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

Product information

Trade name: 866-1810 CHROMA-CHEM® YELLOW IRON OXIDE
Use of the Substance / Preparation: Non-aqueous colorant
Company: Evonik Degussa Corporation
            379 Interpace Parkway
            Parsippany, NJ 07054
            USA
Telephone: 973-541-8000
Telefax: 973-541-8040

US: CHEMTREC EMERGENCY NUMBER: 800-424-9300
CANADA: CANUTEC EMERGENCY NUMBER: 613-996-6666
Product Regulatory Services: 973-541-8060

2. HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***


Flammable liquid and vapor.
May cause eye, skin and respiratory tract irritation.
High vapor concentrations may cause drowsiness.

POTENTIAL HEALTH EFFECTS

Eye contact
Severely irritating.
May cause tearing, reddening and/or swelling.
May injure eye tissue if not removed promptly.
Causes painful stinging or burning of eyes and lids, watering of eyes, conjunctivitis, opaqueness of cornea, possibly leading to loss of sight.

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

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.
If misted, causes irritation of mucous membranes, nose, eyes, and throat. May cause coughing and difficulty in breathing.

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

**Chronic Health Hazard**
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.
Suppliers of xylene have reported that high levels of exposure to xylene in some animal studies were reported to have affected the development of the embryo/fetus. These effects were often at levels which are toxic to the mother. The significance of these findings to human exposure has not been determined, particularly the exposure to the low levels of xylene found in this product.
Toluene may be harmful to the fetus based on laboratory animal studies. Intentional misuse by deliberate inhalation of toluene has been associated with liver, kidney and brain damage in humans. Overexposure to this material has apparently been found to cause the following effects in laboratory animals: Liver abnormalities, kidney damage, nasal damage, brain damage and high frequency hearing loss.
High concentrations (0.1 to 0.2% in air) of ethyl benzene will irritate eyes, mucous membrane and respiratory tract, and will cause dizziness and a sense of constriction of the chest.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Information on ingredients / Hazardous components**

<table>
<thead>
<tr>
<th>Ingredient Description</th>
<th>CAS-No.</th>
<th>Percent (Wt./ Wt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stoddard solvent; Low boiling point naphtha - unspecified</td>
<td>8052-41-3</td>
<td>5 - 10 %</td>
</tr>
<tr>
<td>NJTSR No.56705700001-5055P</td>
<td>Trade Secret</td>
<td></td>
</tr>
<tr>
<td>NJTSR No.56705700001-5057P</td>
<td>Trade Secret</td>
<td></td>
</tr>
<tr>
<td>2-methylpropan-1-ol; iso-butanol</td>
<td>78-83-1</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>butan-1-ol; n-butanol</td>
<td>71-36-3</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light; Kerosine - unspecified</td>
<td>64742-47-8</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>isobutyl acetate</td>
<td>110-19-0</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>Ligroine; Low boiling point naphtha</td>
<td>8032-32-4</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aliph.; Low boiling point naphtha</td>
<td>64742-89-8</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>100-41-4</td>
<td>0.1 - 1 %</td>
</tr>
</tbody>
</table>
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. Consult a physician immediately.

**Ingestion**
Do not induce vomiting as aspiration into the lungs may cause chemical pneumonitis. Should vomiting occur, be sure to keep victim’s head below hips to avoid aspiration of vomitus into the lungs. Seek medical advice immediately.

5. FIRE-FIGHTING MEASURES

**Flash point**
27.78 °C , 82 °F
Method: Pensky-Martens C.C.

OSHA Flammability Classification Flammable liquid

**Suitable extinguishing media**
Use water spray or fog, foam, dry chemical or CO2.

**Specific hazards during fire fighting**
Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint. Burning will produce hazardous compounds including oxides of: carbon, nitrogen, phosphorus.
Further information
Containers can build up pressure if exposed to heat (fire). Cool with water spray. As in any fire, wear self-contained, pressure-demand breathing apparatus (MSHA-NIOSH approved or equivalent) and full protective gear.

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. | Control parameters | Time Weighted Average (TWA): (ACGIH) PEL: (OSHA Z1) |
  | 8052-41-3 | 100 ppm | 100 ppm |
  | 50 ppm | 2900 mg/m³ |
  | 100 ppm | 525 mg/m³ |

• ethylbenzene
  | CAS-No. | Control parameters | Time Weighted Average (TWA): (ACGIH) Short Term Exposure Limit (STEL): (ACGIH) PEL: (OSHA Z1) |
  | 100-41-4 | 100 ppm | 100 ppm |
  | 125 ppm | 435 mg/m³ |
100 ppm
435 mg/m3
125 ppm
545 mg/m3

• 2-methylpropan-1-ol; iso-butanol
CAS-No. 78-83-1
50 ppm
100 ppm
300 mg/m3
50 ppm
150 mg/m3

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

• butan-1-ol; n-butanol
CAS-No. 71-36-3
20 ppm
100 ppm
300 mg/m3
50 ppm
150 mg/m3

Time Weighted Average (TWA): (ACGIH)
PEL: (OSHA Z1)
Ceiling Limit Value: (US CA OEL)
Skin designation: (US CA OEL)

• isobutyl acetate
CAS-No. 110-19-0
150 ppm
150 ppm
700 mg/m3
150 ppm
700 mg/m3

Time Weighted Average (TWA): (ACGIH)
PEL: (OSHA Z1)

• Ligroine; Low boiling point naphtha
CAS-No. 8032-32-4
300 ppm

Time Weighted Average (TWA): (ACGIH)

• toluene
CAS-No. 108-88-3
20 ppm
200 ppm
300 ppm
500 ppm
10 minutes
50 ppm
188 mg/m3
500 ppm
150 ppm
560 mg/m3

Can be absorbed through the skin.

Time Weighted Average (TWA)
Permissible Exposure Limit (PEL): (US CA OEL)
Ceiling Limit Value: (US CA OEL)
Maximum concentration: (OSHA Z2)
Short Term Exposure Limit (STEL): (US CA OEL)
Skin designation: (US CA OEL)
Other information
Exposure values for mineral spirits (CAS Nr 8052-41-3) are given as Stoddard solvent.
Exposure values for Aliphatic petroleum distillates (CAS nr 64742-47-8) are given as Stoddard solvent.

Engineering measures
Use process enclosures, local exhaust ventilation or other engineering controls to control airborne exposure.
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
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.
A safety shower and eye wash fountain should be readily available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form: paste
Color: yellow
Odor: Petroleum distillate odor.

Safety data
Flash point: 27.78 °C
Method: Pensky-Martens C.C.
Relative density: 1.6
Solubility/qualitative: Solubility in water: Slight.
Viscosity, dynamic: 95 - 110 KU (25 °C)
Solvents and Volatiles Data
% VOC (gm/l): 298.68
Evaporation rate: Slower than butyl acetate
### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Conditions to avoid</th>
<th>Avoid high temperatures and sources of ignition.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials to avoid</td>
<td>oxidizing substances</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stoddard solvent; Low boiling point naphtha - unspecified 8052-41-3 LD50 Rat: &gt; 5000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>NJTSR No.56705700001-5057P Trade Secret LD50 Rat: 4450 mg/kg</td>
</tr>
<tr>
<td></td>
<td>2-methylpropan-1-ol; iso-butanol 78-83-1 LD50 Rat: 2500 mg/kg</td>
</tr>
<tr>
<td></td>
<td>butan-1-ol; n-butanol 71-36-3 LD50 Rat: 2460 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Distillates (petroleum), hydrotreated light; Kerosine - unspecified 64742-47-8 LD50 Rat: &gt; 15000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>isobutyl acetate 110-19-0 LD50 Rat: 13400 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Ligroine; Low boiling point naphtha 8032-32-4 LD50 Rat: 5000 - 15000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>ethylbenzene 100-41-4 LD50 Rat: 3500 mg/kg</td>
</tr>
<tr>
<td></td>
<td>toluene 108-88-3 LD50 Rat: 5000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>xylene 1330-20-7 LD50 Rat: 3523 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stoddard solvent; Low boiling point naphtha - unspecified</td>
</tr>
</tbody>
</table>
Component Acute dermal toxicity

Stoddard solvent; Low boiling point naphtha - unspecified
8052-41-3
LD50 Rabbit: > 3000 mg/kg

2-methylpropan-1-ol; iso-butanol
78-83-1
LD50 Rabbit: 3400 mg/kg

butan-1-ol; n-butanol
71-36-3
LD50 Rabbit: 4200 mg/kg

Distillates (petroleum), hydrotreated light; Kerosine - unspecified
64742-47-8
LD50 Rabbit: > 2000 mg/kg

isobutyl acetate
110-19-0
LD50 Rabbit: > 20000 mg/kg

ethylbenzene
100-41-4
LD50 Rabbit: 5000 mg/kg

toluene
108-88-3
LD50 Rabbit: 12124 mg/kg

xylene
1330-20-7
LD50 Rabbit: > 4300 mg/kg

Component carcinogenicity assessment

ethylbenzene
100-41-4
Contains a component which is classified as an IARC 2B carcinogen (possibly carcinogenic to humans).

Component Teratogenicity

xylene
1330-20-7
inhalative Rat: in maternally non-toxic doses
NOAEL (No Observed Adverse Effect Level) teratogenesis: 2.165 mg/l
Method: OECD TG 414

Suppliers of xylene have reported that high levels of exposure to xylene in some animal studies were reported to have affected the development of the embryo/fetus. These effects were often at levels which are toxic to the mother. The significance of these findings to human exposure has not been determined, particularly the exposure to the low levels of xylene.
found in this product.

<table>
<thead>
<tr>
<th>Component</th>
<th>General Toxicity Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>Toluene may be harmful to the fetus based on laboratory animal studies. Intentional misuse by deliberate inhalation of toluene has been associated with liver, kidney and brain damage in humans. Overexposure to this material has apparently been found to cause the following effects in laboratory animals: Liver abnormalities, kidney damage, nasal damage, brain damage and high frequency hearing loss.</td>
</tr>
<tr>
<td>xylene</td>
<td>Potential embryo-foetal toxicity and teratogenicity.</td>
</tr>
</tbody>
</table>

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 and local regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

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
D.O.T. Road/Rail

| Class | 3 |
| UN-No | 1263 |
| Packing group | III |
| Proper shipping name | Paint related material |

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

15. REGULATORY INFORMATION

Information on ingredients / Non-hazardous components

This product contains the following non-hazardous components

<table>
<thead>
<tr>
<th>NJTSR No.</th>
<th>CAS-No.</th>
<th>Trade Secret</th>
<th>Percent (Wt./ Wt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>56705700001-5630P</td>
<td></td>
<td></td>
<td>30 - 60 %</td>
</tr>
<tr>
<td>56705700001-5239P</td>
<td></td>
<td></td>
<td>10 - 30 %</td>
</tr>
</tbody>
</table>

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:

- ethylbenzene
  - CAS-No. 100-41-4
- toluene
  - 108-88-3
- xylene
CERCLA Reportable Quantities
If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- xylene
  CAS-No. 1330-20-7
  Reportable Quantity 11109 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
- 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:

- ethylbenzene
  CAS-No. 100-41-4

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 birth defects or other reproductive harm.

- toluene
  CAS-No. 108-88-3

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

- ethylbenzene
  CAS-No. 100-41-4
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

16. OTHER INFORMATION

HMIS Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>2*</td>
<td>3</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.