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MATERIAL SAFETY DATA SHEET

EMERGENCY ASSISTANCE - 24 hour

For emergency assistance involving chemicals call CHEMTREC (800) 424-9300.

SECTION 1: MATERIAL INFORMATION

Common Name: MCFARLAND STANDARDS (#0.5 - #10)
Synonyms: Barium Sulfate Solution
Catalog Number: R6540, R6541, R6542, R6543, R6544, R6545, R6546, R6547, R6548, R6555
CAS #: 7727-43-7
WARNING: N/AP

SECTION 2: HAZARDOUS INGREDIENTS

<u>Hazardous Components</u>	<u>CAS #</u>	<u>Chemical Family</u>	<u>Molecular Formula</u>	<u>Approximate Concentration</u>
Sulfuric Acid 1%	7664-93-9	Inorganic Acid	H ₂ SO ₄ - H ₂ O	92%-99.5%
Barium Sulfate	7727-43-7	Inorganic Salt	BaSO ₄	0.5% - 8%

SECTION 3: PHYSICAL DATA

Appearance: Clear, colorless liquid with a white precipitate	pH: N/AV	Vapor Density: N/AV
Boiling Point: N/AV	Solubility in Water: N/AV	Flash Point: N/AV
Melting Point: N/AV	Vapor Pressure: N/AV	Evaporation Rate: N/AV
Odor: None	Specific Gravity: N/AV	

SECTION 4: FIRE AND EXPLOSION HAZARD

Flammable: No

Flammability Limits:

Upper: N/AP Lower: N/AP

Extinguish Media: Carbon dioxide, dry chemical, "alcohol" or polymer foam.

Special Hazards: Wear self-contained, positive-pressure breathing apparatus.

Unusual Fire and Explosion Hazards: Heating with Aluminum may cause an explosion.

SECTION 5: REACTIVITY DATA

Stable: **Unstable:**

Conditions to Avoid:

Heat, sparks, open flame

Materials to Avoid:

- Water -
- Acids -
- Bases - (strong)
- Corrosives -
- Oxidizers - (strong)
- Other: Aluminum may cause an explosion. Phosphorous.

Hazardous Decomposition Products:

When heated to decomposition it emits toxic fumes of SO_x.

SECTION 6: HEALTH HAZARD DATA

To the best of our knowledge, the chemical, physical, and toxicological properties of this mixture have not been thoroughly investigated. Presented below are specific data on each of the subcomponent ingredients:

<u>Hazardous Component</u>	<u>%</u>	<u>Threshold Limit Value</u>	<u>TXDS</u>
Sulfuric Acid 1%	92-99.5%	1mg/M ³	N/AV
Barium Sulfate	0.5 - 8%	10mg/M ³	N/AV

Effects of Overexposure (Acute and Chronic): Ingestion may cause stomach pains, vomiting, and/or diarrhea. If ingested, the presence of soluble barium salts may cause toxic reactions due to bioaccumulation. Inhalation of dry barium sulfate powder is tumorigenic to the lungs, thorax, or respiratory system.

Carcinogenicity: These products do not contain any carcinogens at 0.1% or greater.

First Aid Procedure:

Skin Contact: Immediately wash thoroughly with large amounts of water and soap.
Eye Contact: Immediately flush thoroughly with large amounts of water for at least 15 minutes.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration; if breathing is difficult, give oxygen; seek medical attention.
Ingestion: Induce vomiting. Wash out mouth with water, provided person is conscious. Seek medical attention immediately.

In all cases of overexposure seek medical attention.
 Wash contaminated clothing before reuse.

SECTION 7: SPILL OR LEAK PROCEDURES AND DISPOSAL

Steps to be taken if Material is Released or Spilled:

Wearing mask and rubber gloves, pick up using absorbent material and hold for waste disposal.

Waste Disposal Method:

Observe all local, provincial, state, and federal regulations.

SECTION 8: SPECIAL PROTECTION INFORMATION

Provide adequate general mechanical and local exhaust ventilation.
 Avoid prolonged or repeated inhalation of vapor.
 Protect eyes, skin, and clothing with safety goggles and gloves.
 Wash thoroughly after handling.

SECTION 9: SPECIAL HANDLING AND STORAGE PRECAUTIONS

Keep container tightly closed. Store in a cool, dark place. Protect from physical harm.

SECTION 10: MSDS PREPARATION AND INFORMATION

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Revised By: Charissa H. Bolind

Authorized Signature: _____


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