MATERIAL SAFETY DATA SHEET

SUPER MINERAL ELIMINATOR

Version: US/Canada
Date Approved: 01/07/09
Revision No.: 1

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Omega Super Mineral Eliminator
REFERENCE NO.: 000000000109
DATE: 4/01/07

MANUFACTURER

Qualco, Inc.
225 Passaic Street
Passaic, NJ 07055

Emergency Telephone Numbers:

CHEMTREC 1-800-424-9300
Emergency Phone (973) 473-1222 (Plant) Call
General Information 973-473-1222

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Average concentration	Concentration range	Units
1-Hydroxy ethylidene-1, 1-diphosphonic acid	2809-21-4		>=58.0 - <=62.0	%
Phosphonic acide	13598-36-2		<=4.0	%
Water	7732-18-5			

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

FORM: liquid
COLOR: clear to yellow
ODOR: characteristic

WARNING STATEMENTS

DANGER!
Causes eye burns. Corrosive to mild steel.

POTENTIAL HEALTH EFFECTS:

Likely routes of exposure:	Eye and skin contact.
Eye Contact:	Causes eye burns. Injury may be permanent.
Skin Contact:	No more than slightly irritating to skin. No more than slightly toxic if absorbed.
Inhalation:	No information available.
Ingestion:	No more than slightly toxic if swallowed. Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

Refer to Section 11 for toxicological information.

4. FIRST AID MEASURES

EYES: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. If easy to do, remove any contact lenses. See a medical doctor or ophthalmologist immediately.

SKIN: Immediately first aid in not likely to be required. This material can be removed with water. Wash heavily contaminated clothing before reuse.

INGESTION: Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice. Wash heavily contaminated clothing before reuse.

INHALATION: Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice. Wash heavily contaminated clothing before reuse.

5. FIRE FIGHTING MEASURES

FLASH POINT: Non flammable aqueous solution

HAZARDOUS PRODUCTS OF COMBUSTION: Carbon monoxide (CO); carbon dioxide; phosphines.

EXTINGUISHING MEDIA: Water spray, foam, dry chemical, or carbon dioxide

UNUSUAL FIRE AND EXPLOSION HAZARDS: Decomposes in a fire giving of irritant fumes.

FIRE FIGHTING EQUIPMENT: Firefighters, and others exposed, wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protection recommended in Section 8.

ENVIRONMENTAL PRECAUTIONS: Keep out of drains and water courses.

METHODS FOR CLEANING UP: Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Neutralize washings with soda ash or lime. Flush spill area with water.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

7. HANDLING AND STORAGE

HANDLING: Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.
Emptied containers retain vapor and product residue. Observe all recommended safety precautions until container is cleaned, reconditioned or destroyed. The reuse of this material's container for non industrial purposes is prohibited and any reuse must be in consideration of the data provided in this material safety data sheet.

STORAGE:

TEMPERATURE: >0^{o}C.
SUITABLE MATERIALS OF CONSTRUCTION: Glass lining; PVC; polypropylene; glass reinforced plastic; polyethylene
UNSUITABLE MATERIALS OF CONSTRUCTION: Mild steel; Carbon steel; aluminum; other metals
GENERAL: Freeze sensitive. Keep in a cool, dry, well ventilated place. Stable under normal conditions of handling and storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Wear chemical goggles. Have eye wash facilities immediately available at any location where eye contact can occur.

HAND PROTECTION: Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.

BODY PROTECTION: Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wash thoroughly after handling.

RESPIRATORY PROTECTION: Avoid breathing vapor or mist. Use approved respiratory protection equipment when airborne exposure is excessive. If used, full face piece replaces the need for a face shield and/or chemical goggles. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

VENTILATION: Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as processing equipment.

AIRBORNE EXPOSURE LIMITS: (ml/m^3 = ppm). No specific occupational exposure limit has been established.

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

SPECIFIC GRAVITY: 1.45 @ 20°C

pH: <2.0 Conditions 10 g/l @ 25°C

FREEZING POINT/WATER SOLUBILITY: -25°C

VISCOSITY: 46.0 mPa.s @ 20°C
20.2 mPa.s @ 40°C
10.3 mPa.s @ 60°C
5.0 mPa.s @ 90°C

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Do not expose to extreme temperatures.

MATERIALS TO AVOID: Attacks many metals.

HAZARDOUS REACTIONS: Corrosive to aluminum and mild steel. Contact with strong oxidizing agents. Contact with strong bases. Hazardous polymerization does not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide (CO); carbon dioxide; phosphorous oxides (PxOy); phosphines

11. TOXICOLOGICAL INFORMATION

This product has been tested for toxicity. Results from Solutia sponsored studies or from the available public literature are described below:

ACUTE ANIMAL TOXICITY DATA:

EYE EFFECTS:
Rabbit, Corrosive.

SKIN EFFECTS:
Rabbit, Practically non-irritating to skin (rabbit).; 24 h

DERMAL LD_{50}:
Rabbit, 7,940 mg/kg, Practically nontoxic after skin application in animal studies.

ORAL LD_{50}:
Rat, 2,400 mg/kg. Slightly toxic following oral adminstration

REPEAT DOSE TOXICITY: Rat & dog, diet, subchronic. Minor effects (less than lesions) were present in some animals at the end of the observation period.

REPEAT DOSE TOXICITY: Rat & Dog, diet, chronic. Minor effects (less than lesions) were present in some animals at the end of the observation period.

REPEAT DOSE TOXICITY: Dog, subcutaneous, chronic. Adverse effects observed in repeat dose studies. Target organs affected – bone..

DEVELOPMENTAL TOXICITY: Rat & rabbit, gavage. No birth defects were noted in rats given the active ingredient orally during pregnancy.

REPRODUCTIVE TOXICITY: Rat, diet, 2nd generation. This material had no effect on reproduction or fertility.

MUTAGENICITY: No genetic effects were observed in standard tests using bacterial and animal cells.

COMPONENTS:
Data from Solutia studies and/or the available scientific literature on the components of this material which have been identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Hazardous Products Act are discussed below.

1-hydroxy ethylidene-1, 1-diphosphonic acid	Slightly toxic following oral administration. Practically nontoxic after skin application in animal studies. Corrosive to eyes (rabbit). Practically non-irritating to skin (rabbit). Slight effects on bone mineralization were noted following subcutaneous injection. No birth defects were noted in rats given the active ingredient orally during pregnancy. This material had no effect on reproduction or fertility. No genetic effects were observed in standard tests using bacterial and animal cells.
Phosphonic acid:	Slightly toxic following oral administration. Slightly toxic after skin application in animal studies. Corrosive to eyes (rabbit). Corrosive to skin (rabbit). The weight of the evidence indicates that this material is not mutagenic in in-vitro assays.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY:

Invertebrates: 48h, EC50 Water flea (Daphnia magna) 527 mg/l.

Fish: 96 h, LC50 Rainbow trout (Oncorhynchus mykiss) 368 mg/l
96 h, LC50 Bluegill sunfish (Lepomis macrochirus) 868 mg/l

Algae: 96 h, EC50 Algae 7.2 mg/l
Algal growth inhibition is due to ability of this product to complex materials not to toxicity per se.

ENVIRONMENTAL FATE:

Biodegradation: Zahn-Wellens. Dissolved Organic Carbon removed 33% 28 d
Modified OECD Screening theorectical CO2 evolution 2% 70 d
Modified SCAS Dissolved Organic Carbon removed 90%
Closed bottle BOD30/COD 5%
Degrades after acclimatization

Bioconcentration factor (BCF): Not expected to bioaccumulate

13. DISPOSAL CONSIDERATIONS

US EPA RCRA STATUS:

This material when discarded, is a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. See disposal considerations below for US EPA disposal requirements. Consult regulatory officials for performance standards.

US EPA RCRA HAZARDOUS WASTE NUMBER: D002

DISPOSAL CONSIDERATIONS:

Deactivation. Consult 40 CFR 268.48 for concentration based standards.

MISCELLANEOUS ADVICE:

Local, state, provincial, and national disposal regulations may be more or less stringent. Consult your attorney or appropriate regulatory officials for information on such disposal. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

U.S. DOT
Proper Shipping Name: Corrosive Liquid, Acidic, Organic, N.O.S. phosphonic acid
Hazard Class: 8
Hazard Identification number: UN3265
Packing Group: III
Transport Label: Corrosive

15. REGULATORY INFORMATION

All components are in compliance with the following inventories: US TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Japanese ENCS, Phillipine PICCS, Chinese

Canadian WHMIS classification: D2(B) – Materials Causing Other Toxic Effects E – Corrosive Material

SARA Hazard Notification:

Hazard Categories Under Title III Rules (40 CFR 370): Immediate

Section 302 Extremely Hazardous Substances:

Section 313 Toxic Chemical(s):

CERCLA Reportable Quantity: Not applicable

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Products Regulation.

Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.

16. OTHER INFORMATION

PRODUCT USE:

Cleaning/washing agents and disinfectants, Complexing agents, Corrosion inhibitors, Cosmetics, Pharmaceuticals, Scale inhibition.

NFPA RATING

HEALTH	3
FLAMMABILITY	1
REACTIVITY:	1
ADDITIONAL INFO:	NA

HMIS RATING

HEALTH	3
FLAMMABILITY	1
REACTIVITY	1
ADDITIONAL INFO	H

This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.