

**MATERIAL SAFETY DATA SHEET**

HF scientific, inc.  
3170 Metro Parkway  
Fort Myers, FL 33916-7597  
(239) 337-2116  
Mon-Fri 8:00 am-4:30 pm

24 Hour Emergency  
Telephone Number  
CHEMTREC  
1-800-424-9300

**SECTION 1 PRODUCT IDENTIFICATION****PRODUCT NAME:** ProCal Turbidity Calibration Standards**CATALOG NUMBERS:**

HF scientific, inc.: 39957 39953 39927 39928 39845 39855  
39887 39820 39828 39071 39830 29825  
39826 39823 34381S 39843

**CHEMICAL FAMILY:** Not applicable**SYNONYMS:** Not applicable**FORMULA:** A suspension containing:

Deionized Water >99%  
Confidential Preservative <0.02%  
Styrene Divinylbenzene Co-Polymer Beads <1.0%  
Confidential Surfactant <.01%

**SECTION 2 HAZARDOUS INGREDIENTS**

Hazardous Ingredients	OSHA PEL	ACGIH TLV	Other Limits
Preservative	10 mg/m <sup>3</sup>	NA	NA

**OTHER LIMITS RECOMMENDED:** see toxicity data, section 5**SECTION 3 PHYSICAL DATA****BOILING POINT:** 100° C, (212° F)**SOLUBILITY IN WATER:** Not Soluble: Suspended in Water**VAPOR PRESSURE (mm Hg):** 760mm**FREEZING POINT:** 0° C, (32° F)**APPEARANCE AND ODOR:** Clear to slightly turbid solution with no odor**VAPOR DENSITY (AIR=1):** 0.95**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 1.00**EVAPORATION RATE (BUTYL ACETATE = 1):** NA**SECTION 4 FIRE AND EXPLOSION HAZARD DATA****FLASH POINT (METHOD USED):** Not flammable**FLAMMABLE LIMITS:****LEL:** Not applicable      **UEL:** Not applicable**FIRE EXTINGUISHING MEDIA:** Suitable to cause of fire**SPECIAL FIRE FIGHTING PROCEDURES:** Suitable to cause of fire**UNUSUAL FIRE AND EXPLOSIVE HAZARDS:** None**SECTION 5 HEALTH HAZARD EFFECTS AND FIRST AID****ROUTES OF ENTRY:** Inhalation? No    Skin? Yes    Ingestion? Yes**HEALTH HAZARDS (ACUTE & CHRONIC):** Not expected to be a health hazard.**CARCINOGENICITY:** OSHA? NTP? IARC Monographs?  
NO    Not listed**TOXICITY DATA** None Listed**SIGNS AND SYMPTOMS OF EXPOSURE:** None Listed**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY****EXPOSURE:** None**EMERGENCY FIRST AID PROCEDURES:****Eye Exposure:** Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.**Skin Exposure:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Ingestion:** Call a physician immediately. Never give anything by mouth to an unconscious person.**Inhalation:** Not applicable.**SECTION 6 REACTIVITY DATA****STABILITY:** Stable. May agglomerate at temperatures below ≤0°C**CONDITIONS TO AVOID:** DO NOT FREEZE. If freezing occurs, discard standard and replace with fresh suspension. The performance of the standard is compromised if suspension freezes.**INCOMPATIBILITIES (MATERIALS TO AVOID):** Water reactive chemicals**HAZARDOUS DECOMPOSITION PRODUCTS:** None**HAZARDOUS POLYMERIZATION:** Will not occur**SECTION 7 SAFE HANDLING AND USE****Steps to be taken if material is released or spilled:** Wear standard laboratory protective gear and use standard laboratory safety equipment.

Absorb solution with inert material and dispose with laboratory waste.

**WASTE DISPOSAL METHOD:** DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** DO NOT FREEZE. If standard becomes frozen, discard and replace with fresh suspension. Do not shake. Vigorous shaking can cause air bubbles that may affect turbidity measurements.**OTHER PRECAUTIONS:** None**SECTION 8 CONTROL MEASURES****RESPIRATORY PROTECTION:** Not necessary in normal use.**VENTILATION SYSTEMS:** General mechanical ventilation satisfactory in normal use.**EYE PROTECTION:** Safety glasses**SKIN PROTECTION:** Latex or nitrile gloves**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Lab coat, eye wash, safety shower**WORK/HYGIENIC PRACTICES:** Wash hands well after handling. Product intended for laboratory or industrial use only. Do NOT ingest.

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**SECTION 1 PRODUCT IDENTIFICATION**

**PRODUCT NAME:** 0.02 NTU ProCal Standard

**CATALOG NUMBER:**

HF scientific, inc.  
60012 60013

**CHEMICAL FAMILY:** Not applicable

**SYNONYMS:** None

**FORMULA:** Turbidity free water (CAS # 7732-18-5), Preservative

**SECTION 2 HAZARDOUS INGREDIENTS**

No hazardous ingredients greater than or equal to 1%  
No carcinogen greater than or equal to 0.1%

**SECTION 3 PHYSICAL DATA**

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

**Solubility in Water:** Miscible

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

**Appearance and Odor:** Clear and colorless; no odor.

**pH :** 3 - 5 at 25 deg C

**Vapor Density(AIR=1):** Not determined

**Specific Gravity (H<sub>2</sub>O=1):** Approximately 1

**Melting Point:** Approximately 32 deg C (0 deg C)

**Evaporation Rate:** Not determined

**Percent Volatile by Volume:** Not determined

**SECTION 4 FIRE AND EXPLOSION HAZARD DATA**

**Flash Point:** Not Flammable

**Flammable Limits:** Not determined

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

**Fire Fighting Procedures:** Suitable to cause of fire

**Unusual Fire And Explosive Hazards:** None

**SECTION 5 HEALTH EFFECTS AND FIRST AID**

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

**Effects of Overexposure:** Irritation of the eyes, mucous membranes and skin could occur.

**Carcinogenicity:** NTP? IARC MONOGRAPHS? OSHA REGULATED?

Not a carcinogen

**Signs and Symptoms of Exposure:** Burning or irritation of the exposed area.

**Medical Conditions Generally Aggravated by Exposure:** None found

**Emergency First Aid Procedures:**

**Skin:** Wash with plenty of water for 15 minutes. Call physician if irritation occurs.

**Eyes:** Flush eyes with plenty of water for 15 minutes. Call physician.

**Ingestion:** Give large quantities of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call physician.

**Inhalation:** Remove to fresh air. If breathing has stopped, give artificial respiration. Call physician immediately.

**SECTION 6 REACTIVITY DATA**

**Stability:** Stable

**Conditions to Avoid:** Organic matter, chlorates, active metals

**Incompatibilities (Materials to Avoid):** Organic matter, chlorates, active metals

**Hazardous Decomposition Products:** Toxic SO<sub>x</sub> fumes

**Hazardous Polymerization:** Will not occur

**SECTION 7 SAFE HANDLING AND USE**

**Steps to be Taken in Case Material is Released or Spilled:** Absorb with paper towels and discard in trash.

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

**Precautions to be Taken in Handling and Storage:** Avoid contact with skin, eyes and clothing. Store tightly closed in a cool, dry place.

**Other Precautions:** Do not open vial to ensure standard does not get contaminated and stays turbidity free.

**SECTION 8 CONTROL MEASURES**

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

**Ventilation:** General mechanical ventilation satisfactory in normal use.

**Skin Protection:** Latex or Nitrile gloves

**Eye Protection:** Safety goggles

**Other Protective Measures:** None

**Work/Hygenic Practices:** Wash well if contact occurs

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