

MATERIAL SAFETY DATA SHEET**830-1313 CAL-TINT® II BURNT UMBER**

Material no.	99003354	Version	2.3 / US
Specification	139776	Revision date	01/15/2013
Order Number	01996074	Print Date	03/09/2013
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product Information**

Trade name : 830-1313 CAL-TINT® II BURNT UMBER
Use of the Substance / Preparation : Aqueous colorant
Company : Chromaflo Technologies Corporation
2600 Michigan Avenue
Ashtabula, OH 44005-0816
USA

Telephone : 973-929-8000
Telefax : 973-929-8040

US: CHEMTREC EMERGENCY NUMBER : 800-424-9300

CANADA: CANUTEC EMERGENCY NUMBER : 613-996-6666

Product Regulatory Services : 973-929-8060

2. HAZARDS IDENTIFICATION***** EMERGENCY OVERVIEW *****

Form-paste Color-brown Odor-Glycol odor.

CAL-TINT colorants may cause eye, skin and respiratory tract irritation.
May be harmful if swallowed.

POTENTIAL HEALTH EFFECTS**Eye contact**

Moderately irritating.
May cause tearing, reddening and/or swelling.

Skin Contact

Moderately irritating.
Prolonged or repeated contact may result in defatting and drying of the skin causing skin irritation and dermatitis (rash).

Inhalation

CAL-TINT colorants may cause irritation.
Overexposure to aerosols or mists containing ethylene glycol may cause lung irritation. See exposure limit (section 8).

Ingestion

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May be harmful if swallowed.

Ingestion of ethylene glycol may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, irritability and central nervous system effects. Swallowing large volumes of ethylene glycol causes severe kidney damage and cardiopulmonary effects (metabolic acidosis) which may be fatal. The human oral lethal dose is approximately 1.6 g/kg.

Ingestion of ethylene glycol can cause neurological impairment.

Repeated ingestion of ethylene glycol can cause bone marrow, liver, and sperm effects.

Chronic Health Hazard

Ethylene glycol may aggravate an existing kidney disease. Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material. Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and drowsiness.

Some studies have linked exposure of carbon black dust to lung effects. IARC classifies carbon black as a Category 2B Carcinogen (known animal carcinogen, possible human carcinogen) based on inhalation studies. However, the manufacturers of carbon black state that epidemiologic studies of workers in the carbon black industry in the U.S. and W. Europe show no significant adverse health effects due to occupational exposure.

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. Overexposure to crystalline silica dust causes lung effects. There is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica (IARC 1, OSHA).

Crystalline Silica has been assigned the A2 carcinogen designation by ACGIH, suspected human carcinogen.

Chronic inhalation of crystalline silica dust may cause kidney disease, auto-immune disease, and lymph node effects in humans.

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.	1309-37-1	Percent (Wt./ Wt.)	30 - 60 %
ethanediol; ethylene glycol			
CAS-No.	107-21-1	Percent (Wt./ Wt.)	10 - 30 %
Manganese trioxide			
CAS-No.	1317-34-6	Percent (Wt./ Wt.)	5 - 10 %
Umber			
CAS-No.	12713-03-0	Percent (Wt./ Wt.)	5 - 10 %
NJTSR No.56705700001-5043P			
CAS-No.	Trade Secret	Percent (Wt./ Wt.)	5 - 10 %
Calcium Carbonate			
CAS-No.	1317-65-3	Percent (Wt./ Wt.)	1 - 5 %
Carbon black, amorphous			
CAS-No.	1333-86-4	Percent (Wt./ Wt.)	1 - 5 %
Diethylene glycol			

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CAS-No.	111-46-6	Percent (Wt./ Wt.)	1 - 5 %
Silica, crystalline (quartz)			
CAS-No.	14808-60-7	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

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Obtain medical attention. Wash clothing before reuse. Destroy or thoroughly clean contaminated shoes before reuse.

Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention.

Ingestion

Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Never administer anything by mouth to an individual who rapidly losing consciousness, unconscious or convulsing.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

In case of fire, use water (flood with water), dry chemical, CO2 or "alcohol" foam.

Specific hazards during fire fighting

Contains material that can burn in fire if contained water is evaporated by heat or fire. Burning will produce hazardous compounds including oxides of: carbon. nitrogen. sulfur.

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**Personal precautions**

Wear personal protective equipment; see section 8.

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Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Methods for cleaning up

Ventilate area. Absorb spill with inert material and place in a chemical waste container.

7. HANDLING AND STORAGE**Handling****Safe handling advice**

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after 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**

- **Carbon black, amorphous**

CAS-No.	1333-86-4	
Control parameters	3.5 mg/m3	PEL:(OSHA Z1)
	3.5 mg/m3	Time Weighted Average (TWA)
		Permissible Exposure Limit (PEL):(US CA OEL)
	3 mg/m3	Time Weighted Average (TWA):(ACGIH)
	Inhalable fraction.	

- **ethanediol; ethylene glycol**

CAS-No.	107-21-1	
	100 mg/m3	Ceiling Limit Value:(ACGIH)
	Aerosol.	
	40 ppm	Ceiling Limit Value:(US CA OEL)
	100 mg/m3	
	Vapor.	

- **Silica, crystalline (quartz)**

CAS-No.	14808-60-7	
	0.05 mg/m3	Time Weighted Average (TWA):(ACGIH)
	Respirable particles.	
	0.1 mg/m3	Time Weighted Average (TWA)

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Permissible Exposure Limit (PEL):(US CA OEL)

Respirable dust.

0.3 mg/m3

Time Weighted Average (TWA)
Permissible Exposure Limit (PEL):(US CA OEL)

Total dust.

2.4millions of particles
per cubic foot of air
Respirable.

Time Weighted Average (TWA):(Z3)

The exposure limit is calculated from the equation, $250/(\%SiO_2+5)$, using a value of 100% SiO₂. Lower percentages of SiO₂ will yield higher exposure limits.

0.1 mg/m3

Time Weighted Average (TWA):(Z3)

Respirable.

The exposure limit is calculated from the equation, $10/(\%SiO_2+2)$, using a value of 100% SiO₂. Lower percentages of SiO₂ will yield higher exposure limits.

0.3 mg/m3

Time Weighted Average (TWA):(Z3)

Total dust.

The exposure limit is calculated from the equation, $30/(\%SiO_2+2)$, using a value of 100% SiO₂. Lower values of % SiO₂ will give higher exposure limits.

0.025 mg/m3

Time Weighted Average (TWA):(ACGIH)

Respirable fraction.

• **Iron Oxide**

CAS-No. 1309-37-1
10 mg/m3
Fume.

PEL:(OSHA Z1)

5 mg/m3

Time Weighted Average (TWA)
Permissible Exposure Limit (PEL):(US CA OEL)

Fume.

5 mg/m3
Respirable fraction.

Time Weighted Average (TWA):(ACGIH)

• **Manganese trioxide**

CAS-No. 1317-34-6
5 mg/m3 as Mn
0.2 mg/m3 as Mn

Ceiling Limit Value:(OSHA Z1)
Time Weighted Average (TWA)
Permissible Exposure Limit (PEL):(US CA OEL)

0.2 mg/m3 as Mn

Time Weighted Average (TWA):(ACGIH)

• **Calcium Carbonate**

CAS-No. 1317-65-3
5 mg/m3

PEL:(OSHA Z1)

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Respirable fraction.

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 exposure value for ethylene glycol is given as an aerosol.
The exposure value for crystalline silica is for the respirable fraction.

Engineering measures

Use only in well-ventilated areas.

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	brown
Odor	Glycol odor.

Safety data

pH	8.0 - 9.0
Boiling point/range	> 100 °C
Relative density	1.7
Solubility/qualitative	Solubility in water: Dispersible.

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Viscosity, dynamic	75 - 90 KU (25 °C)	
Solvents and Volatiles Data	% VOC (gm/l)	359
Evaporation rate	Slower than butyl acetate	

10. STABILITY AND REACTIVITY

Conditions to avoid	Not applicable.
Materials to avoid	strong acids, oxidizing substances sodium hypochlorite Ethylene oxide and guanidinium perchlorate (incompatible with iron oxide.)

11. TOXICOLOGICAL INFORMATION

Component Acute oral toxicity	Iron Oxide 1309-37-1 LD50 Rat: > 5000 mg/kg
	ethanediol; ethylene glycol 107-21-1 LD50 Rat(female): 4000 mg/kg
	NJTSR No.56705700001-5043P Trade Secret LD50 Rat: 3000 mg/kg
	Carbon black, amorphous 1333-86-4 LD50 Rat: > 10000 mg/kg
	Diethylene glycol 111-46-6 LD50 Rat: 20760 mg/kg
Component Acute inhalation toxicity	Carbon black, amorphous 1333-86-4 LC50 Rat: 6750 mg/m3 / 4 h
Component Acute dermal toxicity	ethanediol; ethylene glycol 107-21-1 LD50 Rabbit: 10500 mg/kg
	NJTSR No.56705700001-5043P Trade Secret LD50 Rabbit: 4400 mg/kg

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Diethylene glycol
111-46-6
LD50 Rabbit: 13300 mg/kg

Component Repeated dose toxicity
ethanediol; ethylene glycol
107-21-1
Chronic ingestion of an ingredient in this product has been shown to cause adverse effects on the peripheral nervous system of laboratory animals.

Component Mutagenicity assessment
Carbon black, amorphous
1333-86-4
This product contains one or more ingredients that have been shown to produce mutagenic effects in in vitro testing.

Component carcinogenicity assessment
Carbon black, amorphous
1333-86-4
Some studies have linked exposure of carbon black dust to lung effects. IARC classifies carbon black as a Category 2B Carcinogen (known animal carcinogen, possible human carcinogen) based on inhalation studies. However, the manufacturers of carbon black state that epidemiologic studies of workers in the carbon black industry in the U.S. and W. Europe show no significant adverse health effects due to occupational exposure.

Silica, crystalline (quartz)
14808-60-7
Contains a component which is classified as an IARC Group 1 carcinogen (carcinogenic to humans).

Component teratogenicity assessment
ethanediol; ethylene glycol
107-21-1
Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. However, there is currently no available information to suggest that ethylene glycol has caused birth defects in humans.

Component General Toxicity Information
ethanediol; ethylene glycol
107-21-1
Ethylene glycol may aggravate an existing kidney disease. Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material. Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and drowsiness.

Diethylene glycol
111-46-6
According to long-term animal inhalation studies, very high concentrations of diethylene glycol vapors caused central nervous system effects in mice and rats. However, an extensive review of the literature shows that no such effects have been documented in humans (Patty's Industrial Hygiene and Toxicology, 1982, Third Revised Ed., Vol 2c, p 3838). In a continuous breeding study of mice, continued ingestion of large

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amounts of diethylene glycol (6 g/kg/day) caused an adverse effect on fertility and some embryotoxic and fetotoxic effects concurrent with some maternal toxicity. The relevance of these very high doses to humans is uncertain.

Silica, crystalline (quartz)
14808-60-7

Chronic inhalation of crystalline silica dust may cause kidney disease, auto-immune disease, and lymph node effects in humans. Crystalline silica has shown positive results in "in vitro" screening tests for mutagenicity.

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 water until the containers are considered generally product free.

14. TRANSPORT INFORMATION**D.O.T. Road/Rail**

Class	9
UN-No	3082
Packing group	III
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.

Loading instructions/Remarks

IATA_C	Not dangerous according to transport regulations.
IATA_P	Not dangerous according to transport regulations.
IMDG	Not dangerous according to transport regulations.
CFR_INWTR	USA: Not regulated for transport when package contains less than the reportable quantity listed in section 15 of the msds.

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CFR_RAIL USA: Not regulated for transport when package contains less than the reportable quantity listed in section 15 of the msds.

CFR_ROAD USA: Not regulated for transport when package contains less than the reportable quantity listed in section 15 of the msds.

15. REGULATORY INFORMATION**Information on Ingredients / Non-hazardous components**

This product contains the following non-hazardous components

Water			
CAS-No.	7732-18-5	Percent (Wt./ Wt.)	10 - 30 %
NJTSR No.56705700001-5068P			
CAS-No.	Trade Secret	Percent (Wt./ Wt.)	1 - 5 %

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:

- ethanediol; ethylene glycol
CAS-No. 107-21-1
- Manganese trioxide
1317-34-6

CERCLA Reportable Quantities

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

- ethanediol; ethylene glycol
CAS-No. 107-21-1
Reportable Quantity 41667 lbs

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

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:

- ethanediol; ethylene glycol

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CAS-No. 107-21-1

- Manganese trioxide
CAS-No. 1317-34-6

Toxic Substances Control Act (TSCA)

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

- None listed

Other US Federal Regulatory Information

Note: Silica, crystalline (airborne particles of respirable size) is listed as a carcinogen under California Proposition 65. However, the physical form of this product (a free flowing paste) precludes exposure to airborne particles of respirable size.

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.

- Carbon black, amorphous
CAS-No. 1333-86-4
- Silica, crystalline (quartz)
CAS-No. 14808-60-7

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.

- | | |
|-----------------------|---------------------------|
| • USA (TSCA) | Listed/registered |
| • Canada (DSL) | Listed/registered |
| • Japan (MITI) | Not listed/Not registered |
| • Korea (TCCL) | Not listed/Not registered |
| • Philippines (PICCS) | Not listed/Not registered |

16. OTHER INFORMATION**HMIS Ratings**

Health :	2*
Flammability :	1
Physical Hazard :	0

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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.