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

Product information

Trade name	:	844-2555 CHROMA-CHEM®LEAD FREE MEDIUM YELLOW M
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**-yellow* **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.

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.
High concentrations of titanium dioxide dust caused microscopic lung tumors in rats in lifetime inhalation studies. However, DuPont, the primary US manufacturer, based on a review of the test data and based on an epidemiological study of employees, concludes that titanium dioxide pigment will not cause chronic respiratory disease in humans at concentrations experienced in the workplace.
Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.
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

2-methoxy-1-methylethyl acetate			
CAS-No.	108-65-6	Percent (Wt./ Wt.)	10 - 30 %
Stoddard solvent; Low boiling point naphtha - unspecified			
CAS-No.	8052-41-3	Percent (Wt./ Wt.)	10 - 30 %
Titanium dioxide			
CAS-No.	13463-67-7	Percent (Wt./ Wt.)	10 - 30 %
Aluminum hydroxide			
CAS-No.	21645-51-2	Percent (Wt./ Wt.)	1 - 5 %
Polyoxyethylene nonylphenyl ether phosphate			
CAS-No.	68412-53-3	Percent (Wt./ Wt.)	1 - 5 %
Polyoxyethylene dodecyl ether phosphate salt			
CAS-No.	42612-52-2	Percent (Wt./ Wt.)	1 - 5 %
Synthetic Amorphous Silica, Precipitated			
CAS-No.	112926-00-8	Percent (Wt./ Wt.)	1 - 5 %

Other information

This material is classified as hazardous under OSHA regulations.
This product contains no lead, cadmium, mercury or hexavalent chromium which have been intentionally introduced as an element during manufacture or distribution and the sum of the concentration level of lead, cadmium, mercury, or hexavalent chromium incidentally present in this product shall not exceed 100 parts per million by weight.

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

Wash contaminated area with lukewarm gently flowing water for at least 20-30 minutes. Remove contaminated clothing, shoes and leather goods under running 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	42.22 °C , 108 °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

- **Stoddard solvent; Low boiling point naphtha - unspecified**

CAS-No.	8052-41-3	
Control parameters	100 ppm	Time Weighted Average (TWA):(ACGIH)
	500 ppm	PEL:(OSHA Z1)
	2900 mg/m3	
	100 ppm	Time Weighted Average (TWA)
	525 mg/m3	Permissible Exposure Limit (PEL):(US CA OEL)

- **Titanium dioxide**

CAS-No.	13463-67-7	
	10 mg/m3	Time Weighted Average (TWA):(ACGIH)
	15 mg/m3	PEL:(OSHA Z1)
	Total dust.	

- **Stoddard solvent; Low boiling point naphtha - unspecified**

CAS-No.	8052-41-3	
	100 ppm	Time Weighted Average (TWA):(ACGIH)
	500 ppm	PEL:(OSHA Z1)
	2900 mg/m3	

100 ppm	Time Weighted Average (TWA)
525 mg/m3	Permissible Exposure Limit (PEL):(US CA OEL)

- **Titanium dioxide**

CAS-No. 13463-67-7

10 mg/m3	Time Weighted Average (TWA):(ACGIH)
15 mg/m3	PEL:(OSHA Z1)
Total dust.	

- **Aluminum hydroxide**

CAS-No. 21645-51-2

10 mg/m3	Time Weighted Average (TWA):(ACGIH)
Inhalable particulate.	
3 mg/m3	Time Weighted Average (TWA):(ACGIH)
Respirable.	
1 mg/m3	Time Weighted Average (TWA):(ACGIH)
Respirable fraction.	

- **Synthetic Amorphous Silica, Precipitated**

CAS-No. 112926-00-8

5 mg/m3	PEL:(OSHA Z1)
Respirable fraction.	
15 mg/m3	PEL:(OSHA Z1)
Total dust.	
20millions of particles per cubic foot of air	Time Weighted Average (TWA):(Z3)
0.8 mg/m3	Time Weighted Average (TWA):(Z3)

The exposure limit is calculated from the equation, 80/(%SiO2), using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.

Other information

Exposure values for mineral spirits (CAS Nr 8052-41-3) are given as Stoddard solvent.
The AIHA WEEL for propylene glycol monomethyl ether acetate is 50 ppm TWA.

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	yellow
Odor	Sweet ether-like odor.

Safety data

Boiling point/range	> 143 °C
Flash point	42.22 °C Method: Setaflash Closed Cup
Relative density	1.1
Solubility/qualitative	Solubility in water: Negligible.
Viscosity, dynamic	65 - 85 KU (25 °C)
Solvents and Volatiles Data	
	% VOC (gm/l) 444
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

11. TOXICOLOGICAL INFORMATION

Component Acute oral toxicity	2-methoxy-1-methylethyl acetate 108-65-6 LD50 Rat: 8532 mg/kg
	Stoddard solvent; Low boiling point naphtha - unspecified 8052-41-3 LD50 Rat: > 5000 mg/kg
	Titanium dioxide

	13463-67-7 LD50 Rat: > 24000 mg/kg Polyoxyethylene nonylphenyl ether phosphate 68412-53-3 LD50 Rat: 4450 mg/kg Synthetic Amorphous Silica, Precipitated 112926-00-8 LD50 Rat: > 31600 mg/kg
Component Acute inhalation toxicity	LC50 (rat) > 4345 ppm, 6 hours, vapor related to substance: 2-methoxy-1-methylethyl acetate Stoddard solvent; Low boiling point naphtha - unspecified 8052-41-3 LC50 Rat: > 5500 mg/m3 / 4 h Titanium dioxide 13463-67-7 LC50 Rat: > 6820 mg/m3 / 4 h
Component Acute dermal toxicity	2-methoxy-1-methylethyl acetate 108-65-6 LD50 Rabbit: > 19000 mg/kg (calculated) (literature value) Stoddard solvent; Low boiling point naphtha - unspecified 8052-41-3 LD50 Rabbit: > 3000 mg/kg Titanium dioxide 13463-67-7 LD50 Rabbit: > 10000 mg/kg Synthetic Amorphous Silica, Precipitated 112926-00-8 LD50 Rabbit: > 2000 mg/kg
Component Repeated dose toxicity	Titanium dioxide 13463-67-7 High concentrations of titanium dioxide dust caused microscopic lung tumors in rats in lifetime inhalation studies. However, DuPont, the primary US manufacturer, based on a review of the test data and based on an epidemiological study of employees, concludes that titanium dioxide pigment will not cause chronic respiratory disease in humans at concentrations experienced in the workplace.
Component carcinogenicity assessment	Titanium dioxide 13463-67-7 Contains a component which is classified as an IARC 2B carcinogen (possibly carcinogenic to humans).

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

- Acute Health Hazard
- Chronic Health 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:

WARNING! This product contains a chemical known in the State of California to cause cancer.

- Titanium dioxide
  CAS-No. 13463-67-7

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)	Listed/registered
• Japan (MITI)	Not listed/Not registered
• Korea (TCCL)	Listed/registered
• Philippines (PICCS)	Listed/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.