

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name: Ticonium 2000 Electro Solution
Product Number: 62178
Chemical Name: Ethylene Glycol & Sulfuric Acid
CAS Number: Blend

Company Identification

Ticonium Co., Div. of CMP Industries LLC
413 North Pearl St
Albany, NY 12207-1311 USA
(518)-434-3147 (For product information)
(800)-424-9300 (For emergencies)
1-800-424-9300 or 1-202-483-7616 (CHEMTREC)

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Chemical Name</u> | <u>Amount</u> | <u>CAS Number</u> |
|----------------------|---------------|-------------------|
| ETHYLENE GLYCOL | 85.0 % | 107-21-1 |
| SULFURIC ACID | 10.0 % | 7664-93-9 |
| HYDROCHLORIC ACID | 5.0 % | 7647-01-0 |

(See Section 8 for exposure guidelines)

(See Section 15 for regulatory information)

HAZARDS DISCLOSURE

This product contains hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

As defined under Sara 311 and 312, this product contains materials that are acute hazards.



3. HAZARDS IDENTIFICATION

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***** EMERGENCY OVERVIEW *****
*
* CAUTION
*
* Highly corrosive material. Use caution when
* handling.
*
*****
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NFPA Rating - Health:
Flammability:
Reactivity:
Special Hazard: N/A

POTENTIAL HEALTH EFFECTS

EYE:

Causes eye irritation, severe damage and even blindness.

SKIN:

causes burns, possible skin ulceration.

INHALATION:

mist can cause damage to the nasal passage and respiratory tract.

INGESTION:

Results in severe damage to mucous membranes and deep tissues. Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

REPRODUCTIVE HAZARDS:

None.

CARCINOGENICITY INFORMATION:

Sulfuric acid is listed by NTP as a carcinogen.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Kidney damage, liver abnormalities, central nervous system effects.

4. FIRST AID MEASURES

EYE CONTACT FIRST AID:

Flush eye with water for 15 minutes lifting upper and lower lids occasionally. Get medical attention.



(section 4 continued)

SKIN CONTACT FIRST AID:

Wash skin with soap and water. Remove contaminated clothing. Wash clothing separately before reuse. Get medical attention.

INHALATION FIRST AID:

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim warm.

INGESTION FIRST AID:

If swallowed, immediately give 2 glasses of water. Keep victim warm and quiet. Get medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

COC Flash Point: N/A

Autoignition Temperature: N/A

FLAMMABLE LIMITS IN AIR

LEL: N/A

UEL: N/A

EXTINGUISHING MEDIA:

Use dry sand or earth to smother fire.

FIRE & EXPLOSION HAZARDS:

Acids react with most metals to release hydrogen gas which can form explosive mixtures with it. Never use welding or cutting torch on or near (even empty) because products (even residue) can ignite explosively.

MISCELLANEOUS:

Wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode and full body protection.

6. ACCIDENTAL RELEASE MEASURES

LARGE SPILLS PROCEDURE:

Eliminate all ignition sources. Stop spill at source. Dike area of spill to prevent spreading. Pump liquid to salvage tank. Remaining liquid can be taken up with sand, clay, earth, floor absorbent or other absorbent material and shoveled into containers.



(section 6 continued)

SMALL SPILLS PROCEDURE:

Cover contaminated surface with sodium bicarbonate or a soda ash/slaked lime mixture (50 - 50). Mix and add water if necessary to form a slurry. Scoop up slurry and wash site with soda ash solution.

7. HANDLING AND STORAGE

STORAGE PRECAUTIONS:

Eliminate all sources of ignition - heat, sparks, flame, electricity, impact and friction.

MISCELLANEOUS:

Store in a cool dry area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Addition to water releases heat which can result in violent boiling and splattering. Always add slowly and in small amounts. Never use hot water. Always add acids to water, never add water to acids.

EYE / FACE PROTECTION REQUIREMENTS:

Use chemical splash goggles and face shield (ANSI Z87-1 or approved equivalent). Chemical goggles are recommended to avoid contact with eyes.

SKIN PROTECTION REQUIREMENTS:

Protective gloves are highly recommended (nitrile rubber, polyvinyl chloride or neoprene). Also wear impervious clothing and boots.

RESPIRATORY PROTECTION REQUIREMENTS:

A NIOSH/OSHA approved air supplied respirator is advised in the absence of proper environmental control.

MISCELLANEOUS:

General and/or local exhaust ventilation system highly recommended.



(section 8 continued)

EXPOSURE GUIDELINES:

ETHYLENE GLYCOL

OSHA TWA: 50 ppm, 127 mg/m³

SULFURIC ACID

OSHA PEL: 1 mg/m³

OSHA TWA: 1 mg/m³

HYDROCHLORIC ACID

OSHA PEL: 5 ppm, 7 mg/m³

OSHA TWA: 5 ppm, 7 mg/m³

OSHA Ceiling Limit: 5 ppm, 7 mg/m³

Skin Designation: Yes

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Viscous Liquid
COLOR: Colorless
ODOR: Acidic
VAPOR PRESSURE: 6 mm Hg @ 317 F
VAPOR DENSITY: 3.4 (Air = 1)
SOLUBILITY IN WATER ...: Very Soluable (50 gr / 100 ml water)
SPECIFIC GRAVITY: 1.864 (Water = 1)

10. STABILITY AND REACTIVITY

STABILITY:

Stable.

POLYMERIZATION:

Hazardous polymerization will not occur.

INCOMPATIBILITY WITH OTHER MATERIALS:

Avoid contact with strong oxidizing agents, strong alkalies, alkali metals, combustible materials, powder metals and organic materials.

11. TOXICOLOGICAL INFORMATION

SULFURIC ACID

Test Code: TCLO

Description: Inhalation

Species: Human

Results: 3 mg/m³ for 24 weeks, not yet reviewed.



(section 11 continued)

Test Code: LDlo
Description: Unreported route of entry.
Species: Man
Results: 135 mg/kg, toxic effects not yet reviewed.

Test Code: Oral LD50
Species: Rat
Results: 2140 mg/kg toxic effects not yet reviewed.

Test Code: Eye
Species: Rabbit
Results: 100 mg rinse produced severe irritation.

Test Code: TCLO
Description: Inhalation
Species: Human
Results: 10,000 mg/m³ caused watering eyes and cough.

Test Code: Lymphocyte Study
Species: Human
Results: 320 millimoles/L caused DNA inhibition

Test Code: Acute Dermal Exposure
Description: Skin
Species: Rabbit
Results: 555 mg (open patch tests) caused mild irritation.

Test Code: Oral LD50
Species: Rat
Results: 4700 mg/kg, no toxic effects.

HYDROCHLORIC ACID

Test Code: LDlo
Description: Inhalation
Species: Human
Results: 1300 ppm/30 min, not yet reviewed.

Test Code: Oral LD50
Species: Rabbits
Results: 900 mg/kg, toxic effects not yet reviewed.

Test Code: TCLO
Description: Inhalation
Species: Rat
Results: 450 mg/m³/hr (1 day prior to pregnancy) produced fetotoxicity (except death) and specific developmental abnormalities.



(section 11 continued)

Test Code: Eye
Species: Rabbit
Results: 100 mg rinse caused irritation.

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements.

Large waste: Destroy by liquid incineration in accordance with state, local and federal regulations. Contaminated absorbent may be deposited in a landfill in accordance with local, state and federal regulations.

14. TRANSPORTATION INFORMATION

PRODUCT LABEL: Ticonium 2000 Electro Solution
D.O.T. SHIPPING NAME: Hydrochloric & sulfuric acid
TECHNICAL SHIPPING NAME: N/A
D.O.T. HAZARD CLASS: Corrosive Material
UN NUMBER: N/A

15. REGULATORY INFORMATION

REGULATORY LISTS SEARCHED:

| | |
|---------------------|------------------------|
| 01 = SARA 313 | 02 = CA Proposition 65 |
| 03 = SARA 302/304 | 04 = CERCLA 302.4 |
| 05 = ACGIH TWA | 06 = ACGIH STEL |
| 07 = ACGIH CALC TLV | 08 = OSHA PEL |
| 09 = CANADIAN WHMIS | 10 = OSHA Ceiling |

EEC Symbols and Indications of Danger:

None

WHMIS Hazard Symbols:

None



(section 15 continued)

Canadian Disclosure List

ETHYLENE GLYCOL (107-21-1)
SULFURIC ACID (7664-93-9)
HYDROCHLORIC ACID (7647-01-0)

SARA Title III - Section 313

ETHYLENE GLYCOL (107-21-1)
SULFURIC ACID (7664-93-9)
HYDROCHLORIC ACID (7647-01-0)

CERCLA Hazardous Substances

SULFURIC ACID (7664-93-9) -- RQ 1000 lb
HYDROCHLORIC ACID (7647-01-0) -- RQ 5000 lb

Clean Air Act - Section 112

HYDROCHLORIC ACID (7647-01-0)

Title V

ETHYLENE GLYCOL (107-21-1)
SULFURIC ACID (7664-93-9)
HYDROCHLORIC ACID (7647-01-0)

SC Toxic Air Pollutants List

ETHYLENE GLYCOL (107-21-1)
SULFURIC ACID (7664-93-9)
HYDROCHLORIC ACID (7647-01-0)

16. OTHER INFORMATION

PREPARED BY: Phyll Tabone
APPROVED BY: John Nicpon
TITLE: Quality Manager
APPROVAL DATE: December 3, 2010
SUPERCEDES DATE ...: July 17, 2006
MSDS NUMBER: 62178
RTN NUMBER: 00000135 (Official Copy)

ABBREVIATIONS USED IN THIS MSDS:

| | |
|----------------------------------|--|
| TLV - THRESHOLD LIMIT VALUE | TWA - Time Weighted Average |
| STEL - SHORT TERM EXPOSURE LIMIT | TPQ - Threshold Planning Quantity |
| RQ - REPORTABLE QUANTITY | PEL - Permissible Exposure Limit |
| C - CEILING LIMIT | CAS - Chemical Abstract Service Number |
| NDA - NO DATA AVAILABLE | N/A - Not Applicable or Not Available |



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