

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 03/04/2020

Version 1.5

SECTION 1. Identification**Product identifier**

Catalog No.	100474
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant®

P

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Reagent for analysis
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Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 400 Summit Drive Burlington Massachusetts 01803 United States of America General Inquiries: +1 800-645-5476 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification**GHS Classification**

Corrosive to Metals, Category 1, H290
Skin irritation, Category 2, H315
Eye irritation, Category 2A, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

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Hazard pictograms



Signal Word

Warning

Hazard Statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements

P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P390 Absorb spillage to prevent material damage.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous sulfuric acid solution.

Hazardous ingredients

Chemical name (Concentration)

CAS-No.

sulphuric acid (>= 10 % - < 30 %)

7664-93-9

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Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

Ingestion

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

irritant effects, Circulatory collapse

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapors.

Fire may cause evolution of:

Sulfur oxides

Advice for firefighters

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Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralizing material (e.g. Chemisorb® H⁺, Art.

No. 101595). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No metal or light-weight-metal containers.

Tightly closed. Dry.

Store at +15°C to +25°C (+59°F to +77°F).

The data applies to the entire pack.

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SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Components

Basis	Value	Threshold limits	Remarks
<i>sulphuric acid (7664-93-9)</i>			
ACGIH	Time Weighted Average (TWA):	0.2 mg/m ³	Form of exposure: Thoracic fraction.
NIOSH/GUIDE	Recommended exposure limit (REL):	1 mg/m ³	
OSHA_TRANS	PEL:	1 mg/m ³	
Z1A	Time Weighted Average (TWA):	1 mg/m ³	

Engineering measures

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

Acid-resistant protective clothing.

Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	odorless
Odor Threshold	Not applicable
pH	ca. 1 at 68 °F (20 °C)
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	Not applicable
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	No information available.
Relative vapor density	No information available.
Density	1.07 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	No information available.

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Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	Oxidizing potential
Corrosion	May be corrosive to metals.

SECTION 10. Stability and reactivity

Reactivity

Oxidizing agents

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Violent reactions possible with:

Water, Alkali metals, alkali compounds, Ammonia, alkalines, Metals, Alkaline earth metals, alkaline earth compounds, metal alloys, acids

Conditions to avoid

no information available

Incompatible materials

animal/vegetable tissues, Metals
Gives off hydrogen by reaction with metals.

Hazardous decomposition products

in the event of fire: See section 5.

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SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact

Target Organs

Eyes

Skin

Respiratory system

teeth

Mucous membranes

Skin irritation

Mixture causes skin irritation.

Eye irritation

Mixture causes serious eye irritation.

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

Group 1: Carcinogenic to humans

sulphuric acid 7664-93-9

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

Known carcinogen.

sulphuric acid 7664-93-9

ACGIH

A2: Suspected human carcinogen

sulphuric acid 7664-93-9

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Further information

After inhalation of vapors: irritative symptoms in the respiratory tract. After skin contact: severe irritations. After eye contact: corneal destruction. After swallowing: damage of the oral, oesophageal, and gastric mucous membranes. Perforation of the oesophagus frequently occurs. Circulatory collapse may occur after 1-2 hours. Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

sulphuric acid

Acute oral toxicity

LD50 Rat: 2,140 mg/kg (ECHA)

Repeated dose toxicity

Rat

female

Inhalation

dust/mist

28 d

daily

LOAEL: 0.0003 mg/l

OECD Test Guideline 412

Subacute toxicity

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Salmonella typhimurium

Result: negative

(HSDB)

SECTION 12. Ecological information

Ecotoxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

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Additional ecological information

Harmful effect due to pH shift. Neutralization possible in waste water treatment plants. Discharge into the environment must be avoided.

Components

sulphuric acid

Toxicity to daphnia and other aquatic invertebrates

static test EC50 Daphnia magna (Water flea): > 100 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

Toxicity to algae

static test EC50 Desmodesmus subspicatus (green algae): > 100 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

Biodegradability

Hydrolysis

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number	UN3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--

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Air transport (IATA)

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--
Special precautions for user	no

Sea transport (IMDG)

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-A S-P

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

United States of America

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Components

sulphuric acid

7664-93-9

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SARA 302

The following components are subject to reporting levels established by SARA Title III, Section 302:

Components

sulphuric acid 7664-93-9

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components

sulphuric acid

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components

sulphuric acid

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

DEA List I

Not listed

DEA List II

Listed

Components

sulphuric acid 7664-93-9

US State Regulations

Massachusetts Right To Know

Components

sulphuric acid

Pennsylvania Right To Know

Components

sulphuric acid

New Jersey Right To Know

Components

sulphuric acid

California Prop 65 Components

WARNING: this product contains a chemical known in the State of California to cause cancer.

Components

sulphuric acid

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Notification status

TSCA:	All components of the product are listed in the TSCA-inventory.
DSL:	All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word

Warning

Hazard Statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/ attention.

SAFETY DATA SHEET

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Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 03/04/2020

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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Revision Date 03/04/2020

Version 1.5

SECTION 1. Identification**Product identifier**

Catalog No. 100474

Product name Phosphate Cell Test (o-phosphate) Method: photometric, PMB
0.05 - 5.00 mg/l PO₄-P
0.2 - 15.3 mg/l PO₄³⁻
0.11 - 11.46 mg/l P₂O₅ Spectroquant®

P-1K

Relevant identified uses of the substance or mixture and uses advised against

Identified uses Reagent for analysis

Details of the supplier of the safety data sheet

Company EMD Millipore Corporation | 400 Summit Drive | Burlington | Massachusetts 01803 | United States of America | General Inquiries: +1 800-645-5476 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.

Emergency telephone 800-424-9300 CHEMTREC (USA)
+1-703-527-3887 CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2. Hazards identification**GHS Classification**

Corrosive to Metals, Category 1, H290
Skin irritation, Category 2, H315
Eye irritation, Category 2A, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

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Hazard pictograms



Signal Word

Warning

Hazard Statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements

P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P390 Absorb spillage to prevent material damage.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous sulfuric acid solution of inorganic compounds.

Hazardous ingredients

Chemical name (Concentration)

CAS-No.

sulphuric acid (>= 10 % - < 30 %)

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Ammonium heptamolybdate ($\geq 1\%$ - $< 5\%$)

12027-67-7

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

Ingestion

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

The following applies to trivalent antimony compounds in general: after uptake and absorption as a result of misuse or improper handling, drop in blood pressure, hepatotoxic effect, in some circumstances myalgia, dyspnoea, dermatitis.

irritant effects

Circulatory collapse

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

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Not combustible.
Ambient fire may liberate hazardous vapors.
Fire may cause evolution of:
Sulfur oxides

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralizing material (e.g. Chemisorb® H⁺, Art. No. 101595). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No metal containers.

Tightly closed. Dry.

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Store at +15°C to +25°C (+59°F to +77°F).
The data applies to the entire pack.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Components

Basis	Value	Threshold limits	Remarks
<i>sulphuric acid (7664-93-9)</i>			
ACGIH	Time Weighted Average (TWA):	0.2 mg/m ³	Form of exposure: Thoracic fraction.
NIOSH/GUIDE	Recommended exposure limit (REL):	1 mg/m ³	
OSHA_TRANS	PEL:	1 mg/m ³	
Z1A	Time Weighted Average (TWA):	1 mg/m ³	
<i>Ammonium heptamolybdate (12027-67-7)</i>			
ACGIH	Time Weighted Average (TWA):	0.5 mg/m ³	Form of exposure: Respirable fraction. Expressed as: as Mo
OSHA_TRANS	PEL:	5 mg/m ³	Expressed as: as Mo
Z1A	Time Weighted Average (TWA):	5 mg/m ³	Expressed as: as Mo

Engineering measures

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Change contaminated clothing and immerse in water. Preventive skin protection
Wash hands and face after working with substance.

Eye/face protection

Safety glasses

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Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

protective clothing

Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	odorless
Odor Threshold	Not applicable
pH	< 1 at 68 °F (20 °C)
Melting point	No information available.
Boiling point	No information available.
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Vapor pressure	No information available.
Relative vapor density	No information available.
Density	1.12 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	Oxidizing potential
Corrosion	May be corrosive to metals.

SECTION 10. Stability and reactivity

Reactivity

Oxidizing agents

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Violent reactions possible with:

Water, Alkali metals, alkali compounds, Ammonia, alkalines, Metals, Alkaline earth metals, alkaline earth compounds, metal alloys, acids

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Conditions to avoid

no information available

Incompatible materials

animal/vegetable tissues

Metals

Gives off hydrogen by reaction with metals.

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact

Target Organs

Eyes

Skin

Respiratory system

teeth

Mucous membranes

Skin irritation

Mixture causes skin irritation.

Eye irritation

Mixture causes serious eye irritation.

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Carcinogenicity

IARC	Group 1: Carcinogenic to humans sulphuric acid 7664-93-9
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	Known carcinogen. sulphuric acid 7664-93-9
ACGIH	A2: Suspected human carcinogen sulphuric acid 7664-93-9 Confirmed animal carcinogen with unknown relevance to humans. Ammonium 12027-67-7 heptamolybdate

Further information

After inhalation of vapors: irritative symptoms in the respiratory tract. After skin contact: severe irritations. After eye contact: corneal destruction. After swallowing: damage of the oral, oesophageal, and gastric mucous membranes. Perforation of the oesophagus frequently occurs. Circulatory collapse may occur after 1-2 hours. The following applies to trivalent antimony compounds in general: after uptake and absorption as a result of misuse or improper handling, drop in blood pressure, hepatotoxic effect, in some circumstances myalgia, dyspnoea, dermatitis. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

Components

sulphuric acid

Acute oral toxicity
LD50 Rat: 2,140 mg/kg (ECHA)

Repeated dose toxicity
Rat
female
Inhalation
dust/mist
28 d
daily
LOAEL: 0.0003 mg/l
OECD Test Guideline 412
Subacute toxicity

Germ cell mutagenicity

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Genotoxicity in vitro

Ames test

Salmonella typhimurium

Result: negative

(HSDB)

Ammonium heptamolybdate

Acute oral toxicity

LD50 Rat: > 2,000 mg/kg

OECD Test Guideline 401 The value is given in analogy to the following substances:

Acute inhalation toxicity

LC50 Rat: > 1.93 mg/l; 4 h ; dust/mist The value is given in analogy to the following substances:

(highest concentration to be prepared)

OECD Test Guideline 403

Acute dermal toxicity

LD50 Rat: > 2,000 mg/kg

OECD Test Guideline 402 The value is given in analogy to the following substances:

Skin irritation

Rabbit

Result: No skin irritation

OECD Test Guideline 404

The value is given in analogy to the following substances:

Eye irritation

Rabbit

Result: No eye irritation

OECD Test Guideline 405

The value is given in analogy to the following substances:

Sensitization

Maximization Test Guinea pig

Result: Does not cause skin sensitization.

Method: OECD Test Guideline 406

The value is given in analogy to the following substances:

Germ cell mutagenicity

Genotoxicity in vitro

In vitro mammalian cell gene mutation test

Human lymphocytes

Result: negative

Method: OECD Test Guideline 405

The value is given in analogy to the following substances:

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

The value is given in analogy to the following substances:

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

In vitro mammalian cell gene mutation test
MOUSE LYMPHOMA TEST
Result: negative
Method: OECD Test Guideline 476
The value is given in analogy to the following substances:

SECTION 12. Ecological information

Ecotoxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Additional ecological information

Harmful effect due to pH shift. Neutralization possible in waste water treatment plants.

Discharge into the environment must be avoided.

Components

sulphuric acid

Toxicity to daphnia and other aquatic invertebrates
static test EC50 Daphnia magna (Water flea): > 100 mg/l; 48 h
Analytical monitoring: yes
OECD Test Guideline 202

Toxicity to algae
static test EC50 Desmodesmus subspicatus (green algae): > 100 mg/l; 72 h
Analytical monitoring: yes
OECD Test Guideline 201

Biodegradability

Hydrolysis

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

Ammonium heptamolybdate

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Toxicity to fish

semi-static test LC50 *Oncorhynchus mykiss* (rainbow trout): 420 mg/l; 96 h
OECD Test Guideline 203 The value is given in analogy to the following substances:

Toxicity to daphnia and other aquatic invertebrates

static test EC50 *Daphnia magna* (Water flea): 79 mg/l; 48 h
OECD Test Guideline 202 The value is given in analogy to the following substances:

Toxicity to bacteria

static test EC50 activated sludge: 820 mg/l; 3 h
OECD Test Guideline 209

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number	UN3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--

Air transport (IATA)

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Environmentally hazardous --

Special precautions for user no

Sea transport (IMDG)

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-A S-P

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

United States of America

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Components

sulphuric acid	7664-93-9
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SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

SARA 302

The following components are subject to reporting levels established by SARA Title III, Section 302:

Components

sulphuric acid 7664-93-9

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Components

sulphuric acid

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Components

sulphuric acid

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

DEA List I

Not listed

DEA List II

Listed

Components

sulphuric acid 7664-93-9

US State Regulations

Massachusetts Right To Know

Components

sulphuric acid

Pennsylvania Right To Know

Components

sulphuric acid

New Jersey Right To Know

Components

sulphuric acid

California Prop 65 Components

WARNING: this product contains a chemical known in the State of California to cause cancer.

Components

sulphuric acid

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Notification status

TSCA:	All components of the product are listed in the TSCA-inventory.
DSL:	All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word
Warning

Hazard Statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements

Response
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/ attention.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-1K	

Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 03/04/2020

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 03/04/2020

Version 1.5

SECTION 1. Identification**Product identifier**

Catalog No.	100474
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant®
	P-2K
CAS-No.	50-81-7

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Reagent for analysis
-----------------	----------------------

Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 400 Summit Drive Burlington Massachusetts 01803 United States of America General Inquiries: +1 800-645-5476 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification**GHS Classification**

Combustible dust

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling*Signal Word*

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

Warning

Hazard Statements

May form combustible dust concentrations in air.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	C ₆ H ₈ O ₆ (Hill)
Molar mass	176.12 g/mol

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

Ingestion

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Most important symptoms and effects, both acute and delayed

We have no description of any toxic symptoms.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water, Foam, Carbon dioxide (CO₂), Dry powder

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapors/mists with a water spray jet.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

Store at +15°C to +25°C (+59°F to +77°F).
The data applies to the entire pack.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory protection

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	white
Odor	odorless
Odor Threshold	Not applicable

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

pH	2.2 - 2.5 at 50 g/l 68 °F (20 °C)
Melting point	No information available.
Boiling point/boiling range	Not applicable
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	May form combustible dust concentrations in air.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	Not applicable
Relative vapor density	Not applicable
Density	1.65 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	330 g/l at 75 °F (24 °C)
Partition coefficient: n-octanol/water	log Pow: -2.15 (Lit.) Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	> 378 °F (> 192 °C)
Viscosity, dynamic	at 68 °F (20 °C) Not applicable

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	716 °F (380 °C)
Bulk density	ca.500 - 900 kg/m ³

SECTION 10. Stability and reactivity

Reactivity

Reducing agents
Risk of dust explosion.

Chemical stability

sensitive to moisture
Sensitivity to light
Sensitive to air.

Possibility of hazardous reactions

Violent reactions possible with:
Aluminum, Copper alloys, Zinc, metal ions, Oxidizing agents, Copper, Acids, bases

Conditions to avoid

Strong heating (decomposition).

Incompatible materials

no information available

Hazardous decomposition products

no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact, Ingestion

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

Acute oral toxicity

LD50 Rat: 11,900 mg/kg (RTECS)

Skin irritation

Rabbit

Result: No irritation

OECD Test Guideline 404

Eye irritation

Rabbit

Result: slight irritation

OECD Test Guideline 405

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Substances which occur in nature

Chronic uptake results in damage of:

Kidney

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

LC50 *Oncorhynchus mykiss* (rainbow trout): 1,020 mg/l; 96 h
OECD Test Guideline 203 acidic

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia magna* (Water flea): 360 mg/l; 48 h (External MSDS)

Toxicity to algae

IC50 *Desmodesmus subspicatus* (green algae): 1,750 mg/l; 72 h (External MSDS)

Toxicity to bacteria

EC50 *Pseudomonas putida*: 140 mg/l; 16 h (External MSDS)

Persistence and degradability

Biodegradability

97 %; 5 d
OECD Test Guideline 302B
Readily eliminated from water

Ratio BOD/ThBOD

BOD₂₈ 65 %
Closed Bottle test

BOD₅ 48 %

Closed Bottle test

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: -2.15
(Lit.) Bioaccumulation is not expected.

Mobility in soil

No information available.

Additional ecological information

Discharge into the environment must be avoided.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number	UN3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--

Air transport (IATA)

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--
Special precautions for user	no

Sea transport (IMDG)

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	II
Environmentally hazardous	--
Special precautions for	yes

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

user
EmS

F-A S-P

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

United States of America

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number	100474	Version 1.5
Product name	Phosphate Cell Test (o-phosphate) Method: photometric, PMB 0.05 - 5.00 mg/l PO ₄ -P 0.2 - 15.3 mg/l PO ₄ ³⁻ 0.11 - 11.46 mg/l P ₂ O ₅ Spectroquant® P-2K	

Notification status

TSCA:	All components of the product are listed in the TSCA-inventory.
DSL:	All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

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

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

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