1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name	:	844-1063 CHROMA-CHEM®RED OXIDE RO
Use of the Substance / Preparation	:	Non-aqueous colorant
Company	:	Chromaflo Technologies Corporation 2600 Michigan Avenue Ashtabula,OH 44005-0816 USA
Telephone	:	440-997-5137
Telefax	:	440-992-3613
US: CHEMTREC EMERGENCY NUMBER	:	800-424-9300
CANADA: CANUTEC EMERGENCY NUMBER	:	613-996-6666
Product Regulatory Services	:	440-536-9691

2. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****

***Form**-paste* ***Color**-red* **Odor**-*Sweet ether-like odor.*

May cause eye, skin and respiratory tract irritation.
Combustible liquid and vapor.

POTENTIAL HEALTH EFFECTS

Eye contact

Irritating.
May cause tearing, reddening and/or swelling.
May injure eye tissue if not removed promptly.
May cause conjunctivitis.

Skin Contact

A moderate skin irritant based on testing of similar CHROMA-CHEM® base mixtures. Prolonged or repeated contact may cause irritation.
Prolonged skin contact with large amounts of ether acetates may cause drowsiness.

Inhalation

Possibly irritating.
Excessive inhalation of solvent vapors may cause nasal and respiratory irritation and central nervous system effects including dizziness, weakness, fatigue, nausea, headache, possible

unconsciousness and even death.

Ingestion

May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Chronic Health Hazard

High vapor concentrations (3000 ppm) of propylene glycol monomethyl ether acetate caused upper respiratory irritation and liver and kidney effects in subchronic animal testing. The relevance of these results to humans is not known.
Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis. On X-rays it appears to be a benign pneumoconiosis and is not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis producing materials such as silica. Because this product is a free-flowing liquid or paste, dust inhalation is not an expected route of exposure.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients / Hazardous components

Iron oxide			
CAS-No.	1332-37-2	Percent (Wt./ Wt.)	30 - 60 %
2-methoxy-1-methylethyl acetate			
CAS-No.	108-65-6	Percent (Wt./ Wt.)	10 - 30 %
C.I. Pigment Black 11			
CAS-No.	1317-61-9	Percent (Wt./ Wt.)	0.1 - 1 %
Poly(oxy-1,2-ethanediyl),alpha-tridecyl-o-OH,phosphate			
CAS-No.	9046-01-9	Percent (Wt./ Wt.)	1 - 5 %

Other information

This material is classified as hazardous under OSHA regulations.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

Skin contact

Remove contaminated clothing/shoes. Flush skin with water. Follow by washing with soap and water. If symptoms develop or persist, obtain medical attention. Wash clothing before reuse.

Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 30 minutes, while holding eyelids apart.
Do not allow contaminated water to contact the unaffected eye or face during irrigation of an affected eye.
Obtain medical attention immediately.

Ingestion

Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.
If the heart has stopped or breathing has stopped, trained personnel should begin cardiopulmonary resuscitation or artificial respiration immediately.

5. FIRE-FIGHTING MEASURES

Flash point	46.67 °C , 116 °F Method: Setaflash Closed Cup
OSHA Flammability Classification	Combustible Liquid

Suitable extinguishing media

Use water spray or fog, foam, dry chemical or CO2.

Specific hazards during fire fighting

Combustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

Further information

As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Additional advice

Absorb spill with inert material, then place in a chemical waste container. After removal, flush contaminated area with water and collect for disposal. Clean up spills immediately. Remove sources of ignition and ventilate area. Use a respirator and other protective equipment as outlined in Section 8. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

7. HANDLING AND STORAGE

Handling

Safe handling advice

Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.

Storage

Requirements for storage areas and containers

Keep in a dry, cool place.
Keep container closed when not in use.
Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component occupational exposure guidelines

- **C.I. Pigment Black 11**

CAS-No.	1317-61-9	
Control parameters	5 mg/m3 Respirable fraction.	PEL:(OSHA Z1)
	15 mg/m3 Total dust.	PEL:(OSHA Z1)
	3 mg/m3 Respirable particles.	Time Weighted Average (TWA):(ACGIH)
	10 mg/m3 Inhalable particles.	Time Weighted Average (TWA):(ACGIH)

- **Iron oxide**

CAS-No.	1332-37-2	
	Respirable fraction. Listed.	(Z3)
	5 mg/m3 Respirable fraction.	PEL:(OSHA Z1)
	15 mg/m3 Total dust.	PEL:(OSHA Z1)
	3 mg/m3 Respirable particles.	Time Weighted Average (TWA):(ACGIH)
	10 mg/m3 Inhalable particles.	Time Weighted Average (TWA):(ACGIH)

Other information

The AIHA WEEL for propylene glycol monomethyl ether acetate is 50 ppm TWA.
The exposure limit for iron oxide is for dust and fume as Fe.

Engineering measures

Use explosion-proof ventilation equipment.

Personal protective equipment

Respiratory protection

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hand protection
Use impermeable gloves.

Eye protection
Chemical resistant goggles must be worn.

Skin and body protection
A safety shower and eye wash fountain should be readily available.
To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	paste
Color	red
Odor	Sweet ether-like odor.

Safety data

Boiling point/range	> 143 °C
Flash point	46.67 °C Method: Setaflash Closed Cup
Relative density	2
Solubility/qualitative	Solubility in water: Negligible.
Viscosity, dynamic	75 - 95 KU (25 °C)
Solvents and Volatiles Data	
	% VOC (gm/l) 503
Evaporation rate	Slower than butyl acetate

10. STABILITY AND REACTIVITY

Conditions to avoid	Avoid high temperatures and sources of ignition.
Materials to avoid	oxidizing substances
Further information	Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Component	Acute oral toxicity	Iron oxide 1332-37-2 LD50 Rat: > 5000 mg/kg

2-methoxy-1-methylethyl acetate
108-65-6
LD50 Rat: 8532 mg/kg

Poly(oxy-1,2-ethanediyl),alpha-tridecyl-o-OH,phosphate
9046-01-9
LD50 Rat: > 2000 mg/kg

Component Acute inhalation toxicity: LC50 (rat) > 4345 ppm, 6 hours, vapor
related to substance: 2-methoxy-1-methylethyl acetate

Component Acute dermal toxicity: 2-methoxy-1-methylethyl acetate
108-65-6
LD50 Rabbit: > 19000 mg/kg
(calculated)
(literature value)

Component General Toxicity Information: 2-methoxy-1-methylethyl acetate
108-65-6
High vapor concentrations (3000 ppm) of propylene glycol monomethyl ether acetate caused upper respiratory irritation and liver and kidney effects in subchronic animal testing. The relevance of these results to humans is not known.

12. ECOLOGICAL INFORMATION

General Ecological Information: No ecotoxicological studies are available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Advice on disposal: Waste must be disposed of in accordance with federal, state, provincial and local regulations. CONTAINER DISPOSAL: Empty containers by removing the top and inverting to allow all free-flowing product to drain. To meet regulatory criteria, the container is considered empty when less than 3% remains in the container. Additional special handling is not typically required and the empty container can be discarded with other non-hazardous trash. Note: Local disposal regulations may be more stringent and require additional restrictions or precautions. Customers should check with their local disposal company, municipal or state authority. Recycle of plastic or metal containers may require clean rather than empty containers. In this case the containers can be rinsed with mineral spirits until the containers are considered generally product free.

14. TRANSPORT INFORMATION

Sea transport IMDG-Code

Class	3
UN-No	1263
Packaging group	III
EmS	F-E, S-E
Proper technical name (Proper shipping name)	
PAINT RELATED MATERIAL	

Air transport ICAO-TI/IATA-DGR

Class	3
UN-No	1263
Packaging group	III
Proper technical name (Proper shipping name)	
Paint related material	

Loading instructions/Remarks

IATA_C	ERG-Code 3L
IATA_P	ERG-Code 3L
CFR_INWTR	In the U.S. this material may be classified as combustible liquid. Combustible liquids are not regulated in packages 450 liters or less. This applies for shipments by road and rail only.
CFR_RAIL	In the U.S. this material may be classified as combustible liquid. Combustible liquids are not regulated in packages 450 liters or less. This applies for shipments by road and rail only.
CFR_ROAD	In the U.S. this material may be classified as combustible liquid. Combustible liquids are not regulated in packages 450 liters or less. This applies for shipments by road and rail only.

15. REGULATORY INFORMATION

US Federal Regulations

OSHA

If listed below, chemical specific standards apply to the product or components:

- None listed

Clean Air Act Section (112)

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None listed

CERCLA Reportable Quantities

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed

SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes:

- Acute Health Hazard
- Chronic Health Hazard
- Fire Hazard

SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None listed

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

State Regulations

California Proposition 65

A warning under the California Drinking Water Act is required only if listed below:

- None listed

International Chemical Inventory Status

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact the Product Regulatory Services Department.

• Europe (EINECS/ELINCS)	Listed/registered
• USA (TSCA)	Listed/registered
• Canada (DSL)	Listed/registered
• Australia (AICS)	Not listed/Not registered
• Japan (MITI)	Not listed/Not registered
• Korea (TCCL)	Listed/registered
• Philippines (PICCS)	Not listed/Not registered
• China	Listed/registered
• New Zealand	Listed/registered

16. OTHER INFORMATION

HMIS Ratings

Health :	2
Flammability :	2
Physical Hazard :	0

Further information

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.