SAFETY DATA SHEET

Creation Date 19-Oct-2009 **Revision Date** 05-Aug-2015 **Revision Number** 1

1. Identification

Product Name: Phosphoric Acid Solution

Cat No. : AC424040025;

Synonyms Orthophosphoric acid

Recommended Use Laboratory chemical. Used as a chemical preservative and pH adjustment.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
C & G Containers, Inc.
152 Easy Street
Lafayette, Louisiana 70506
Tel: 337.237.7123

CHEMTREC Tel. No.**US:**001-800-424-9300 /
Europe:001-703-527-3887

2. Hazard(s) identification

Classification

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	1	B
Serious Eye Damage/Eye Irritation	Category 1		
Specific target organ toxicity (single exposure) Target Organs - Respiratory system.	Category 3		

Label Elements

Signal Word
Danger

Hazard Statements
May be corrosive to metals
Causes severe skin burns and eye damage
May cause respiratory irritation

Precautionary Statements Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area

Keep only in original container

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

Eyes

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

Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Spills

Absorb spillage to prevent material damage

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in corrosive resistant polypropylene container with a resistant inliner

Store in a dry place

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition / information on ingredients

Component	CAS-No	Content in Percent
Phosphoric acid (50%)	7664-38-2	42.5
Water	7732-18-5	42.5
Phosphoric acid (0.05%)	7664-38-2	0.05
Water	7732-18-5	99.95

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion DO NOT induce vomiting unless directed to do so by a physician or poison control center. Call a physician or Poison Control Center immediately.

Most important symptoms/effects Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

Notes to Physician Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..

Unsuitable Extinguishing Media	No information available.
Flash Point	Not applicable
Method -	No information available.
Autoignition Temperature	No information available.
Explosion Limits	
Upper	No data available
Lower	No data available
Oxidizing Properties	Not applicable
Sensitivity to mechanical impact	No information available.
Sensitivity to static discharge	No information available.

Specific Hazards Arising from the Chemical

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products Oxides of phosphorus.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	0	N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological Information.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Use only under a chemical fume hood. Ensure adequate ventilation. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors/dust. Do not ingest.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric acid	TWA: 1 mg/m^3 STEL: 3 mg/m^3	(Vacated) TWA: 1 mg/m^3 (Vacated) STEL: 3 mg/m^3 TWA: 1 mg/m^3	IDLH: 1000 mg/m^3 TWA: 1 mg/m^3 STEL: 3 mg/m^3

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Phosphoric acid	TWA: 1 mg/m^3 STEL: 3 mg/m^3	TWA: 1 mg/m^3 STEL: 3 mg/m^3	TWA: 1 mg/m^3 STEL: 3 mg/m^3

Legend
ACGIH *- American Conference of Industrial Hygiene*
OSHA *- Occupational Safety and Health Administration*
NIOSH IDLH: *Immediately Dangerous to Life or Health*

Engineering Measures Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

9. Physical and chemical properties

Physical State	Liquid
Appearance	Clear, Viscous
Odor	odorless
Odor Threshold	No information available.
pH	1
Melting Point/Range	21°C / 69.8°F
Boiling Point/Range	158°C / 316.4°F
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	

9. Physical and chemical properties

Upper	No data available
Lower	No data available
Vapor Pressure	2 hPa @ 20°C
Vapor Density	3.4
Relative Density	1.680
Solubility	No information available.
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available.
Decomposition temperature	300 °C
Viscosity	3.86 mPas @ 20°C

10. Stability and reactivity

Reactive Hazard None known, based on information available.
Stability Hygroscopic.

Conditions to Avoid Incompatible products. Excess heat. Exposure to moisture.

Incompatible Materials Strong oxidizing agents, Metals, Bases, Alcohols, Amines, halogenated agents

Hazardous Decomposition Products Oxides of phosphorus

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions Contact with metals may evolve flammable hydrogen gas.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50 classification criteria are not met.E > 20 mg/l.
AT

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phosphoric acid	2600 mg/kg (Rat)	2730 mg/kg (Rabbit)	850 mg/m^3 (Rat) 1 h

Toxicologically Synergistic No information available. **Products**

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

Irritation Causes burns by all exposure routes

Sensitization No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Phosphoric acid	7664-38-2	Not listed	Not listed	Not listed	Not listed	Not listed
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system.

STOT - repeated exposure None known.

Aspiration hazard No information available.

Symptoms / effects, both acute and delayed Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.
Possible perforation of stomach or esophagus should be investigated.

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Phosphoric acid	Not listed	98 - 106 mg/L LC50 96 h	Not listed	> 100 mg/L EC50 = 48 h

Persistence and Degradability Miscible with water, Persistence is unlikely, based on information available.

Bioaccumulation/ Accumulation No information available

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN1805
Proper Shipping Name PHOSPHORIC ACID SOLUTION
Hazard Class 8
Packing Group III

TDG

UN-No UN1805
Proper Shipping Name PHOSPHORIC ACID SOLUTION
Hazard Class 8
Packing Group III

IATA

14. Transport information

UN-No UN1805
Proper Shipping Name PHOSPHORIC ACID, SOLUTION
Hazard Class 8
Packing Group III

IMDG/IMO UN-No UN1805
Proper Shipping Name PHOSPHORIC ACID, SOLUTION
Hazard Class 8
Packing Group III

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Phosphoric acid	X	X	-	231-633-2	-		X	X	X	X	X
Water	X	X	-	231-791-2	-		X	-	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA. S - Indicates a substance that is identified in a proposed or final Significant New Use Rule T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Phosphoric acid	X	5000 lb	-	-
Water	-	1 LB	-	-

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration

CERCLA

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

Component	Hazardous Substances RQs	CERCLA EHS RQs
Phosphoric acid	5000 lb	-

ıicals.

California Proposition 65 This product does not contain

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Phosphoric acid	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N DOT Severe
Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class E Corrosive material

16. Other information

Prepared By
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Thermo Fisher Scientific and C&G Containers
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Creation Date 19-Oct-2009

CG Revision Date 05-August-2015
FS Revision Date 11-Feb-2014

Reason for revision This product has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. End of SDS