

SAFETY DATA SHEET

Issue Date 19-Jan-2023 Revision Date 02-Feb-2023 Version 1

1. Identification

Product identifier

Product Name Phosphate Standard Solution Ampule, 50 mg/l as PO₄

Other means of identification

Product Code(s) 17120H

Detailed information about the manufacturer, supplier, and/or importer

Manufacturer Address

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

Recommended use of the chemical and restrictions on use

Recommended Use Water Analysis, Standard solution

Restrictions on use Consumer use

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

2. Hazard(s) identification

Classification of the substance or mixture

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Other hazards which do not result in classification

No information available.

3. Composition/information on ingredients

Substance

Not applicable

Mixture

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

Product Code(s) 17120H

Chemical nature aqueous solution.

Chemical name	CAS No	Weight-%	
Water	7732-18-5	90 - 100%	
Formaldehyde	50-00-0	<0.1%	
Methanol	67-56-1	<0.1%	

4. First-aid measures

Description of necessary first aid measures

Inhalation Remove to fresh air.

Skin contact Wash skin with soap and water.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Ingestion Clean mouth with water.

For emergency responders

Self-protection of the first aiderNo information available.

Most important symptoms/effects, acute and delayed

Symptoms No information available.

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

5. Fire-fighting measures

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing mediaDo not scatter spilled material with high pressure water streams.

Specific hazards arising from the

chemical

No information available.

Hazardous combustion products This material will not burn.

Special protective actions for

fire-fighters

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

mg/l as PO₄

Methods and material for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder,

sawdust). Take up mechanically, placing in appropriate containers for disposal.

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

Environmental precautions

Environmental precautionsNo information available.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations 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.

Incompatible materialsNone known based on information supplied.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

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

Chemical name	ACGIH TLV	Philippines
Formaldehyde	dermal sensitizer;respiratory sensitizer	Ceiling: 5 ppm
50-00-0	STEL: 0.3 ppm	Ceiling: 6 mg/m ³
	TWA: 0.1 ppm	
Methanol	STEL: 250 ppm	TWA: 200 ppm
67-56-1	TWA: 200 ppm	TWA: 260 mg/m ³
	S*	· ·

Biological occupational exposure limits

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

Chemical name	ACGIH
Methanol	15 mg/L - urine (Methanol) - end of shift
67-56-1	

Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protectionNo special protective equipment required.

 Gloves

 Duration of contact
 PPE - Glove material
 Glove thickness
 Break through time

 Long term (repeated)
 Wear protective Viton™ gloves
 0,70 mm
 >480 minutes

 Short term
 Wear protective nitrile rubber gloves
 0,20 mm
 >30 minutes

exceeded or irritation is experienced, ventilation and evacuation may be required.

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

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance aqueous solution clear

Physical state Liquid Odor Odorless

ColorColorlessOdor thresholdNo data available

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

Molecular weight No data available

pH 5 @ 20 °C

Melting point / freezing point = $0 \, ^{\circ}\text{C} \, / \, 32 \, ^{\circ}\text{F}$

Initial boiling point and boiling range = 100 °C / 212 °F

Evaporation rate 0.99 (water = 1)

Vapor pressure 23.027 mm Hg / 3.07 kPa at 25 °C / 77 °F

Relative vapor density 0.62

Specific Gravity 0.986

Partition coefficient Not applicable

Soil Organic Carbon-Water Partition

Coefficient

Not applicable

Autoignition temperature No data available

Decomposition temperatureNo information available

Dynamic viscosity 1 cP (mPa s) at 20 °C / 68 °F

Kinematic viscosity 1.014 cSt (mm²/s) at 20 °C / 68 °F

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature_	
Soluble	> 1000 ma/L	25 °C / 77 °F	

Solubility in other solvents

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Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Ethyl alcohol	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Metal Corrosivity

Steel Corrosion RateNo data availableAluminum Corrosion RateNo data available

Volatile Organic Compounds (VOC) Content

See ingredients information below

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Water	7732-18-5	No data available	-
Formaldehyde	50-00-0	No data available	Χ
Methanol	67-56-1	100%	Χ

Explosive properties

Upper explosion limitNo data availableLower explosion limitNo data available

Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limit:No data availableLower flammability limit:No data available

Oxidizing properties No data available.

Other information

VOC content 0.05404

Bulk density No information available

10. Stability and reactivity

Reactivity No information available.

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization None under normal processing.

Conditions to avoid None known based on information supplied.

Incompatible materialsNone known based on information supplied.

Hazardous Decomposition Products No information available.

11. Toxicological information

Information on likely routes of exposure

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Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Substance

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LD50	100 mg/kg	None reported	None reported	GESTIS

Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%)	Rabbit LD ₅₀	270 mg/kg	None reported	None reported	GESTIS
CAS#: 50-00-0					

Inhalation (Dust/Mist) Exposure Route

ſ	Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
		type	dose	time		sources for data
	Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LC₅₀	0.578 mg/L	4 hours	None reported	LOLI

Inhalation (Vapor) Exposure Route

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

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

Mixture

No data available.

Substance

Test data reported below.

Test data reported below.									
Chemical name	Test method	Species	Reported	Exposure	Results	Key literature			
			dose	time		references and			
						sources for data			

mg/l as PO₄

Formaldehyde (<0.1%)	Standard Draize Test	Human	0.150 mg	72 hours	Corrosive to skin	RTECS
CAS#: 50-00-0						
Methanol (<0.1%) CAS#: 67-56-1	OECD Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method	Rabbit	None reported	20 hours	Not corrosive or irritating to skin	ECHA

Serious eye damage/eye irritation

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

Mixture

No data available.

Substance

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rinse Test	Human	1 ppm	6 minutes	Corrosive to eyes	RTECS
Methanol (<0.1%) CAS#: 67-56-1	OECD Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method		0.05 mL	24 hours	Not corrosive or irritating to eyes	ECHA

Respiratory or skin sensitization

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

Mixture

No data available.

Substance

Test data reported below.

Skin Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Patch test	Human	Confirmed to be a skin sensitizer	ERMA
Methanol (<0.1%) CAS#: 67-56-1	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	ECHA

Respiratory Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	IgE Specific Immune Response Test	Guinea pig	Confirmed to be a respiratory sensitizer	CICAD

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
Methanol	DNA inhibition	Human lymphocyte	300 mmol/L	None reported	Positive test result for	RTECS

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(<0.1%)			mutagenicity	
CAS#: 67-50	5-1			

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
Methanol (<0.1%) CAS#: 67-56-1	DNA damage	Rat	0.405 mg/kg	None reported	Positive test result for mutagenicity	RTECS

Inhalation (Vapor) Exposure Route

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Micronucleus test	Human	.000985 mg/L	8.5 years	Positive test result for mutagenicity	RTECS

Carcinogenicity

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

Mixture

No data available.

Substance

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Water	7732-18-5	=	=	-	•
Formaldehyde	50-00-0	A1	Group 1	Known	X
Methanol	67-56-1	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat	15 mg/L	78 weeks	Olfaction Tumors	RTECS

Reproductive toxicity

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

Mixture

No data available.

Substance

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
Methanol	Rat	4118 mg/kg	10 days	Effects on Embryo or Fetus	RTECS

(<0.1%)	TDLo	Specific Developmental
CAS#: 67-56-1		Abnormalities
		Ear
		Eye
		Fetotoxicity (except death e.g.
		stunted fetus)
		Urogenital System

Inhalation (Dust/Mist) Exposure Route

	Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
		type	dose	time		sources for data
	Methanol	Rat	0.0026 mg/L	22 days	Effects on Embryo or Fetus	RTECS
	(<0.1%)	TCLo	_		Fetotoxicity (except death e.g.	
-	CAS#: 67-56-1				stunted fetus)	

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde	Rat	40 mg/L	14 days	Effects on Embryo or Fetus	RTECS
(<0.1%)	TCLo			Fetotoxicity (except death e.g.	
CAS#: 50-00-0				stunted fetus)	

STOT - single exposure

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

Mixture

No data available.

Substance

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human LD∟₀	70 mg/kg	None reported	Gastrointestinal Kidney, Ureter, or Bladder Liver Other changes Ulcerated stomach Other changes	RTECS
Methanol (<0.1%) CAS#: 67-56-1	Human LD∟₀	143 mg/kg	None reported	Lungs, Thorax, or Respiration Dyspnea	RTECS

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Methanol	Human	300 mg/L	None reported	Lungs, Thorax, or	RTECS
(<0.1%)	TCL₀			Respiration	
CAS#: 67-56-1				Other changes	

STOT - repeated exposure

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

Mixture

No data available.

Substance

Test data reported below.

Oral Exposure Route

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

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Methanol	Monkey	2340 mg/kg	3 days	None reported	ECHA
(<0.1%)			•	·	
CAS#: 67-56-1					

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human TC∟₀	0.017 mg/L	0.5 days	Eye Lungs, Thorax, or Respiration Lacrimation Other changes	RTECS

Aspiration hazard

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

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

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

Mixture

Aquatic Acute Toxicity
No data available.
Aquatic Chronic Toxicity
No data available.
Substance

Aquatic Acute Toxicity
Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Formaldehyde (<0.1%)	96 hours	Morone saxatilis	LC50	6.7 mg/L	PEEN
CAS#: 50-00-0					

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Formaldehyde (<0.1%)	48 Hours	Daphnia pulex	EC ₅₀	5.8 mg/L	PEEN
CAS#: 50-00-0					

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Mixture

No data available.

Bioaccumulation

Mixture

No data available.

Partition coefficient Not applicable

ng/I as PO₄

Mobility

Soil Organic Carbon-Water Partition Coefficient

Not applicable

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Other adverse effects

No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused

products

Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

Note: No special precautions necessary.

<u>IMDG</u> Not regulated

IATA Not regulated

ADR Not regulated

DOT Not regulated

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

Regulatory information

National regulations

Chemical Control Order and Priority Chemical List

	Chemical name	Priority Chemical List	Substances Subject to Chemical Control Orders (CCO)	Initial List of Single Substances and Compounds Covered under Chemical Control Order (CCO) and Priority Chemical
-	Formaldehyde	Applicable	Not applicable	Applicable

International Regulations

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

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The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

PICCS Complies. Complies. **TSCA** Complies. DSL/NDSL Complies. **EINECS/ELINCS ENCS** Complies. Complies. **IECSC** Complies. **KECL - Existing substances** Complies. **AICS**

NZIoC Contact supplier for inventory compliance status.

PICCS - Philippines Inventory of Chemicals and Chemical Substances

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

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

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

16. Other information

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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)

IMDG International Maritime Dangerous Goods (IMDG) IATA International Air Transport Association (IATA)

European Agreement concerning the International Carriage of Dangerous Goods by Road **ADR**

ATSDR Agency for Toxic Substances and Disease Registry (ATSDR)

CHEMVIEW not translate code U.S. Environmental Protection Agency ChemView Database EFSA not translate code European Food Safety Authority (EFSA)

EPA not translate code EPA (Environmental Protection Agency) EPA AEGL not translate code Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act EPA FIFRA not translate code

U.S. Environmental Protection Agency High Production Volume Chemicals EPA_HPV not translate code

Food Research Journal FOOD_JOURN not translate code Hazardous Substance Database HSDB not translate code

IUCLID not translate code International Uniform Chemical Information Database (IUCLID)

JAPAN_GHS not translate code National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NICNAS not translate code

NIOSH not translate code NIOSH (National Institute for Occupational Safety and Health) NLM CIP not translate code National Library of Medicine's ChemID Plus (NLM CIP)

NLM PUBMED not translate code National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP) NTP not translate code

New Zealand's Chemical Classification and Information Database (CCID) NZ_CCID not translate code

Organization for Economic Co-operation and Development Environment, Health, and Safety OECD_EHSP not translate code

Publications

Organization for Economic Co-operation and Development High Production Volume OECD_HPV not translate code

Chemicals Program

OECD_SIDS not translate code Organization for Economic Co-operation and Development Screening Information Data Set

WHO not translate code World Health Organization

ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS (Chemical Carcinogenesis Research Information System)

CDC (Center for Disease Control)

CEPA (Canadian Environmental Protection Agency)

CICAD CICAD (Concise International Chemical Assessment Documents)

ECHA ECHA (The European Chemicals Agency)
EEA EEA (European Environment Agency)
EPA EPA (Environmental Protection Agency)

ERMA (New Zealands 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 (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 (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 (Pan European Ecological Network)

RTECS (Registry of Toxic Effects of Chemical Substances)
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 (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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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