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

Product information

<table>
<thead>
<tr>
<th>Trade name</th>
<th>830-9907 CAL-TINT®II LAMP BLACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of the Substance / Preparation</td>
<td>Aqueous colorant</td>
</tr>
<tr>
<td>Company</td>
<td>Chromaflo Technologies Corporation</td>
</tr>
<tr>
<td></td>
<td>2600 Michigan Avenue</td>
</tr>
<tr>
<td></td>
<td>Ashtabula, OH 44005-0816</td>
</tr>
<tr>
<td></td>
<td>USA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone</th>
<th>440-997-5137</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telefax</td>
<td>440-992-3613</td>
</tr>
</tbody>
</table>

**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*-black  *Odor*-Glycol odor.

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

POTENTIAL HEALTH EFFECTS

**Eye contact**

Severely irritating.

May injure eye tissue if not removed promptly.

**Skin Contact**

Moderately irritating.

**Inhalation**

May cause respiratory tract irritation.

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

**Ingestion**

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.
Ingestion of excessive amounts of diethylene glycol causes abdominal discomfort or pain, nausea, vomiting, dizziness, central nervous system effects, kidney damage and cardiopulmonary effects (metabolic acidosis) which may be fatal (estimated human oral lethal dose, 1.0 to 1.2 g/kg) and may cause liver 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.

Short term exposures to talc may cause lung irritation. Long term excessive exposure to talc dust may cause talsosis, a pulmonary fibrosis which in turn may lead to severe and permanent damage to the lungs. NTP Toxicology and Carcinogenesis Studies of Talc revealed that there is some evidence of carcinogenic activity in male rats and clear evidence of carcinogenic activity in female rats. There was no evidence of carcinogenic activity in male or female mice.

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.

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**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Percent (Wt./ Wt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black, amorphous</td>
<td>1333-86-4</td>
<td>10 - 30 %</td>
</tr>
<tr>
<td>NJTSR No.56705700001-5043P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>Trade Secret</td>
<td></td>
</tr>
<tr>
<td>Ethanediol; ethylene glycol</td>
<td>107-21-1</td>
<td>10 - 30 %</td>
</tr>
<tr>
<td>Diethylene glycol</td>
<td>111-46-6</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>Talc, Magnesium silicate hydrate</td>
<td>14807-96-6</td>
<td>10 - 30 %</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light; Kerosine - unspecified</td>
<td>64742-47-8</td>
<td>0.01 - 1 %</td>
</tr>
<tr>
<td>NJTSR No.56705700001-5704P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>Trade Secret</td>
<td></td>
</tr>
</tbody>
</table>

MSDS-US (R11/01) / 8/31/2011 11:41
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**
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion**
If swallowed, get medical attention immediately. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

**Flash point**
not determined

**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.

**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.

**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
  3 mg/m³
  3.5 mg/m³
  3 mg/m³
  Inhalable fraction.
  PEL:(OSHA Z1)
  Time Weighted Average (TWA)
  Permissible Exposure Limit (PEL):(US CA OEL)
  Time Weighted Average (TWA):(ACGIH)

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

- **Talc, Magnesium silicate hydrate**
  CAS-No. 14807-96-6
  2 mg/m³
  Respirable fraction.
  The value is for particulate matter containing no asbestos and <1% crystalline silica.
  2 mg/m³
  Time Weighted Average (TWA):(ACGIH)
  Permissible Exposure Limit (PEL):(US CA OEL)
  Respirable dust.
  20millions of particles
  Time Weighted Average (TWA):(Z3)
Other information
The exposure value for ethylene glycol is given as an aerosol.
The AIHA WEEL for diethylene glycol is 50 PPM for total vapor and aerosol and 10 mg/m3 for aerosol alone (eight hour time-weighted averages).
The OSHA TWA and ACGIH TWA exposure values for talc are for asbestos free talc expressed as millions of particles per cubic foot (mppcf).

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: black
Odor: Glycol odor.
Safety data

pH 8.0 - 9.0

Boiling point/range > 100 °C

Flash point not determined

Relative density 1.4

Solubility/qualitative Solubility in water: Dispersible.

Viscosity, dynamic 75 - 90 KU (25 °C)

Solvents and Volatiles Data

% VOC (gm/l) 439

Evaporation rate Slower than butyl acetate

10. STABILITY AND REACTIVITY

Conditions to avoid Not applicable.

Materials to avoid strong acids, oxidizing substances

sodium hypochlorite

Further information Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Component Acute oral toxicity Carbon black, amorphous
1333-86-4
LD50 Rat: > 10000 mg/kg

NJTSR No.56705700001-5043P
Trade Secret
LD50 Rat: 3000 mg/kg

ethanediol; ethylene glycol
107-21-1
LD50 Rat(female): 4000 mg/kg

Diethylene glycol
111-46-6
LD50 Rat: 20760 mg/kg

Distillates (petroleum), hydrotreated light; Kerosine - unspecified
64742-47-8
LD50 Rat: > 15000 mg/kg
Component  Acute inhalation toxicity

<table>
<thead>
<tr>
<th>Material</th>
<th>LD50 Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black, amorphous 1333-86-4</td>
<td>5700 mg/kg</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light; Kerosine - unspecified 64742-47-8</td>
<td>&gt; 14100 mg/m³ / 4 h</td>
</tr>
</tbody>
</table>

Component  Acute dermal toxicity

<table>
<thead>
<tr>
<th>Material</th>
<th>LD50 Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJTSR No.56705700001-5043P</td>
<td>4400 mg/kg</td>
</tr>
<tr>
<td>ethanediol; ethylene glycol 107-21-1</td>
<td>10500 mg/kg</td>
</tr>
<tr>
<td>Diethylene glycol 111-46-6</td>
<td>13300 mg/kg</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light; Kerosine - unspecified 64742-47-8</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

Component  Repeated dose toxicity

<table>
<thead>
<tr>
<th>Material</th>
<th>LOAEL</th>
<th>target organ/effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc, Magnesium silicate hydrate 14807-96-6</td>
<td>0.006 mg/l</td>
<td>Lungs</td>
</tr>
<tr>
<td>Inhalation Rat(male) Testing period: 791 d</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.
Talc, Magnesium silicate hydrate
14807-96-6
Short term exposures to talc may cause lung irritation. Long term excessive exposure to talc dust may cause talcosis, a pulmonary fibrosis which in turn may lead to severe and permanent damage to the lungs. NTP Toxicology and Carcinogenesis Studies of Talc revealed that there is some evidence of carcinogenic activity in male rats and clear evidence of carcinogenic activity in female rats. There was no evidence of carcinogenic activity in male or female mice.

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 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.

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.
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.56705700001-5032P
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

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 27174 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
  CAS-No. 107-21-1

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.

- Carbon black, amorphous
  CAS-No. 1333-86-4
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) Not listed/Not registered
- Philippines (PICCS) Listed/registered
- China Listed/registered
- New Zealand Listed/registered

16. OTHER INFORMATION

HMIS Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>2*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

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.