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: 4/27/2015
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, CALL 703-527-3887 (collect calls accepted)

2. Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), H290
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318

GHS label elements, including precautionary statements

Pictogram

Signal word	Danger
Hazard statement(s)	
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Precautionary statement(s)

P234	Keep only in original container.
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

Chemical	*CAS No.*	*% w/v*
Potassium Chloride	7447-40-7	<1%
o-Phosphoric Acid,85% w/w	7664-38-2	<10.0%
Deionized Water	7732-18-5	Balance

4. First Aid Measures

EYE CONTACT: Irrigate immediately with large quantity of water for at least 15 minutes. Get medical attention immediately.

INHALATION: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

SKIN CONTACT: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. Fire Fighting Measures

Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Oxides of phosphorus

Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
Further information
No data available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, 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 and materials for containment and cleaning 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

Precautions for safe handling
Avoid inhalation of vapor or mist.
For precautions see section 2.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end use(s)
Apart from the uses mentioned in section 1, no other specific uses are stipulated

8. Exposure Controls/Personnel Protection

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Phosphoric acid	7664-38-2	TWA	0.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		TWA	1mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation Skin irritation		
		STEL	3.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation		

		Eye irritation Skin irritation		
		STEL	3 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation Skin irritation		
		TWA	1.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	1.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	3.000000 mg/m3	USA. NIOSH Recommended Exposure Limits

Exposure Controls & Personnel Protection (cont.)

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. Physical and Chemical Properties

APPEARANCE:	Clear liquid	**BOILING POINT (^{O}C):**	100
ODOR:	Odorless	**FREEZE POINT (^{O}C):**	0
SOLUBILITY IN WATER:	100%	**VAPOR PRESSURE @ 20 ^{O}C:**	N/A
RELATIVE DENSITY:	1.864 (o-Phosphoric acid)	**pH:**	1
EVAPORATION RATE:	0.36(water) compared with (n-Butyl acetate =1)		

10.Stability and Reactivity

Reactivity
No data available
Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
No data available
Conditions to avoid
No data available
Incompatible materials
Strong bases, powdered metals
Hazardous decomposition products
Other decomposition products - No data available In the event of fire: see section 5

11. Toxicological Information

TOXICITY DATA United States:

Product /Ingredient Name	Test	Result	Route	Species
phosphoric acid	LD50	1530 mg/kg	Oral	Rat
	LD50	2740 mg/kg	Dermal	Rabbit
	LC50	850 mg/m3 (1 hr)	Inhalation	Rat

CHRONIC EFFECTS ON HUMANS: Contains material which causes damage to the following organs: Upper respiratory tract, skin, eye lens and cornea.
OTHER TOXIC EFFECTS ON HUMANS: Very hazardous in case of skin contact (corrosive), of eye contact (corrosive), of ingestion and inhalation (lung irritant).

SPECIFIC EFFECTS:
Carcinogenic effects: none known
Mutagenic effects: none known
Teratogenic effects: none known

SENSITIZATION:
Ingestion: May cause burns to mouth, throat and stomach.
Inhalation: Corrosive to respiratory system.
Eyes: Corrosive to eyes.
Skin: Corrosive to the skin.

12. Ecological Information
ECOTOXICOLOGICAL INFORMATION: No known significant effects.
PRODUCTS OF DEGRADATION: These products are phosphates and are less toxic than the product itself.

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

D.O.T. SHIPPING NAME: Phosphoric Acid Solution
D.O.T. HAZARD CLASS: 8
U.N. / N.A. NUMBER: UN1805
PACKING GROUP: III

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

U.S. FEDERAL REGULATIONS:

TSCA STATUS: Listed on 8(b) inventory (o-phosphoric acid).
CERCLA REPORTABLE QUANTITY: None
SARA SECTION 302/304/311/312 EXTREMELY HAZARDOUS SUBSTANCES: No
SARA SECTION 302/304 Emergency planning notification: No
SARA SECTION 302/304/311/312 HAZARDOUS CHEMICALS: Phosphoric acid – immediate health hazard.
Clean Water Act (CWA) 311: Phosphoric acid

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

NFPA Ratings: Health: 3	**Flammability**: 0	**Reactivity:** 0	**Special Notice Key:** corrosive
HMIS Ratings: Health: 3	**Flammability**: 0	**Reactivity:** 0	**Special Notice Key:** corrosive

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Revision

Date of latest revision:	4/27/2015
Responsibility for SDS:	S.K. Wells