



## MATERIAL SAFETY DATA SHEET

### 1. Chemical Product and Company Identification

Description: Formazin Calibration Solution - 4000 NTU  
 Product Code: Signet Part Numbers 3822-4000, 3822-4002  
 Product Type: Formazin Stock Solution, 4000 NTU  
 Application: Calibration of turbidity instrument

#### Manufacturer/Supplier Information

MSDS prepared by:  
 Georg Fischer Signet LLC  
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 El Monte, California 91731

Date Prepared: July 29, 2008  
 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. Chemical Content

Chemical	CAS No.	% w/v
Water, deionized	7732-18-5	>88%
Formaldehyde	50-00-0	<0.1%
Hexamethylenetetramine	100-97-0	<10%
Formazin Polymer		<1%

### 3. Hazards Identification

Hazardous Ingredient(s)	OSHA PEL	ACGIH TLV	TOXICITY
Formaldehyde <b>CAS# 50-00-0</b>	1.0 ppm	1.0 ppm	LD <sub>50</sub> 800 mg/kg (oral rat)
Hexamethylenetetramine <b>CAS# 100-97-0</b>	Not Listed	Not Listed	LD <sub>50</sub> 9200 mg/kg (intravenous rat)
Formazin Polymer	Not Listed	Not Listed	Not Listed

### 4. Health Hazard Effects and First Aid Measures

**Route(s) of Entry:** Inhalation: No Skin: Yes Ingestion: Yes

**Health Hazards (Acute and Chronic):** Acute and chronic for residual formaldehyde

**Carcinogenicity:**

**NTP:** Yes, for formaldehyde

**IARC Monographs:** Yes, for formaldehyde

**OSHA Regulated:** Yes, for formaldehyde CAS # 50-00-0. Formaldehyde, which may exist in residual amounts in formazin, is a possible cancer hazard based on tests with laboratory animals.

**Signs and Symptoms of Exposure:** Irritation of the eyes, skin, and mucous membranes. Gastrointestinal pain if swallowed.

**Medical Conditions Generally Aggravated by Exposure:** Allergies or sensitivity to hexamethylenetetramine.

#### **EMERGENCY AND FIRST AID PROCEDURES:**

**Eyes:** Flush eyes for at least 15 minutes. See a physician.

**Ingestion:** Get medical help immediately.

**Skin:** Wash well with soap and water. If irritation develops, see a physician.

**Inhalation:** Remove to fresh air.

#### **5. Fire Fighting Procedures**

**Flash Point:** Not flammable

**Flammable Limits:** LEL: Not Applicable UEL: Not Applicable

**Extinguishing Media:** Suitable to cause of fire

**Special Fire Fighting Procedures:** NIOSHA approved respirator and protective clothing.

**Unusual Fire and Explosion Hazards:** None found

#### **6. Handling and Storage**

**Steps to be Taken in Case Material is Released or Spilled:** Absorb with earth, sand, or similar material. Flush area with water.

**Precautions to be Taken in Handling And Storage:** Normal precautions satisfactory. Avoid skin and eye contact.

**Other Precautions:** Do not pipette by mouth

#### **7. Exposure Controls & Personnel Protection**

**Respiratory Protection:** None required in normal use

**Ventilation:** General ventilation is satisfactory for normal use

**Skin Protection:** Rubber gloves

**Eye Protection:** Splash goggles

**Other Protective Clothing or Equipment:** Lab coat suggested. Safety shower and eye wash.

**Work/Hygienic Practices:** Wash well after handling.

#### **8. Physical and Chemical Properties**

**Boiling Point(F):** Approximately 212 ° F (100 °C)

**Specific Gravity (H<sub>2</sub>O = 1):** Not found

**Vapor Pressure (mm Hg):** Not applicable

**Melting Point:** Not found

**Vapor Density (Air = 1):** Not found

**Evaporation Rate (Butyl Acetate = 1):** Not found

**Solubility in Water:** Fluid layer is miscible

**Percent Volatile By Volume:** Not found

**Appearance and Odor:** White suspension - little odor

#### **9. Stability and Reactivity**

**Stability:** Stable under normal conditions of use and storage

**Conditions to Avoid:** None found

**Incompatibility (Materials to Avoid):** Not found

**Hazardous Decomposition of Product:** None

**Hazardous Polymerization :** Will not occur under normal conditions of use and storage

**Conditions to Avoid:** None found

#### **10. Toxicological Information**

#### **11. Ecological Information**

**12. Disposal Considerations:**

**Waste Disposal Method:** DISPOSE OF IN ACCORDANCE THE APPLICABLE FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

**13. Transportation Information**

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Not Currently Regulated

**DOT Hazard Class:** NA

**DOT Subsidiary Risk:** NA

**14. Regulatory Information - (NOT ALL INCLUSIVE)**

**U.S. Federal Regulations:**

**O.S.H.A.:** This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

**E.P.A.:**

**S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370):** Immediate (Acute) Health Hazard

Delayed (Chronic) Health Hazard

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

Formaldehyde

**302 (EHS) TPQ (40 CFR 355):** Formaldehyde 500 lbs.

**304 CERCLA RQ (40 CFR 302.4):** Formaldehyde 1000 lbs.

**304 EHS RQ (40 CFR 355):** Formaldehyde - RQ 100 lbs

**Clean Water Act (40 CFR 116.4):** Formaldehyde - RQ 100 lbs.

**RCRA:** Contains no RCRA regulated substances.

**C.P.S.C.:** Not applicable

**State Regulations:**

**California Prop. 65:** No Prop. 65 listed chemicals are present in this product.

**Identification of Prop. 65 Ingredient(s):** None

**California Perchlorate Rule CCR Title 22 Chap 33:**

**Trade Secret Registry:** Not applicable

**National Inventories:**

**U.S. Inventory Status:** All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

**TSCA CAS Number:** Not applicable.

**15. Disclaimer:**

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**Revision**

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Responsibility for MSDS: S.K. Wells

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