SAFETY DATA SHEET

1. Chemical Product and Company Identification

Description:	Chlorine Dioxide Sensor Electrolyte
Product Code:	Signet Part Number: 3-2632.391, 3-2632.398, 3-2632-1, 3-4632-10, 3-4632-11
Product Type:	Aqueous phosphoric acid solution
Application:	Electrolyte for Chlorine Dioxide Sensor

Manufacturer/Supplier Information
Manufactures for and SDS prepared by:
Georg Fischer Signet LLC
3401 Aero Jet Ave.
El Monte, California 91731

Date Prepared: 11/30/18
For additional health, safety or regulatory information, call (626) 571-2770

For Chemical Emergency
Spill Leak Fire Exposure or Accident
Call CHEMTREC Day or Night

DOMESTIC NORTH AMERICA 800-424-9300

INTERNATIONAL, REFER TO THE INFORMATION CONTAINED HEREIN AND CALL YOUR LOCAL GF OFFICE

2. Hazard(s) Identification

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS)
Hazard Categories:
Corrosive to metals (Category 1), H290
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318

GHS Label Elements:
Pictogram:

Signal Word:	**DANGER**
Hazard Statements:	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Precautionary Statement:	P234 Keep only in original container. P260 Do not breathe mist, vapors, spray. P264 Wash skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a

POISON CENTER or doctor/ physician. P321 Specific treatment (see supplemental first aid instructions on this label). P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage. P405 Store locked up. P406 Store in corrosive resistant stainless steel container with a resistant inner liner. P501 Dispose of contents/ container to an approved waste disposal plant.

3. Composition/Information on Ingredients

o-Phosphoric Acid, 85% w/w

CAS Registry #: 7664-38-2
EC#: 231-633-2
Percent Weight (%): 13.0

Potassium Phosphate Monobasic

CAS Registry #: 7778-77-0
EC#: 231-913-4
Percent Weight (%): 6.8

Potassium Chloride

CAS Registry #: 7447-40-7
EC#: 231-211-8
Percent Weight (%): 0.75

Deionized Water

CAS Registry #: 7732-18-5
EC#: 231-791-2
Percent Weight (%): Balance

4. First Aid Measures

General Information:	Consult a physician. Present this safety data sheet to the doctor in attendance. Move out of dangerous area.
Inhalation:	Move person into fresh air. If not breathing, perform rescue breathing and contact emergency medical personnel. If breathing is difficult, give oxygen.
Skin Contact:	Remove contaminated clothing and shoes immediately. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Wash clothing and shoes before reuse.
Ingestion:	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Eye Contact:	Irrigate immediately with large quantity of water for at least 15 minutes. Get medical attention immediately.

Most important symptoms/effects, acute and delayed:

Inhalation:	Coughing. Dry/sore throat. Irritation of respiratory tract. Irritation of nasal mucous membranes. May appear later: Respiratory difficulties. Risk of lung oedema.

Skin Contact:	Caustic burns/corrosion of skin.
Eye Contact:	Corrosion of the eye tissue.
Ingestion:	Burns to gastric/intestinal mucosa. Nausea. Abdominal pain. Blood in vomit.
After Absorption of Large Quantities:	Shock
After Repeated Exposure:	Red skin/dry skin

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary: No data available

5. Fire Fighting Measures

Suitable Extinguishing Media:	Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media:	No unsuitable extinguishing media known.
Hazardous Combustion Products:	Oxides of phosphorous

Protective Equipment and Precautions for Firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary.

6. Accidental Release Measures

Personal Precautions:	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.
Environmental Precautions:	Do not let product enter drains.
Methods for Containment and Clean Up:	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
Reference to Other Sections	For disposal see section 13.

7. Handling and Storage

Handling:	Do not ingest. Do not get in eyes, skin or on clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling.
Storage:	Keep in tightly closed container. Store in a cool, dry, well-ventilated area.
Incompatible Materials:	Strong bases, metals.

8. Exposure Controls / Personal Protection

Control Parameters:

Occupational Exposure Limits: Phosphoric acid, 85% w/w (7664-38-2).

ACGIH TLV (US, 1/2006)	STEL: 3mg/m3 15 minutes	Forms: all forms
	TWA: 1mg/m3 8 hours	Forms: all forms
NIOSH REL (US 12/2001)	STEL: 3mg/m3 15 minutes	Form: all forms
	TWA: 1mg/m3 10 hours	Form: all forms
OSHA PEL (US, 8/1997)	TWA: 1mg/m3 8 hours	Form: all forms
OSHA PEL 1989 (US 3/1989)	STEL: 3mg/m3 15 minutes	Form: all forms
	TWA: 1mg/m3 8 hours	Form: all forms

Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protective Equipment

Respiratory Protection: For conditions of use where exposure to dust or mist is apparent, a properly fitted, air-purifying or air-fed respirator must be worn.

Skin and Body Protection: Wear impervious clothing, boots, chemical resistant gloves, lab coat, apron or coveralls to prevent skin contact.

Eye/Face Protection: Use chemical safety goggles and or a full face shield where splash is possible. Maintain eyewash fountain

9. Physical and Chemical Properties

Appearance:	Clear, colorless liquid
pH:	1.5
Odor:	Odorless
Odor Threshold:	Not applicable
Boiling Point (oC):	Approximately 100
Melting Point (oC):	Approximately 0
Flash Point:	Not applicable
Vapor Pressure:	No data available
Vapor Density:	No data available
Relative Density:	1.86 (o-phosphoric acid)
Flammability:	Not applicable
Solubility in Water:	Infinite
Partition Coefficient (n-octonol/water):	No data available
Explosive Limits (upper/lower):	No data available
Evaporation Rate Compared with (n-butyl acetate = 1):	0.36 (water)
Viscosity:	No data available
Autoignition Temperature:	Not applicable
Decomposition Temperature:	No data available

10. Stability and Reactivity

Reactivity:	Explosive in the presence of heat and oxidizers.
Chemical Stability:	Stable under normal conditions of use and storage.
Possibilty of Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	Heat, oxidizers and incompatible materials.
Incompatible Materials:	Metals and alkalis.
Hazardous Decomposition Materials:	Phosphorous oxides, corrosive vapors.

11. Toxicological Information

Acute Toxicity: Not classified
Skin Corrosion/Irritation: Causes severe skin burns and eye damage.
Serious Eye Damage/Irritation: Causes serious eye damage.
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive Toxicity: Not classified
STOT Single Exposure: Not classified
STOT Repeated Exposure: Not classified
Aspiration Hazard: Not classified

Symptoms related to the physical, chemical and toxicological characteristics:
Inhalation: Coughing. Dry/sore throat. Irritation of respiratory tract. Irritation of nasal mucous membranes. May appear later: Respiratory difficulties. Risk of lung oedema.
Skin Contact: Caustic burns/corrosion of skin.
Eye Contact: Corrosion of the eye tissue.
Ingestion: Burns to gastric/intestinal mucosa. Nausea. Abdominal pain. Blood in vomit.
After Absorption of Large Quantities: Shock
After Repeated Exposure: Red skin/dry skin.

Delayed and immediate effects also chronic from short and long term exposure:
Inhalation: Respiratory difficulties. Risk of lung oedema.
Skin Contact: Red skin/dry skin

Numerical Measure of Toxicity: TOXICITY DATA United States: Phosphoric acid.
LD50 1530 mg/kg oral rat. LD50 2740 mg/kg dermal rabbit.
LC50 850 mg/m3 (1hr) inhalation rat.

12. Ecological Information

Ecotoxicity:
Ecology: Air - air pollutant.
Ecology: Water - mild water pollutant (surface water). May cause eutrophication. Toxic to plankton.

Persistence and Degradability: No data available
Bioaccumulative Potential: Not bioaccumulative
Other Adverse Effects: No data available
Mobility in Soil: No data available

13. Disposal Considerations

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal should be in accordance with all applicable regional, national and local laws and regulations.

14. Transportation Information

UN Number: 1805
UN Proper Shipping Name: Phosphoric acid solution
Transport Hazard Class: 8 Corrosive material
Packing Group: III - Minor danger
Environmental Group: No supplementary information available

15. Regulatory Information - (NOT ALL INCLUSIVE)

UNITED STATES

OSHA STATUS: o-Phosphoric acid, listed on this SDS is considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of hazardous material.
HCS Classification: Toxic Material, Corrosive Material, Target Organ Effects
State Regulations:

Pennsylvania RTK: Phosphoric Acid (environmental hazard, generic environmental hazard)

Massachusettes RTK: Phosphoric Acid
New Jersey: Water, Phosphoric Acid

CANADA

WHMIS (Canada): Class E corrosive material
CEPA DSL/CEPA NDSL: CEPA DSL: Water, phosphoric acid

EU REGULATIONS: R34- Causes burns
S2- Keep out of reach of children
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

INTERNATIONAL REGULATIONS:

Austria (NICNAS): Water, Phosphoric Acid
China: Phosphoric Acid
Germany water class: Phosphoric Acid
Japan (METI): Water, Phosphoric Acid
Korea (TCCL): Water, Phosphoric Acid
Philippines (RA6969): Water, Phosphoric Acid

16. Other Information

This information is given without any warranty or representation. It is believed to be correct but does not claim to be all inclusive and shall only be used as guide. Georg Fischer Piping Systems shall not be held liable for any damage resulting from handling or contact with the above product. This SDS is offered solely for your consideration, investigation and verification.

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Revision

Date of latest revision:	11/30/2018
Responsibility for SDS:	S.K. Wells