicity

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

Acute Toxicity Estimations (ATE)

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

ATEmix (oral)	2,000.00 mg/kg
ATEmix (dermal)	250.00 mg/kg
ATEmix (inhalation-dust/mist)	2.5050 mg/l
ATEmix (inhalation-vapor)	25.050 mg/l
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

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

Mixture

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 8 / 14

No data available.

Ingredient Skin Corrosion/Irritation Data

No data available.

Serious eye damage/irritation

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

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Mercury bromide (HgBr ₂) (1 - 5%) CAS#: 7789-47-1	None reported	None reported	None reported	None reported	Corrosive to eyes	HSDB

Respiratory or skin sensitization

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

Mixture

No data available.

Ingredient Sensitization Data

No data available.

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

May cause damage to organs.

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
Cellulose	9004-34-6	-	Group 1	Known	X
Mercury bromide (HgBr ₂)	7789-47-1	-	Group 3	-	-

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 9 / 14

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Group 3 - Not Classifiable as to Carcinogenicity in Humans
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.

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.

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

Ecotoxicity

Harmful to aquatic life with long lasting effects.

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.

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 10 / 14

Mixture

No data available.

Bioaccumulation

Material does not bioaccumulate

Mixture

No data available.

Partition coefficient

log K_{ow} ~ 0

Mobility

Soil Organic Carbon-Water Partition Coefficient

log K_{oc} ~ 0

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment 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.

US EPA Waste Number

D009

Special instructions for disposal

Dispose of all mercury contaminated material at an E.P.A. hazardous waste facility.

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN2025
Proper shipping name	MERCURY COMPOUNDS, SOLID, N.O.S.
DOT Technical Name	Mercury bromide (HgBr ₂)
Transport hazard class(es)	6.1
Packing Group	III
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to DOT.
Emergency Response Guide Number	151

TDG

UN/ID no	UN2025
Proper shipping name	MERCURY COMPOUND, SOLID, N.O.S.
Transport hazard class(es)	6.1
Packing Group	III
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to TDG.

IATA

UN number or ID number	UN2025
Proper shipping name	Mercury compound, solid, n.o.s.
Transport hazard class(es)	6.1
Packing group	III
ERG Code	6L

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 11 / 14

IMDG

UN number or ID number	UN2025
Proper shipping name	MERCURY COMPOUND, SOLID, N.O.S.
Transport hazard class(es)	6.1
Packing Group	III
EmS-No	F-A, S-A
Special Provisions	223, 274, 43, 66

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	Complies
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

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	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 12 / 14

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
Mercury bromide (HgBr2) 7789-47-1	-	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

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Cellulose (CAS #: 9004-34-6)	Carcinogen
Mercury bromide (HgBr2) (CAS #: 7789-47-1)	Developmental



WARNING: This product can expose you to chemicals including Mercury bromide (HgBr2), Cellulose, which are known to the State of California to cause cancer or birth defects or reproductive harm.
For more information, go to <http://www.P65Warnings.ca.gov>

IMERC: Contains Mercury Dispose of in accordance with local, state and federal regulations or laws.

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
Cellulose 9004-34-6	X	X	X
Mercury bromide (HgBr2) 7789-47-1	X	-	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Cellulose	180.0950	-

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

Special Comments

This product contains mercury and may be subject to reporting and recordkeeping requirements

Additional information

Global Automotive Declarable Substance List (GADSL)

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 13 / 14

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thresholds
Mercury bromide (HgBr ₂) 7789-47-1	Declarable Substance (LR) Prohibited Substance (LR)	0.0005 % 0.1 %

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

Product Code(s) 2800100
Issue Date 16-Aug-2018
Version 4.9

Product Name Arsenic Test Strips
Revision Date 28-Feb-2025
Page 14 / 14

regulations.

SKN* Skin designation
RSP+ Respiratory sensitization
C Carcinogen
M mutagen

SKN+ Skin sensitization
** Hazard Designation
R Reproductive toxicant

Prepared By Hach Product Compliance Department

Issue Date 16-Aug-2018

Revision Date 28-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



Be Right™

SAFETY DATA SHEET

Issue Date 08-Jul-2021

Revision Date 10-Feb-2025

Version 5.2

Page 1 / 12

1. IDENTIFICATION

Product identifier

Product Name Arsenic Reagent #1

Other means of identification

Product Code(s) 2797899

Safety data sheet number M00244

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent.

Uses advised against Consumer use.

Restrictions on use For Laboratory Use Only.

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 not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

None

Hazard statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Other Hazards Known

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 2 / 12

Substance

Chemical Name	Sodium phosphate dibasic
Chemical Family	Inorganic salt.
Formula	Na ₂ HPO ₄
CAS No	7558-79-4
Alternate CAS Number	7782-85-6 - Heptahydrate
Chemical nature	Inorganic Compound.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Phosphoric acid, disodium salt	7558-79-4	100%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms	See Section 11 for additional Toxicological Information.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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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	Phosphorus oxides.
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
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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 Ensure adequate ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

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 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.

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 This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

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. 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 Wear safety glasses with side shields (or goggles).

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 4 / 12

Skin and body protection No special protective equipment required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

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	Solid
Appearance	crystalline
Color	colorless
Odor	Odorless
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	141.96 g/mole	
pH	9.1	1% Solution
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	1.62	
Partition coefficient	$\log K_{ow} \sim 0$	
Soil Organic Carbon-Water Partition Coefficient	$\log K_{oc} \sim 0$	
Autoignition temperature	No data available	
Decomposition temperature	No information available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

Solubility(ies)

Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	118000 mg/L	20 °C / 68 °F

Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acids	Soluble	> 1000 mg/L	25 °C / 77 °F
Ethyl alcohol	Insoluble	< 0.1 mg/L	25 °C / 77 °F

Other information

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 5 / 12

Corrosive to metals

Steel Corrosion Rate
Aluminum Corrosion Rate

No data available
No data available

Volatile Organic Compounds (VOC) Content

This Product is by Weight 100% an Individual Pure Chemical Substance

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Phosphoric acid, disodium salt	7558-79-4	No data available	-

Explosive properties

Upper explosion limit
Lower explosion limit

No data available
No data available

Flammable properties

Flash point

Not applicable

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

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

Hazardous polymerization does not occur.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

Hazardous decomposition products

Phosphorus oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.

Symptoms No information available.

Acute toxicity

Based on available data, the classification criteria are not met

Mixture

If available, see ingredient data below.

Ingredient Acute Toxicity Data

No data available.

Unknown Acute Toxicity

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

Acute Toxicity Estimations (ATE)

Not applicable

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

ATEmix (oral)	99,999.00
ATEmix (dermal)	99,999.00
ATEmix (inhalation-dust/mist)	99,999.00
ATEmix (inhalation-vapor)	99,999.00
ATEmix (inhalation-gas)	99,999.00

Skin corrosion/irritation

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

Mixture

If available, see ingredient data below.

Ingredient Skin Corrosion/Irritation Data

No data available.

Serious eye damage/irritation

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

Mixture

If available, see ingredient data below.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Respiratory or skin sensitization

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

Mixture

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 7 / 12

If available, see ingredient data below.

Ingredient Sensitization Data

No data available.

STOT - single exposure

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

Mixture

If available, see ingredient data below.

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

If available, see ingredient data below.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

Carcinogenicity

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

Mixture

If available, see ingredient data below.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Phosphoric acid, disodium salt	7558-79-4	-	-	-	-

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

If available, see ingredient data below.

Substance invitro Data

No data available.

Mixture invivo Data

If available, see ingredient data below.

Substance invivo Data

No data available.

Reproductive toxicity

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

Mixture

No data available.

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 8 / 12

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

If available, see ingredient data below.

Aquatic Chronic Toxicity

If available, see ingredient data below.

Substance

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Mixture

No data available.

Bioaccumulation

There is no data for this product

Mixture

No data available.

Partition coefficient

log K_{ow} ~ 0

Mobility

Soil Organic Carbon-Water Partition Coefficient

log K_{oc} ~ 0

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment 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.

US EPA Waste Number

Not applicable

Special instructions for disposal Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

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 Complies
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

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

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 10 / 12

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
Phosphoric acid, disodium salt 7558-79-4	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)
Phosphoric acid, disodium salt 7558-79-4	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
Phosphoric acid, disodium salt 7558-79-4	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Phosphoric acid, disodium salt	180.0910	21 CFR 182.1778,21 CFR 182.6290,21 CFR 182.6778,21 CFR 182.8778

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

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Not applicable

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 11 / 12

NFPA and HMIS Classifications

NFPA	Health hazards - 0	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 0	Flammability - 0	Physical hazards - 0	Personal protection - X -1

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'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	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.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant

Product Code(s) 2797899
Issue Date 08-Jul-2021
Version 5.2

Product Name Arsenic Reagent #1
Revision Date 10-Feb-2025
Page 12 / 12

M mutagen

Prepared By Hach Product Compliance Department

Issue Date 08-Jul-2021

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.

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End of Safety Data Sheet



Be Right™

SAFETY DATA SHEET

Issue Date 28-05-2019

Revision Date 10-Feb-2025

Version 9

Page 1 / 16

1. IDENTIFICATION

Product identifier

Product Name Arsenic Reagent #2

Other means of identification

Product Code(s) 2797799

Safety data sheet number M01887

UN/ID no UN3260

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent.

Uses advised against Consumer use.

Restrictions on use For Laboratory Use Only.

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)

Oxidizing solids	Category 3
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Chronic aquatic toxicity	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Danger

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 2 / 16



Hazard statements

H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P270 - Do not eat, drink or smoke when using this product
P501 - Dispose of contents/ container to an approved waste disposal plant
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves, protective clothing, eye protection, and 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
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
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
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P332 + P313 - If skin irritation occurs: Get medical attention
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P273 - Avoid release to the environment
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/ combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Other Hazards Known

Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	Potassium peroxydisulfate sulfate (K ₅ H ₃ (SO ₃ (O ₂)) ₂ (SO ₄) ₂)
Chemical Family	Oxidizing Agents.
Formula	H ₃ K ₅ S ₄ O ₁₈
CAS No	70693-62-8
Chemical nature	Inorganic Compound.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent	HMRIC #
EN / EGHS			Page 2 / 16

		Range	
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	70693-62-8	100%	-

4. FIRST AID MEASURES

Description of 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 advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Skin contact	IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get immediate medical advice/attention.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation.
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Indication of any immediate medical attention and special treatment needed

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.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use water. Do not use dry chemicals or foams. CO ₂ or Halon may provide limited control. Flood fire area with water from a distance. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable Extinguishing Media	Dry chemical. Foam. Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May ignite combustibles (wood, paper, oil, clothing, etc.). Runoff may create fire or explosion hazard. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous combustion products	Carbon monoxide, Carbon dioxide. Sulfur oxides. Potassium oxides.

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Do not move cargo or vehicle if cargo has been exposed to heat. Oxidizer. May ignite combustibles (wood, paper, oil, clothing, etc.). Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

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

Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See section 8 for more information. Stop leak if you can do it without risk. Attention! Corrosive material. Use personal protective equipment as required.

Other Information

Keep combustibles (wood, paper, oil, etc) away from spilled material. DO NOT GET WATER INSIDE CONTAINERS. Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. Do not allow to enter into soil/subsoil.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

Methods for cleaning up

With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Flush area with flooding quantities of water. Prevent product from entering drains. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

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

Use personal protection equipment. Avoid contact with skin, eyes or clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

Handle in accordance with good industrial hygiene and safety practice. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Do not store near combustible materials. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials. Store in accordance with particular national and local regulations.

Flammability class Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

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. Wear fire/flame resistant/retardant clothing.

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

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	Solid		
Appearance	powder	Color	white
Odor	None	Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
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Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 6 / 16

Molecular weight	614.9 g/mole	
pH	2.3	1% Solution
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	2.35	
Partition coefficient	$\log K_{ow} < 0.3$	OECD Test No. 117: Partition Coefficient (n-octanol/water), HPLC Method
Soil Organic Carbon-Water Partition Coefficient	$\log K_{oc} = 1.26$	OECD 121 - Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC)
Autoignition temperature	No data available	
Decomposition temperature	250 °C / 482 °F	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

Solubility(ies)

Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Moderately soluble	≥ 357 mg/L	20 °C / 68 °F

Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
None reported	No information available	No data available	No information available

Other information

Corrosive to metals

Steel Corrosion Rate	Not applicable
Aluminum Corrosion Rate	Not applicable

Volatile Organic Compounds (VOC) Content

This Product is by Weight 100% an Individual Pure Chemical Substance

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Potassium peroxymonosulfate sulfate (K ₅ H ₃ (SO ₃ (O ₂)) ₂ (SO ₄) ₂)	70693-62-8	Not applicable	-

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 7 / 16

Explosive properties

Upper explosion limit
Lower explosion limit

Not applicable
Not applicable

Flammable properties

Flash point

Not applicable

Flammability Limit in Air

Upper flammability limit:
Lower flammability limit:

No data available
No data available

Oxidizing properties

Classified as an oxidizer according to GHS criteria.

Bulk density

1100 kg/m³

10. STABILITY AND REACTIVITY

Reactivity

Oxidizer.

Chemical stability

May cause fire or explosion; strong oxidizer.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge Yes.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Heat, flames and sparks. Incompatible materials. Exposure to air or moisture over prolonged periods.

Incompatible materials

organic material. Combustible material. Hydrocarbons. Acids. Bases. Oxidizing agent.

Hazardous decomposition products

Oxygen. Sulfur oxides.

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. May cause irritation of respiratory tract.

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.

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 8 / 16

Skin contact

Corrosive. Causes severe burns. Avoid contact with skin and clothing.

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

Harmful if swallowed

Mixture

If available, see ingredient data below.

Ingredient Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) (100%) CAS#: 70693-62-8	Rat LD ₅₀	1204 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)

Not applicable

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

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

Causes severe burns.

Mixture

If available, see ingredient data below.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium peroxymonosulfate sulfate	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	24 hours	Corrosive to skin	ECHA

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 9 / 16

(K5H3(SO3(O2))2(S O4)2) (100%) CAS#: 70693-62-8						
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Serious eye damage/irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Mixture

If available, see ingredient data below.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Respiratory or skin sensitization

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

Mixture

If available, see ingredient data below.

Ingredient Sensitization Data

Test data reported below.

Skin Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(S O4)2) (100%) CAS#: 70693-62-8	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	ECHA

STOT - single exposure

May cause respiratory irritation.

Mixture

If available, see ingredient data below.

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

If available, see ingredient data below.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(S	Rat NOAEL	> 1000 mg/kg	28 days	No toxicological effects observed	ECHA

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 10 / 16

O4)2) (100%) CAS#: 70693-62-8					
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Carcinogenicity

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

Mixture

If available, see ingredient data below.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	70693-62-8	-	-	-	-

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

If available, see ingredient data below.

Substance invitro Data

No data available.

Mixture invivo Data

If available, see ingredient data below.

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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) (100%) CAS#: 70693-62-8	Rat NOAEL	250 mg/kg	21 days	No reproductive or developmental toxic effects observed	ECHA

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects.

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

Mixture

Aquatic Acute Toxicity

If available, see ingredient data below.

Aquatic Chronic Toxicity

If available, see ingredient data below.

Substance

Aquatic Acute Toxicity

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) (100%) CAS#: 70693-62-8	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	53 mg/L	ECHA

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) (100%) CAS#: 70693-62-8	48 Hours	<i>Daphnia magna</i>	EC ₅₀	3.5 mg/L	ECHA

Aquatic Chronic Toxicity

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) (100%) CAS#: 70693-62-8	28 days	<i>Cyprinodon variegatus</i>	NOEC	0.222 mg/L	ECHA

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 12 / 16

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) (100%) CAS#: 70693-62-8	28 days	<i>Mysidopsis bahia</i>	NOEC	0.267 mg/L	ECHA

Persistence and degradability

Mixture

No data available.

Bioaccumulation

Material does not bioaccumulate

Mixture

No data available.

Partition coefficient

log K_{ow} < 0.3

Mobility

Soil Organic Carbon-Water Partition Coefficient

log K_{oc} = 1.26

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products

Should not be released into the environment. 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

D001, D002

Special instructions for disposal

Work in an approved fume hood. Dilute material with excess water making a weaker than 5% solution. 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.

14. TRANSPORT INFORMATION

DOT

UN/ID no

UN3260

Proper shipping name

Corrosive Solid, Acidic, Inorganic, N.O.S.

DOT Technical Name

Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)

Transport hazard class(es)

8

Packing Group

II

Emergency Response Guide Number

154

TDG

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 13 / 16

UN/ID no	UN3260
Proper shipping name	Corrosive Solid, Acidic, Inorganic, N.O.S.
TDG Technical Name	Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)
Transport hazard class(es)	8
Packing Group	II

IATA

UN number or ID number	UN3260
Proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.*
IATA Technical Name	Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)
Transport hazard class(es)	8
Packing group	II
ERG Code	8L
Special Provisions	A3, A803

IMDG

UN number or ID number	UN3260
Proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.*
IMDG Technical Name	Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)
Transport hazard class(es)	8
Packing Group	II
EmS-No	F-A, S-B
Special Provisions	274

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	Complies
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

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 14 / 16

NZIoC - New Zealand Inventory of Chemicals

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)

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

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 does not contain any substances regulated by state right-to-know regulations.

U.S. EPA Label Information

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

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Not applicable

NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 1	Physical and chemical properties OX
HMIS	Health hazards - 3	Flammability - 0	Physical hazards - 1	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'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	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.
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	28-05-2019
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

Product Code(s) 2797799
Issue Date 28-05-2019
Version 9

Product Name Arsenic Reagent #2
Revision Date 10-Feb-2025
Page 16 / 16

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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End of Safety Data Sheet



Be Right™

SAFETY DATA SHEET

Issue Date 13-01-2020

Revision Date 07-Mar-2025

Version 5

Page 1 / 14

1. IDENTIFICATION

Product identifier

Product Name Arsenic Reagent #4

Other means of identification

Product Code(s) 45429

Safety data sheet number M00007

UN/ID no UN2967

Recommended use of the chemical and restrictions on use

Recommended Use Water Analysis.

Uses advised against Consumer use.

Restrictions on use For Laboratory Use Only.

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)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Chronic aquatic toxicity	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Warning



Hazard statements

H290 - May be corrosive to metals
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

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
P273 - Avoid release to the environment
P501 - Dispose of contents/ container to an approved waste disposal plant
P234 - Keep only in original container
P390 - Absorb spillage to prevent material damage

Other Hazards Known

May be harmful if swallowed
Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Family Mixture.
Chemical nature Mixture of inorganic compounds.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Sulfamic acid	5329-14-6	90 - 100%	-
Magnesium sulfate	7487-88-9	<1%	-

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. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

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.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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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	Sulfur oxides.
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.
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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	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. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

Flammability class Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

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. Wear breathing apparatus if exposed to vapors/dusts/aerosols.

Hand Protection Wear suitable gloves. Impervious gloves. 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. Barrier creams may help to protect the exposed areas of skin.

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.

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.

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

Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 5 / 14

Information on basic physical and chemical properties

Physical state	Solid	Color	white
Appearance	crystalline	Odor threshold	No data available
Odor	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	2.15	
Partition coefficient	log K _{ow} ~ 0.1	
Soil Organic Carbon-Water Partition Coefficient	log K _{oc} ~ 0.7	
Autoignition temperature	No data available	
Decomposition temperature	205 °C / 401 °F	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

Solubility(ies)

Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	80 °C / 176 °F

Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Methanol	Slightly soluble	> 0.1 mg/L	25 °C / 77 °F
Ethyl alcohol	Slightly soluble	> 0.1 mg/L	25 °C / 77 °F

Other information

Corrosive to metals

Classified as corrosive to metal according to GHS criteria

Steel Corrosion Rate

20.68 mm/yr / 0.81 in/yr

Aluminum Corrosion Rate

5.38 mm/yr / 0.21 in/yr

Volatile Organic Compounds (VOC) Content

Not applicable

<u>Chemical name</u>	<u>CAS No.</u>	<u>Volatile organic compounds (VOC) content</u>	<u>CAA (Clean Air Act)</u>
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Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 6 / 14

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sulfamic acid	5329-14-6	Not applicable	-
Magnesium sulfate	7487-88-9	No data available	-

Explosive properties

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

Flammable properties

Flash point Not applicable

Flammability Limit in Air

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

Oxidizing properties

No data available.

Bulk density

No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable. Corrosive to metal.

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

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods.

Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

Hazardous decomposition products

Nitrogen oxides (NOx). Sulfur oxides. Ammonia. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation May cause irritation of respiratory tract.

Eye contact Irritating to eyes. 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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	Rat LD ₅₀	2140 mg/kg	None reported	None reported	ECHA

Unknown Acute Toxicity

99.6% of the mixture consists of ingredient(s) of unknown toxicity.

Acute Toxicity Estimations (ATE)

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

ATEmix (oral)	2,148.60 mg/kg
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

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	Standard Draize Test	Human	40 mg	5 days	Mild skin irritant	RTECS

Serious eye damage/irritation

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

Mixture

No data available.

Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 8 / 14

Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	Standard Draize Test	Rabbit	20 mg	None reported	Eye irritant	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.

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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	Rat NOAEL	1000 mg/kg	90 days	No toxicological effects observed	ECHA

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
Sulfamic acid	5329-14-6	-	-	-	-
Magnesium sulfate	7487-88-9	-	-	-	-

Legend

Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 9 / 14

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.

Mixture invivo Data

No data available.

Substance invivo Data

Test data reported below.

Oral Exposure Route

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	Micronucleus test	Mouse	None reported	None reported	Negative test result for mutagenicity	NITE

Reproductive toxicity

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

Mixture

No data available.

Ingredient Reproductive Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	Rat NOAEL	200 mg/kg	None reported	No reproductive or developmental toxic effects observed	ECHA

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

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

Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 10 / 14

No data available.

Substance

Aquatic Acute Toxicity
Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	96 hours	<i>Pimephales promelas</i>	LC ₅₀	42.2 mg/L	ERMA
Magnesium sulfate (<1%) CAS#: 7487-88-9	96 hours	<i>Gambusia affinis</i>	LC ₅₀	15500 mg/L	IUCLID

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	48 Hours	<i>Daphnia magna</i>	EC ₅₀	71.6 mg/L	ECHA

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfamic acid (90 - 100%) CAS#: 5329-14-6	72 Hours	<i>Selenastrum capricornutum</i>	EC ₅₀	48 mg/L	ECHA
Magnesium sulfate (<1%) CAS#: 7487-88-9	72 Hours	<i>Scenedesmus subspicatus</i>	EC ₅₀	2700 mg/L	IUCLID

Aquatic Chronic Toxicity
No data available.

Persistence and degradability

Mixture
No data available.

Bioaccumulation
Material does not bioaccumulate

Mixture
No data available.

Partition coefficient log K_{ow} ~ 0.1

Mobility

Soil Organic Carbon-Water Partition Coefficient log K_{oc} ~ 0.7

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment 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.
US EPA Waste Number	D002

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN2967
Proper shipping name	SULFAMIC ACID
Transport hazard class(es)	8
Packing Group	III
Emergency Response Guide Number	154

TDG

UN/ID no	UN2967
Proper shipping name	SULFAMIC ACID
Transport hazard class(es)	8
Packing Group	III

IATA

UN number or ID number	UN2967
Proper shipping name	Sulphamic acid
Transport hazard class(es)	8
Packing group	III
ERG Code	8L

IMDG

UN number or ID number	UN2967
Proper shipping name	SULPHAMIC ACID
Transport hazard class(es)	8
Packing Group	III
EmS-No	F-A, S-B

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

Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 12 / 14

International Inventories

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECI	Complies
PICCS	Complies
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

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	Yes
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)

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

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
Sulfamic acid 5329-14-6	X	-	-

U.S. EPA Label Information

Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 13 / 14

Chemical name	FIFRA	FDA
Sulfamic acid	-	21 CFR 186.1093
Magnesium sulfate	-	21 CFR 184.1443

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

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thresholds
Magnesium sulfate 7487-88-9	Declarable Substance (FI)	1 % 0.1 %

NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 3	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

Product Code(s) 45429
Issue Date 13-01-2020
Version 5

Product Name Arsenic Reagent #4
Revision Date 07-Mar-2025
Page 14 / 14

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.
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 13-01-2020

Revision Date 07-Mar-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.

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End of Safety Data Sheet



Be Right™

SAFETY DATA SHEET

Issue Date 08-Jun-2019

Revision Date 10-Feb-2025

Version 4

Page 1 / 14

1. IDENTIFICATION

Product identifier

Product Name Arsenic Reagent #3

Other means of identification

Product Code(s) 2797999

Safety data sheet number M01888

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent.

Uses advised against Consumer use.

Restrictions on use For Laboratory Use Only.

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)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Danger



Hazard statements

H302 - Harmful if swallowed
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements

P270 - Do not eat, drink or smoke when using this product
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
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
P310 - Immediately call a POISON CENTER or doctor/physician
P260 - Do not breathe dust/fume/gas/mist/vapors/spray

Other Hazards Known

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Family Mixture.
Chemical nature Mixture of organic compounds.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Tetrasodium EDTA, dihydrate	10378-23-1	50 - 60%	-
Glycine, N,N-1,2-ethanediybis[N-(carboxymethyl)-, disodium salt, dihydrate	6381-92-6	40 - 50%	-

4. FIRST AID MEASURES

Description of 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. Get medical attention immediately if symptoms occur.

Eye contact Get immediate medical advice/attention. 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.

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 Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. 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 Sodium oxides. Carbon monoxide, Carbon dioxide. Nitrogen oxides.

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. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.

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 Take up mechanically, placing in appropriate containers for disposal.

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

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 4 / 14

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. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.

Flammability class Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

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.

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Color	white
Appearance	crystalline	Odor threshold	Not applicable
Odor	None		

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 5 / 14

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	Not applicable	
pH	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	No data available	
Partition coefficient	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

Solubility(ies)

Water solubility

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

Solubility in other solvents

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

Other information

Corrosive to metals

Steel Corrosion Rate	Not applicable
Aluminum Corrosion Rate	Not applicable

Volatile Organic Compounds (VOC) Content

Not applicable

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Tetrasodium EDTA, dihydrate	10378-23-1	Not applicable	-
Glycine, N,N-1,2-ethanediybis[N-(carboxymeth yl)-, disodium salt, dihydrate	6381-92-6	Not applicable	-

Explosive properties

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 6 / 14

Upper explosion limit
Lower explosion limit

No data available
No data available

Flammable properties

Flash point

Not applicable

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

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

Hazardous polymerization does not occur.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products

Nitrogen oxides. Carbon dioxide. Carbon monoxide. Sodium oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation

No known effect based on information supplied.

Eye contact

Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.

Skin contact

May cause irritation.

Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 7 / 14

Symptoms

Redness. Burning. May cause blindness.

Acute toxicity

Harmful if swallowed
Harmful if inhaled

Mixture

No data available.

Ingredient Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Tetrasodium EDTA, dihydrate (50 - 60%) CAS#: 10378-23-1	Rat LD ₅₀	2700 mg/kg	None reported	None reported	IUCLID
Glycine, N,N-1,2-ethanediylbis [N-(carboxymethyl)-, disodium salt, dihydrate (40 - 50%) CAS#: 6381-92-6	Rat LD ₅₀	2300 mg/kg	None reported	None reported	RTECS

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Glycine, N,N-1,2-ethanediylbis [N-(carboxymethyl)-, disodium salt, dihydrate (40 - 50%) CAS#: 6381-92-6	None reported	Estimated	None reported	None reported	No information available

Unknown Acute Toxicity

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

Acute Toxicity Estimations (ATE)

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

ATEmix (oral)	917.40 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	3.30 mg/l
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

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

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

EN / EGHS	Page 7 / 14
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Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 8 / 14

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Glycine, N,N-1,2-ethanediylbis [N-(carboxymethyl)-, disodium salt, dihydrate (40 - 50%) CAS#: 6381-92-6	Standard Draize Test	Rabbit	500 mg	20 hours	Not corrosive or irritating to skin	ECHA

Serious eye damage/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

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Glycine, N,N-1,2-ethanediylbis [N-(carboxymethyl)-, disodium salt, dihydrate (40 - 50%) CAS#: 6381-92-6	Standard Draize Test	Rabbit	50 mg	None reported	Mild eye irritant	ECHA

Respiratory or skin sensitization

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

Mixture

No data available.

Ingredient Sensitization Data

No data available.

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

May cause damage to organs.

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.

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 9 / 14

Mixture

No data available.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Tetrasodium EDTA, dihydrate	10378-23-1	-	-	-	-
Glycine, N,N-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt, dihydrate	6381-92-6	-	-	-	-

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

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Glycine, N,N-1,2-ethanediylbis [N-(carboxymethyl)-, disodium salt, dihydrate (40 - 50%) CAS#: 6381-92-6	Cytogenetic analysis	Hamster lung	200 mg/L	None reported	Positive test result for mutagenicity	RTECS

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.

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 10 / 14

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

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Glycine, N,N-1,2-ethanediylbis [N-(carboxymethyl)-, disodium salt, dihydrate (40 - 50%) CAS#: 6381-92-6	96 hours	<i>Lepomis macrochirus</i>	LC ₅₀	159 mg/L	Vendor SDS

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Glycine, N,N-1,2-ethanediylbis [N-(carboxymethyl)-, disodium salt, dihydrate (40 - 50%) CAS#: 6381-92-6	72 Hours	None reported	EC ₅₀	10 mg/L	Vendor SDS

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Mixture

No data available.

Bioaccumulation

Material does not bioaccumulate

Mixture

No data available.

Partition coefficient

No data available

Mobility

Soil Organic Carbon-Water Partition Coefficient

No data available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment 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.
US EPA Waste Number	Not applicable
Special instructions for disposal	Dilute material with excess water making a weaker than 5% solution. 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.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	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	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 12 / 14

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

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	Yes
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)

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

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 does not contain any substances regulated by state right-to-know regulations.

U.S. EPA Label Information

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

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Not applicable

NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 3			

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 13 / 14

	- *	Flammability - 0	Physical hazards - 0	Personal protection - X - I
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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'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	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.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By Hach Product Compliance Department

Product Code(s) 2797999
Issue Date 08-Jun-2019
Version 4

Product Name Arsenic Reagent #3
Revision Date 10-Feb-2025
Page 14 / 14

Issue Date 08-Jun-2019

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.

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End of Safety Data Sheet