MATERIAL SAFETY DATA SHEET (MSDS)

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EM SCIENCE

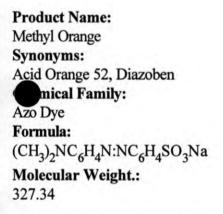
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| Manufacturer | Preparation Date.: 3/1/91 |
|-----------------------------|---|
| EM SCIENCE | |
| A Division of EM Industries | Information Phone Number.: 856-423-6300 |
| P.O. Box 70 | Hours: Mon. to Fri. 8:30-5 |
| 480 Democrat Road | Chemtrec Emergency Number: 800-424-9300 |
| Gibbstown, N.J. 08027 | Hours: 24 hrs a day |
| | |

Catalog Number(s):

5

MX1245 MX1250 MX1255 MX1260



2. COMPOSITION / INFORMATION ON INGREDIENTS

| | Component | CAS # | Appr % | |
|--------|-----------|----------|--------|--|
| Methyl | Orange | | | |
| | | 547-58-0 | 100% | |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW Y BE HARMFUL IF SWALLOWED. Ses Eye Irritation.

Appearance: Yellow-brown crystalline powder

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

Symptoms of Exposure:

May be harmful if swallowed. Causes eye irritation on contact.

Medical Cond. Aggravated by Exposure: Data not available.

Routes of Entry: Inhalation, ingestion

Carcinogenicity:

The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

4. FIRST AID MEASURES

Emergency First Aid:

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE. Skin: Wash thoroughly with soap and water. Eyes: Immediately flush thoroughly with water for at least 15 minutes. Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.

5. FIRE FIGHTING MEASURES

Flash Point (F): Noncombustible Flammable Limits LEL (%): N/A Flammable Limits UEL (%): N/A Extinguishing Media: Water spray, foam, CO₂

Fire Fighting Procedures:

Wear self-contained breathing apparatus.

Fire & Explosion Hazards:

Thermal decomposition produces toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Spill Response:

Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal I Dection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

7. HANDLING AND STORAGE

Handling & Storage:

-

Keep container closed. Store at controlled room temperature. Do not breathe dust. Do not get in eyes, on skin, or on coning.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:

Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:

Material should be handled or transferred in an approved fume hood or with adequate ventilation. Protective gloves should be worn to prevent skin contact (Neoprene or equivalent) Safety glasses with side shields should be worn at all times.

Work/Hygenic Practices:

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

EXPOSURE GUIDELINES

OSHA - PEL:

TWA STEL CL Component PPM MG/M3 PPM MG/M3 Skin

Methyl Orange



ACGIH - TLV:

TWA STEL CL Component PPM MG/M3 PPM MG/M3 Skin

Methyl Orange

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

9. PHYSICAL AND CHEMCIAL PROPERTIES

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Boiling Point (C 760 mmHg) : N/A
Melting Point (C) : N/A
Specific Gravity (H<sub>2</sub>0 = 1) : N/A
Vapor Pressure (mm Hg) : N/A
Percent Volatile by vol (%): N/A
Vor Density (Air = 1) : N/A
Evaporation Rate (BuAc = 1): N/A
Solubility in Water (%) : Slight
Appearance :
Yellow-brown crystalline powder
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10. STABILITY AND REACTIVITY



Hazardous Polymerization: Does not occur

Hazardous Decomposition: $CO_{x'} SO_{x'}$ Nitrogen Compounds

Conditions to Avoid: None indicated

Materials To Avoid:

() Water
() Acids
() Bases
() Corrosives
(X) Oxidizers
() Other:

11. TOXICOLOGICAL INFORMATION

Toxicity Data

ipr-mus LD50: 101 mg/kg

Toxicological Findings: Tests on laboratory animals indicate material may produce adverse mutagenic effects. Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA Waste Numbers:

Treatment:

Material does not have an EPA Waste number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished.

ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL RENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION

DOT Proper Shipping Name: non-regulated

DOT ID Number :

14. REGULATORY INFORMATION

TSCA Statement:

The CAS number of this product is listed on the TSCA Inventory.

| | SARA | SARA | CERCLA |
|---------------|--------------------|-------------|----------------------------------|
| Component | EHS | EHS TPQ | RQ |
| | (302) | (lbs) | (lbs) |
| Methyl Orange | | | |
| | | | |
| | OSHA | SARA | DeMinimis |
| Component | OSHA Floor List | SARA 313 | DeMinimis for SARA 313 (%) |

pere is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

15. OTHER INFORMATION

Comments: None

NFPA Hazard Ratings:

Health : 1 Flammability : 1 Reactivity : 0 Special Hazards :

Revision History: 12/1/83 10/27/87 3/22/88

| = Revised Section

I/A = Not Available

N/E = None Establised

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