

SAFETY DATA SHEET

Issue Date 06-Nov-2018 Revision Date 06-Nov-2018 Version 6 Page 1 / 13

1. IDENTIFICATION

Product identifier

Product Name Phosphate Acid Reagent Vials

Other means of identification

Product Code(s) 2767245VIAL

Safety data sheet number M01616

UN/ID no UN3264

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory Use.

Uses advised against None. Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address

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

Emergency telephone number

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

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 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word - Danger

EN / AGHS Page 1/13

Product Name Phosphate Acid Reagent Vials **Revision Date** 06-Nov-2018

Page 2/13



Hazard statements

H290 - May be corrosive to metals

H315 - Causes skin irritation

H318 - Causes serious eye damage

Precautionary statements

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

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

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

P310 - Immediately call a POISON CENTER or doctor/physician

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

Other Hazards Known

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

<u>Mixture</u>

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Sulfuric acid	7664-93-9	3 - 7%	-

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 Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open

while rinsing. Do not rub affected area. Get immediate medical advice/attention.

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.

EN / AGHS Page 2/13

Product Name Phosphate Acid Reagent Vials

Revision Date 06-Nov-2018

Page 3 / 13

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

5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable Extinguishing Media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

No information available.

Hazardous combustion products This material will not burn.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear.

6. ACCIDENTAL RELEASE MEASURES

U.S. NoticeOnly persons properly qualified to respond to an emergency involving hazardous

substances may respond to a spill according to federal regulations (OSHA 29 CFR

1910.120(a)(v)) and per your company's emergency response plan and

guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations

should respond to a spill involving chemicals.

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required.

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

Environmental precautions

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

Methods and material for containment and cleaning up

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

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

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

Reference to other sectionsSee section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

EN / AGHS Page 3/13

Product Name Phosphate Acid Reagent Vials

Revision Date 06-Nov-2018

Page 4/13

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

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid	TWA: 0.2 mg/m ³	TWA: 1 mg/m ³	IDLH: 15 mg/m ³
CAS#: 7664-93-9	_	(vacated) TWA: 1 mg/m ³	TWA: 1 mg/m ³

Appropriate engineering controls

Engineering Controls

Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Respiratory protection

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

Hand Protection Wear suitable gloves. Impervious gloves.

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

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

Information on basic physical and chemical properties

Physical state

Liquid

Appearance aqueous solution
Odor None

General Hygiene Considerations

Color colorless

Odor threshold No data available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

EN / AGHS Page 4/13

Product Name Phosphate Acid Reagent Vials

Revision Date 06-Nov-2018

Page 5/13

Molecular weight No data available

pH < 1

Melting point/freezing point ~ 0 °C / 32 °F Estimation based on theoretical

calculation

Boiling point / boiling range ~ 100 °C / 212 °F Estimation based on theoretical

calculation

Evaporation rate 0.6 (water = 1) Estimation based on theoretical

calculation

Vapor pressure 23.477 mm Hg / 3.13 kPa at 25 °C / 77 °F Estimation based on theoretical

calculation

Vapor density (air = 1) 0.62 (air = 1)

Specific gravity (water = 1 / air = 1) 1.03 Estimation based on theoretical

calculation

Partition Coefficient (n-octanol/water) Not applicable

Soil Organic Carbon-Water Partition

Coefficient

Not applicable

Autoignition temperature No data available

Decomposition temperature No data available

Dynamic viscosityNo data available

Kinematic viscosity No data available

Solubility(ies)

Water solubility

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

Solubility in other solvents

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

Other Information

Metal Corrosivity

Classified as corrosive to metal according to GHS criteria

Steel Corrosion RateNo data availableAluminum Corrosion RateNo data available

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sulfuric acid	7664-93-9	No data available	-

EN / AGHS Page 5/13

Product Code(s) 2767245VIAL

Issue Date 06-Nov-2018

Version 6

Product Name Phosphate Acid Reagent Vials

Revision Date 06-Nov-2018

Page 6/13

Explosive properties

Upper explosion limitNo data availableLower explosion limitNo data available

Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limitNo data availableLower flammability limitNo data available

Oxidizing properties No data available.

Bulk density No data available

Particle Size No information available

Particle Size Distribution No information available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None Sensitivity to Static Discharge None.

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials

Incompatible materials Oxidizing agent. Strong acids. Strong bases.

<u>Hazardous Decomposition Products</u>

Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Inhalation May cause irritation of respiratory tract.

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

irreversible damage to eyes.

Skin contact Causes skin irritation.

EN / AGHS Page 6/13

Product Name Phosphate Acid Reagent Vials Revision Date 06-Nov-2018

Page 7/13

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

Acute toxicity

Product Acute Toxicity Data

No data available.

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)

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

Skin corrosion/irritation

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

Product Skin Corrosion/Irritation Data

Test data reported below.

Test method	Species	Exposure time	Results	Key literature references and sources for
United States	Rabbit	1.0 hours	Skin irritant	<u>data</u>
Department of				Internal Data
Transportation (DOT)				
Skin Corrosion Test				

Ingredient Skin Corrosion/Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (3 - 7%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to skin	HSDB (Hazardous Substances Data Bank)

Serious eye damage/irritation

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

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (3 - 7%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to eyes	HSDB (Hazardous Substances Data Bank)

EN / AGHS Page 7/13

Product Name Phosphate Acid Reagent Vials **Revision Date** 06-Nov-2018

Page 8/13

Respiratory or skin sensitization

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

Product Sensitization Data

No data available.

Ingredient Sensitization Data

No data available.

STOT - single exposure

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

Product Specific Target Organ Toxicity Single Exposure Data

No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid	Human	0.144 mg/L	5 minutes	Lungs, Thorax, or	RTECS (Registry of Toxic
(3 - 7%)	TDLo			Respiration	Effects of Chemical
CAS#: 7664-93-9				Dyspnea	Substances)

STOT - repeated exposure

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

Product Specific Target Organ Toxicity Repeat Dose Data

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
Sulfuric acid	Human	.003 mg/L	168 days	Musculoskeletal	RTECS (Registry of Toxic
(3 - 7%)	TCL₀			Changes in teeth and	Effects of Chemical
CAS#: 7664-93-9				supporting structures	Substances)

Carcinogenicity

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

Product Carcinogenicity Data

No data available.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Sulfuric acid	7664-93-9	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)	Group 1 - Carcinogenic to Humans
NTP (National Toxicology Program)	Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of	X - Present
Labor)	

Germ cell mutagenicity

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

Product Germ Cell Mutagenicity invitro Data

EN / AGHS Page 8/13

Product Name Phosphate Acid Reagent Vials **Revision Date** 06-Nov-2018

Page 9/13

No data available.

Ingredient Germ Cell Mutagenicity invitro Data

No data available.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (3 - 7%) CAS#: 7664-93-9	Cytogenetic analysis	Hamster ovary	4 mmol/L	None reported	Positive test result for mutagenicity	No information available

Product Germ Cell Mutagenicity invivo Data

No data available.

Ingredient Germ Cell Mutagenicity invivo Data

No data available.

Reproductive toxicity

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

Product Reproductive Toxicity Data

No data available.

Ingredient Reproductive Toxicity Data

No data available.

	Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and sources for data
		type	dose	time		sources for data
Ì	Sulfuric acid	Rabbit	.02 mg/L	7 hours	Specific Developmental	No information available
	(3 - 7%)	TCLo			Abnormalities	
	CAS#: 7664-93-9				Musculoskeletal system	!

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

environment.

Product Ecological Data

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Ingredient Ecological Data

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Product Biodegradability Data

No data available.

EN / AGHS Page 9/13

Product Name Phosphate Acid Reagent Vials

Revision Date 06-Nov-2018

Page 10 / 13

Bioaccumulation

Product Bioaccumulation Data

No data available.

Partition Coefficient (n-octanol/water)

Not applicable

Mobility

Soil Organic Carbon-Water Partition Coefficient Not applicable

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

14. TRANSPORT INFORMATION

U.S. DOT

UN/ID no UN3264

Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S.

D002

DOT Technical Name (< 10% Sulphuric Acid Solution)

Hazard Class 8
Packing Group III

TDG

UN/ID no UN3264

Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S.

TDG Technical Name (< 10% Sulphuric Acid Solution)

Hazard Class 8
Packing Group | ||

<u>IATA</u>

UN/ID no UN3264

Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S.

IATA Technical Name (< 10% Sulphuric Acid Solution)

Hazard Class 8
Packing Group III

IMDG

UN/ID no UN3264

Proper shipping name Corrosive Liquid, Acidic, Inorganic, N.O.S.

IMDG Technical Name (< 10% Sulphuric Acid Solution)

Hazard Class 8
Packing Group III

EN / AGHS Page 10/13

Product Name Phosphate Acid Reagent Vials **Revision Date** 06-Nov-2018

Page 11 / 13

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

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
KECL	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 %
Sulfuric acid (CAS #: 7664-93-9)	1.0

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
Sulfuric acid	1000 lb	-	•	X

EN / AGHS Page 11 / 13

Product Name Phosphate Acid Reagent Vials **Revision Date** 06-Nov-2018

Page 12 / 13

7664-93-9		
-----------	--	--

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)
Sulfuric acid	1000 lb	1000 lb	RQ 1000 lb final RQ
7664-93-9			RQ 454 kg final RQ

U.S. - DEA (Drug Enforcement Administration) List I & List II

Chemical name	U.S DEA (Drug Enforcement Administration) - List I or Precursor	U.S DEA (Drug Enforcement Administration) - List II or Essential
	Chemicals	Chemicals
Sulfuric acid	Not Listed	50 gallon Export Volume (exports,
(3 - 7%)		transshipments and international
CAS#: 7664-93-9		transactions to designated countries)

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Sulfuric acid (CAS #: 7664-93-9)	Carcinogen

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

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

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid	X	X	X
7664-93-9			

U.S. EPA Label Information

Chemical name	FIFRA	FDA	
Sulfuric acid	180.0910	21 CFR 184.1095	

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

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Not applicable

EN / AGHS Page 12/13

Product Name Phosphate Acid Reagent Vials

Revision Date 06-Nov-2018

Page 13 / 13

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

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

NIOSH IDLH Immediately Dangerous to Life or Health

ACGIH (American Conference of Governmental Industrial Hygienists)

NDF no data

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 06-Nov-2018

Revision Date 06-Nov-2018

Revision Note SDS sections updated

2

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©2018

End of Safety Data Sheet

EN / AGHS Page 13 / 13