

# Thermo

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## Orion 080013 Anode Cleaning Solution Material Safety Data Sheet

### I. PRODUCT IDENTIFICATION: Anode Cleaning Solution (For Dissolved Oxygen Electrodes)

Part of Orion 080013

PRODUCT USE: Reagent

NFPA RATINGS: HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0

### II. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT		%	LD <sub>50</sub> mg/kg
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )			
CAS NO.	7664-93-9	<1	>90ml/Kg (DRL-RAT)
Sodium Sulfite (Na <sub>2</sub> SO <sub>3</sub> )			
CAS NO.	7757-83-7	5	3060 (DRL-RAT)
Sodium Thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> )			
CAS NO.	7772-98-7	10	4000 (SCU-RBT) LD <sub>10</sub>
Deionized Water			
CAS NO.	7732-18-5	>84	150,000 (IPR-MUS)

### III. HAZARDS IDENTIFICATION

TARGET ORGANS: Skin, eyes and respiratory tract.

ACUTE TOXICITY: Can cause severe burns, may burn digestive tract, may cause damage to lung tissue.

CHRONIC TOXICITY: No systemic effects from ingestion of small amounts. Skin dermatitis and burns. Inhalation: Bronchitis, inflammation of upper respiratory tract.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Dermatitis, heart, and respiratory conditions.

### IV. FIRST AID MEASURES

EYE AND SKIN CONTACT: Wash off with large amounts of water. Neutralize contact area only after body has been washed thoroughly with running water. Consult physician.

INGESTION: Do not induce vomiting. Give water or milk. Consult physician.

INHALATION: Artificial respiration or fresh air. Consult physician.

### V. FIRE FIGHTING MEASURES

FLASH POINT: Not flammable AUTOIGNITION POINT: NA

FLAMMABILITY LIMITS: UPPER: NA LOWER: NA

EXTINGUISHING MEDIA: Dry chemical or CO<sub>2</sub>.

### VI. ACCIDENTAL RELEASE MEASURES

Cover surface with slaked lime mixture, add water to form slurry. Scoop up and wash neutralized waste, drain with excess water (if local law allows).

### VII. HANDLING AND STORAGE

Always wear eye protection and gloves when working with this product.

Store in cool dry area and keep container closed. Keep away from organics, acids, bases, perchlorates, permanganates, and metals.

### VIII. EXPOSURE CONTROLS/ PERSONAL PROTECTION

OSHA & ACGIH THRESHOLD LIMIT: H<sub>2</sub>SO<sub>4</sub>: 1mg/m<sup>3</sup> TWA

PROTECTIVE EQUIPMENT: Safety glasses, lab coat and gloves.

### IX. PHYSICAL AND CHEMICAL PROPERTIES

STATE: Clear liquid ODOR THRESHOLD: None

SENSITIVITY TO MECHANICAL IMPACT: None

SENSITIVITY TO STATIC DISCHARGE: None

COEFFICIENT OF OIL/WATER DISTRIBUTION: None

SOLUBILITY IN WATER: Soluble pH: 5.15 - 6.35

SPECIFIC GRAVITY: 1.02

BOILING POINT: 100°C MELTING POINT: Not determined

VAPOR DENSITY: Not determined

### X. STABILITY AND REACTIVITY

Product is stable. Hazardous polymerization will not occur.  
Incompatibilities: Acetic Acid, NH<sub>4</sub>OH, Metals, HClO<sub>2</sub>, BrF<sub>2</sub>, Isoprene, NaOH, Steel.  
Hazardous decomposition product: Toxic gases and vapors may be released when sulfuric acid decomposes.

### XI. TOXICOLOGICAL INFORMATION

Route of Exposure: May irritate skin.  
Teratogen Status: None  
Mutagen Status: None  
Reproductive Toxicity: None  
Carcinogen Status: None

### XII. ECOLOGICAL INFORMATION

None available.

### XIII. DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with Federal, State and Local Regulations.

### XIV. TRANSPORT INFORMATION

Product is not hazardous for transport.

### XV. REGULATORY INFORMATION

EUROPEAN INFORMATION:

None

US/ CANADA INFORMATION

SARA Title III: H<sub>2</sub>SO<sub>4</sub> regulated under section 302, CERCLA, and 313 under this act.

Cal. Proposition 65: Ingredients not listed.

US TSCA Inventory: Ingredients are listed.

CPR Class: None.

TDG Class: None.

MSDS discloses elements required by the CPR.

### XVI. OTHER INFORMATION

THE ABOVE INFORMATION IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. ALL PRODUCTS ARE OFFERED IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT PRODUCTION SPECIFICATIONS AND ARE INTENDED SOLELY FOR USE IN ANALYTICAL TESTING. THE MANUFACTURER SHALL IN NO EVENT BE LIABLE FOR ANY INJURY, LOSS OR DAMAGE RESULTING FROM THE HANDLING, USE OR MISUSE OF THESE PRODUCTS.

MSDS prepared by Quality Assurance Group.

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