

SAFETY DATA SHEET

1. Chemical Product and Company Identification

Description: Buffer Calibration Solution, pH 4.01 (Color Coded-RED)
Product Code: Signet Part Number 3822-7004
Product Type: Aqueous Salt Solution
Application: Calibration of pH and ORP Electrodes

Manufacturer/Supplier Information

Manufactured for and SDS prepared by:
Georg Fischer Signet LLC
3401 Aero Jet Ave.
El Monte, California 91731

Date Prepared: 05/05/2015

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. Hazard(s) Identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation Category 2

Serious Eye Damage/Eye Irritation Category 2

Label Elements None required

Signal Word Warning

Causes skin irritation

Causes eye irritation



Prevention: Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection.

Skin

Take off contaminated clothing and wash before reuse.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention.

Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

None identified

Other hazards

Contains a substance probably/possibly carcinogenic to humans. Refer to section 11. May be harmful by inhalation, in contact with skin and if swallowed. May cause respiratory irritation.

3. Composition / information on ingredients

<i>Chemical</i>	<i>CAS No.</i>	<i>% w/v</i>
Potassium Hydrogen Phthalate	877-24-7	1.0
Formaldehyde	50-00-0	0.05
Methyl alcohol	67-56-1	0.02
Fluorescein, 2',4',5',7'-tetraiodo disodium salt	16423-68-0	0.02
Water	7732-18-5	98.91

4. First Aid Measures

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

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion: Do not induce vomiting. Obtain medical attention.

Most important symptoms/effects: No information available.

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

Hazardous Combustion Products

None known

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.

NFPAHealth
2Flammability
0Instability
0Physical Hazards
N/A**6. Accidental release measures****Personal Precautions**

Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions

Avoid release to the environment. 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**

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

Storage

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

8. Exposure controls / personal protection**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Formaldehyde	Ceiling: 0.3 ppm	(Vacated) TWA: 3 ppm (Vacated) STEL: 10 ppm (Vacated) Ceiling: 5 ppm TWA: 0.75 ppm STEL: 2 ppm	IDLH: 20 ppm TWA: 0.016 ppm Ceiling: 0.1 ppm
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m3 (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m3 Skin TWA: 200 ppm TWA: 260 mg/m3	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m3 STEL: 250 ppm STEL: 325 mg/m3

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Formaldehyde	Ceiling: 2 ppm Ceiling: 3 mg/m3	Ceiling: 2 ppm Ceiling: 3 mg/m3	STEL: 1.0 ppm CEV: 1.5 ppm
Methyl alcohol	TWA: 200 ppm TWA: 262 mg/m3 STEL: 250 ppm STEL: 328 mg/m3 Skin	TWA: 200 ppm TWA: 260 mg/m3 STEL: 250 ppm STEL: 310 mg/m3	TWA: 200 ppm STEL: 250 ppm Skin

Legend**ACGIH** - American Conference of Governmental Industrial Hygienists**OSHA** - Occupational Safety and Health Administration**NIOSH IDLH**- The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures 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.

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

9. Physical and chemical properties

Physical State	Liquid
Appearance	Pink
Odor	Odorless
Odor Threshold	No information available
pH	4.0
Melting Point/Range	0 °C / 32 °F
Boiling Point/Range	100 °C / 212 °F
Flash Point	Not applicable
Evaporation Rate	> 1.0 (Ether = 1.0)
Flammability (solid,gas)	No information available

Flammability or explosive limits

Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	0.7 (Water = 1.0)
Relative Density	1.0
Solubility	Soluble in water
Decomposition Temperature	No information available
Viscosity	No information available
VOC Content (%)	0.0700000002980232

10. Stability and reactivity

Reactive Hazard	None known, based on information available.
Stability	Stable under normal conditions.
Conditions to Avoid	No information available.
Incompatible Materials	None known.
Hazardous Decomposition Products	None under normal use conditions
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information May be harmful by inhalation, ingestion, or skin absorption.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium Hydrogen Phthalate	3200 mg/kg (Rat)	Not listed	Not listed
Formaldehyde	500 mg/kg (Rat)	270 mg/kg (Rabbit)	0.578 mg/L (Rat) 4 h
Methyl alcohol	6200 mg/kg (Rat)	15800 mg/kg (Rabbit)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h
Fluorescein, 2',4',5',7'-tetraiodo, disodium salt	1840 mg/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

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

Irritation Irritating to eyes and skin May cause irritation of respiratory tract
Sensitization No information available
Carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Component	Cas-No	IARC	NTP	ACGIH	OSHA	Mexico
water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Potassium Hydrogen Phthalate	877-24-7	Not listed	Not listed	Not listed	Not listed	Not listed
Formaldehyde	50-00-0	Group1	Known	A2	X	A2
Methyl alcohol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
Fluorescein, 2',4',5',7'-tetraiodo, disodium salt	16423-68-0	Not listed	Not listed	Not listed	Not listed	Not listed

IARC: (International Agency for Research on Cancer) IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program) NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

Mexico - Occupational Exposure Limits - Carcinogens Mexico - Occupational Exposure Limits - Carcinogens

A1 - Confirmed Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Confirmed Animal Carcinogen

A4 - Not Classifiable as a Human Carcinogen

A5 - Not Suspected as a Human Carcinogen

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Teratogenicity

No information available.

STOT - single exposure

None known

STOT - repeated exposure

None known

Aspiration hazard

No information available

Symptoms / Effects

No information available

Endocrine Disruptor Information

No information available

Other Adverse Effects

The toxicological properties have not been fully investigated.

12. Ecological Information**Ecotoxicity**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Formaldehyde	Not listed	Leuciscus idus: LC50 = 15 mg/L 96h	Not listed	EC50 = 20 mg/L 96h EC50 = 2 mg/L 48h
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h

**Persistence and Degradability
Bioaccumulation/ Accumulation**

No information available

No information available.

Mobility

Component	log Pow
Formaldehyde	-0.35
Methyl alcohol	-0.74

13. Disposal Considerations

Dilute with water, neutralize with weak sodium hydroxide solution, and then flush to sewer if local regulations allow. Always dispose of in accordance with local, state and federal regulations.

Component	RCRA – U Series Wastes	RCRA – P Series Wastes
Formaldehyde – 50-00-0	U122	-
Methyl alcohol – 67-56-1	U154	-

14. Transportation Information

DOT. SHIPPING NAME: Not regulated
DOT. HAZARD CLASS: Not regulated
TDG: Not regulated
IATA: Not regulated
IMDG/IMO: Not regulated

15. Regulatory Information

All of the components in the product are on the following Inventory lists: Australia X = listed China
Canada Europe TSCA Korea Philippines.

International Inventories

Component	TSCA	DSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Water	X	X	231-791-2	X	-	X	X	X
Potassium Hydrogen Phthalate	X	X	212-889-4	X	X	X	X	X
Formaldehyde	X	X	200-001-8	X	X	X	X	X
Methyl alcohol	X	X	200-659-6	X	X	X	X	X
Fluorescein	X	X	240-474-8	X	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

Component	CAS-No	Weight %	SARA 313 – Threshold Values %
Formaldehyde	50-00-0	0.05	0.1
Methyl Alcohol	67-56-1	0.02	1.0

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	CWA – Reportable Quantities	CWA – Toxic	Component CWA - Hazardous
Formaldehyde	X	100 lb	-	-

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Formaldehyde	X	-	-
Methyl Alcohol	X	-	-

OSHA Occupational Safety and Health Administration

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Formaldehyde	2 ppm STEL 0.5 ppm Action Level 0.75 ppm TWA	TQ: 1000 lb

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Formaldehyde	100 lb	100 lb
Methyl Alcohol	5000 lb	-

California Proposition 65 This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Formaldehyde	50-00-0	Carcinogen	40 µg/day	Carcinogen
Methyl Alcohol	67-56-1	Developmental	-	Developmental

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Formaldehyde	X	X	X	X	X
Methyl Alcohol	X	X	X	X	X

U.S. Department of Transportation

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

U.S. Department of Homeland Security

This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Formaldehyde	11250 lb STQ (solution)

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: D2B Toxic materials



17. Disclaimer

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Revision

Date of latest revision: 05-05-15
Responsibility for SDS: S.K. Wells

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