

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name /EM QUANT @ Manganese Test /Product Code10080
Manufacturer: EMD Chemicals Inc. P.O. Box 70 /480 Democrat Road Gibbstown, NJ 08027
Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.
For More Information Call In Case of Emergency Call
856-423-6300 Technical Service
Monday-Friday: 8:00 AM - 5:00 PM 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Synonym

Reagent No. 1 of two reagents. Reagent No. 2 of two reagents

Material Uses Analytical reagent. Chemical Family Solution.

Section 2. Composition and Information on Ingredients

Product name / Reagent.	Component ; CAS # ; % by Weight
EM QUANT @ Manganese Test	Water; 7732-18-5; 96%
Sodium Hydroxide; 1310-73-2; 4%	
EM QUANT @ Manganese Test	Water; 7732-18-5; 90%
Acetic Acid; 64-19-7; 10%	

Section 3. Hazards Identification

Physical State and Appearance/Liquid.

Emergency Overview DANGER! CAUSES EYE AND SKIN BURNS.HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.

WARNING! CAUSES EYE AND SKIN BURNS.HARMFUL IF INHALED OR SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA, TEETH.

Routes of Entry/Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion. Potential Acute Health Effects/Hazardous in case of eye contact (corrosive). Causes eye burns. Skin /Hazardous in case of skin contact (permeator, corrosive). Skin contact produces burns.

Inhalation/Hazardous in case of inhalation (lung irritant). Ingestion/Hazardous in case of ingestion. Potential Chronic Health Effects

Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure: Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

Eye Contact / Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately. Skin Contact/In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. Inhalation/ If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Ingestion/ If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flammability of the Product/ Non-flammable. Auto-ignition Temperature /Not applicable.Flash Points / Not applicable. Flammable Limits / Not applicable.Products of Combustion - Not available. Fire Hazards in Presence of Various Substances Not applicable. Explosion Hazards in Presence of Various Substances Risks of explosion of the product in presence of static discharge: No. Risks of explosion of the product in presence of mechanical impact: No. Risks of explosion of the product in presence of static discharge: Explosive in presence of open flames, sparks and static discharge. Risks of explosion of the product in presence of mechanical impact: No. Fire Fighting Media and Instructions Not applicable. Protective Clothing (Fire) Not applicable. Special Remarks on Fire Hazards Not available. Special Remarks on Explosion Hazards Not available.

Section 6. Accidental Release Measures

Small Spill and Leak Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Large Spill and Leak Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. Spill Kit Information Reagent No. 1 The following EMD Chemicals Inc. SpillSolv @ absorbent is recommended for this product: SX1320 Caustic Treatment Kit Reagent No. 2 The following EMD Chemicals Inc. SpillSolv @ absorbent is recommended for this product: SX1310 Acid Treatment Kit

Section 7. Handling and Storage

Handling Do not ingest. Do not breathe vapor or mist. Keep container closed. Do not get in eyes, on skin or clothing. Storage Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location. Personal Protection Eyes Face shield. Body Full suit. Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear

appropriate respirator when ventilation is inadequate. Hands Gloves. Feet Boots. Personal Protection in Case of a Large Spill Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Product Name Exposure Limits Water Not available. Sodium Hydroxide ACGIH (United States). CEIL: 2 mg/m3 OSHA (United States). CEIL: 2 mg/m3 Acetic Acid ACGIH (United States, 1994). STEL: 37 mg/m3 15 minute(s). STEL: 15 ppm 15 minute(s). TWA: 25 mg/m3 8 hour(s). TWA: 10 ppm 8 hour(s). NIOSH REL (United States, 1994). STEL: 37 mg/m3 15 minute(s). STEL: 15 ppm 15 minute(s). TWA: 25 mg/m3 10 hour(s). TWA: 10 ppm 10 hour(s). OSHA Final Rule (United States, 1989). TWA: 25 mg/m3 8 hour(s). TWA: 10 ppm 8 hour(s).

Section 9. Physical and Chemical Properties

Odor Not available. Color Colorless. Physical State and Appearance Liquid. Molecular Weight Not applicable. Molecular Formula Not applicable. pH Not available. Boiling/Condensation Point The lowest known value is 99.9°C (211.8°F) (Water). The lowest known value is 99.9°C (211.8°F) (Water). Weighted average: 101.69°C (215°F) Melting/Freezing Point May start to solidify at -0.1°C (31.8°F) based on data for: Water. May start to solidify at 16.72°C (62.1°F) based on data for: Acetic Acid. Weighted average: 1.58°C (34.8°F) Critical Temperature Not available. Specific Gravity The only known value is 2.13 (Water = 1) (Sodium Hydroxide). The only known value is 1.051 (Water = 1) (Acetic Acid). Vapor Pressure Not available. Vapor Density Not available. The highest known value is 2.1 (Air = 1) (Acetic Acid). VOC Not available. Physical Chemical Comments Not available.

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable. Conditions of Instability Not available. Incompatibility with Various Substances Slightly reactive to reactive with oxidizing agents, metals, alkalis. Rem/Incompatibility Not available. Hazardous Polymerization Will not occur.

Section 11. Toxicological Information

RTECS Number: Water ZC0110000 Sodium Hydroxide WB4900000 Acetic Acid AF1225000 Toxicity LD50: Not available. LC50: Not available. Acute oral toxicity (LD50): 33100 mg/kg (Rat) (Calculated value for the mixture). Acute toxicity of the vapor (LC50): 28100 ppm 4 hours (Musk rat) (Calculated value for the mixture). Chronic Effects on Humans Not available. Acute Effects on Humans Hazardous in case of eye contact (corrosive). Causes eye burns. Hazardous in case of skin contact (corrosive). Skin contact produces burns. Hazardous in case of inhalation (lung irritant). Hazardous in case of ingestion. Special Remarks on Toxicity Not available. Special Remarks on Chronic Effects on Humans Not available. Special Remarks on Other Toxic Effects on Humans Not available. Synergetic Products (Toxicologically) Not available. Carcinogenic Effects This material is not known to cause cancer in animals or humans. Toxicity to Reproductive System Not available. Teratogenic Effects Not available.

Section 13. Disposal Considerations

EPA Waste Number D002 / Treatment Specified Technology - Neutralize to pH 6-9. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

Section 14. Transport Information

DOT Classification TDG Classification IMO/IMDG Classification ICAO/IATA Classification

Section 15. Regulatory Information

U.S. Federal Regulations TSCA 8(b) inventory: Water; Sodium Hydroxide TSCA 8(b) inventory: Water; Acetic Acid SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: Sodium Hydroxide SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Hydroxide: Immediate (Acute) Health Hazard SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: Acetic Acid SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Acetic Acid: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard SARA 313 toxic chemical notification and release reporting: No products were found. SARA 313 toxic chemical notification and release reporting: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: Sodium Hydroxide Clean Water Act (CWA) 311: Acetic Acid Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found. State Regulations Pennsylvania RTK: Sodium Hydroxide: (environmental hazard, generic environmental hazard) Massachusetts RTK: Sodium Hydroxide New Jersey: Sodium Hydroxide Pennsylvania RTK : Acetic Acid :environmental hazard, generic environmental hazard) Massachusetts RTK: Acetic Acid New Jersey: Acetic Acid California prop. 65: No products were found.

Section 16. Other Information

National Fire Protection Association (U.S.A.) 0 Health 1 0 Fire Hazard Reactivity Specific Hazard Other Special Considerations Not available. Notice to Reader

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