Section 01 - Product Information

Identification of the company: Clariant Corporation
4000 Monroe Road
Charlotte, NC, 28205
Telephone No.: +1 704 331 7000

Information of the substance/preparation:
Textile, Leather, and Paper Chemicals
Product Safety 1-704-331-7710

Emergency tel. number: +1 800-424-9300 CHEMTREC

Trade name: Cartasol Turquoise K-AQ Liquid
Material number: 202672
Formula: Proprietary
Primary product use: Colorant/dye
Chemical family: Copper phthalocyanine dye

Section 02 - Composition information on hazardous ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-no. (Trade secret no.)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (As An Integral Part Of The Dye or Pigment Molecule)</td>
<td>7440-50-8</td>
<td>&lt; 5 %</td>
</tr>
<tr>
<td>Copper Compound</td>
<td></td>
<td>&lt; 16 %</td>
</tr>
<tr>
<td>Proprietary Alkaloid Component</td>
<td></td>
<td>&lt; 5 %</td>
</tr>
<tr>
<td>Methanesulfonic Acid</td>
<td>75-75-2</td>
<td>5 - 15 %</td>
</tr>
<tr>
<td>Hydroxyacetic acid</td>
<td>79-14-1</td>
<td>10 - 20 %</td>
</tr>
</tbody>
</table>

Section 03 - Hazards identification

Expected Route of entry:
- Inhalation: yes
- Skin contact: yes
- Eye contact: yes
- Ingestion: yes
- Skin absorption: no

Health effects of exposure:

Low pH - Corrosive
Due to the low pH of this product it may be corrosive to eyes and skin.

Copper (as an integral part of the dye or pigment molecule)
Copper: Overexposure to copper salts can cause irritation to intact skin. Can also cause irritation to the eyes. Inhalation of copper dusts may cause irritation to the upper respiratory
tract. Exposure to copper fumes and dust may also cause a metallic taste in the mouth.

Proprietary alkaloid
Proprietary Alkaloid: A human poison by ingestion. Low concentrations may cause a Small decrease in heart rate. Ingestion of large amounts may result in headache, lightheadedness, dizziness, chills, fever, excitement, restlessness, nervousness, insomnia, mild delirium, hallucinations, tinnitus, constricted pupils, decreased visual fields, amblyopia, diplopia, photophobia, and scintillating scotoma. Neurological symptoms may persist for several days. May cause gastrointestinal irritation, nausea, vomiting, stimulation of gastric acid secretion, anorexia, hematemesis, abdominal cramps, diarrhea, and diuresis followed by oliguria and dehydration. Other effects may include alternating states of consciousness and muscle twitching, tremors, hyperesthesia, hypertonicity or hypotonicity, trismus, opisthotonos and convulsions. Slight increase in basal metabolic rate, metabolic acidosis, ketonuria, glycosuria, hyperglycemia, hypokalemia and rhabdomyolysis have been reported. Other effects may include dyspnea, tachypnea, chest tightness, palpitations, increase in systolic blood pressure and arrhythmias including tachycardia and extrasystoles. Seizures generally precede death. In addition to the above acute effects, agitation, disturbed sleep, induced psychosis, heartburn and hyperventilation may occur. Low grade fever and elevated plasma free fatty acid have been reported. Respiratory failure of cardiopulmonary arrest may occur. Prolonged use of high doses may result in increased incidence of spontaneous abortion, breech presentations, stillbirth, premature delivery, low birth weight, developmental. Abnormalities of the craniofacial and musculoskeletal systems and babies with decreased activity and decreased muscle tone. Other reproductive administration to mice resulted in statistically significant increase in The incidence of carcinogenic tumors of the skin and appendages. Inhalation may result in irritation of the nose and throat and cause coughing and chest discomfort. If sufficient quantities are absorbed, may cause poisoning as detailed in the acute ingestion. No deaths were reported in rats exposed to 55 ppm for 4 hours. Persons with glaucoma, duodenal ulcers, liver cardiovascular, renal and Or psychological disordors are at increased risk from exposure. May cross the placenta and be excreted in breast milk. Alcohol may increase toxic effects. Interactions with medications have been reported carcinogenic status: human evidence inadequate, animal evidence Inadequate (IARC group - 3).

Methanesulfonic acid ( 75-75-2 )
Methanesulfonic acid: Corrosive. Harmful if inhaled or swallowed. Causes burns. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Oral (rat) LD50: 200 mg/kg. Intraperitoneal (rat) LD50: 50 mg/kg. Oral (quail) LD50: 1000 mg/kg. Poison by ingestion and intraperitoneal routes. The NIOSH Registry of Toxic Effects of chemical substances lists some esters of methane sulfonic acid as having suspected mutagenic, teratogenic, or carcinogenic activity.

Glycolic Acid ( 79-14-1 )
Glycolic Acid may be harmful by inhalation, ingestion or skin absorption. May cause irreversible eye damage; symptoms may include stinging, tearing, redness, swelling, corneal damage, and blindness. May cause severe skin irritation. Material is irritating to tissues of the mucous membranes and upper respiratory tract. No effects of chronic exposure are currently known.
Known effects on other illnesses: No known effects on other illnesses for this product.

Listed carcinogen:
IARC: No
NTP: No
OSHA: No
Other: No

HMIS:
Health: 3* Flammability: 1 Reactivity: 0 Personal protection: D

Section 04 - First aid measures

After inhalation:
Get victim to fresh air. Give artificial respiration or oxygen if breathing has stopped. Get prompt medical attention. Do not give fluids if victim is unconscious.

After contact with skin:
Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

After contact with eyes:
Immediately flush eyes with running water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek prompt medical attention if redness or irritation occurs.

After ingestion:
If ingested, seek medical assistance immediately.

Advice to doctor / Treatment:
None known.

Section 05 - Fire fighting measures

Flashpoint: No data.
Lower explosion limit: not tested.
Upper explosion limit: not tested.
Ignition temperature: not tested.

Hazardous combustion products:
Thermal decomposition may produce oxides of carbon, nitrogen, and sulfur. Residue will contain copper.

Extinguishing media: water
Alcohol resistant foam
carbon dioxide
Dry Chemical
Water / Fog Spray

Special fire fighting procedure:
Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.

Unusual fire and explosion hazards: None known.
Section 06 - Accidental release measures

Steps to be taken in case of spill or leak:
Contain spill. All spills should be collected as liquid or absorbed on a suitable absorbant. Clean up should be accomplished by removal of contaminated soil or scrubbed with soap and water and cleaning wastes removed with absorbant materials. Wear proper protective equipment. Prevent or minimize material from reaching surface waters, sanitary drains, or storm drains.

Section 07 - Handling and storage

Advice on safe handling:
Avoid getting on skin or in eyes when handling product.

Further info on storage conditions:
Keep containers closed.

Section 08 - Exposure controls / personal protection

Occupational exposure limits:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS number</th>
<th>Regulatory list</th>
<th>Type of value</th>
<th>Values / Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPPER, DUSTS AND MISTS, AS CU</td>
<td>7440-50-8</td>
<td>US ACGIH Threshold Limit Values Data</td>
<td>Time Weighted Average (TWA):</td>
<td>1 mg/m3</td>
</tr>
<tr>
<td>COPPER, FUME</td>
<td>7440-50-8</td>
<td>US ACGIH Threshold Limit Values Data</td>
<td>Time Weighted Average (TWA):</td>
<td>0.2 mg/m3</td>
</tr>
</tbody>
</table>

Respiratory protection: In well ventilated areas respiratory protection is not normally required. In confined, poorly ventilated areas the use of NIOSH approved respiratory protection may be required. Wear filter mask if dried dust is present.

Hand protection: Butyl Rubber, PVC Or Neoprene.

Eye protection: Chemical splash goggles.

Other protective equipment: Protective clothing to minimize skin contact should be worn. Chemically resistant safety shoes. Wash contaminated clothing with soap and water and dry before reuse. Safety showers and eyewash stations should be provided in all areas where this material is handled.

Advice on system design: Local ventilation recommended - mechanical ventilation may be used.

IDLH: Not Determined
Section 09 - Physical and chemical properties

Form: Liquid
Color: blue
Odor: characteristic
pH: 2 - 4
Solubility in water: miscible
Melting point: not determined
Freezing point: not determined
Boiling point: not determined

Section 10 - Stability and reactivity

Chemical stability: Stable.
Hazardous Polymerization: Will not occur.
Conditions to avoid: None known.
Strong oxidizing agents.
Avoid contact with strong bases.

Section 11 - Toxicological information

Product information:
Acute oral toxicity: LD50 (rat) not tested.
Skin irritation: Not tested
Eye irritation: Not tested

Section 12 - Ecological information

Remarks:
No data available.

Section 13 - Disposal considerations

Waste disposal information:
Small quantities may be treated in aerobic wastewater treatment systems. Larger quantities may be incinerated or landfilled after solidification in permitted systems.

RCRA hazardous waste:
Yes -- If it becomes a waste as sold.
RCRA number: D002
Section 14 - Transport information

DOT Regulation:
- Proper shipping name: Corrosive liquid, acidic, organic, n.o.s.
- Hazard class: 8
- Packing group: III
- UN/NA-number: UN 3265
- Primary hazard class: 8
- Technical Name: Methanesulfonic acid
- Glycolic Acid
- Emergency Response Guide: 153

IATA
- Proper shipping name: Corrosive liquid, acidic, organic, n.o.s.
- Class: 8
- Packing group: III
- UN/ID number: UN 3265
- Primary risk: 8
- Remarks: Shipment permitted
- Hazard inducer(s): Methanesulfonic acid
- Glycolic Acid

IMDG
- Proper shipping name: Corrosive liquid, acidic, organic, n.o.s.
- Class: 8
- Packing group: III
- UN no.: UN 3265
- Primary risk: 8
- Hazard inducer(s): Methanesulfonic acid
- Glycolic Acid
- EmS: F-A S-B

Section 15 - Regulatory information

TSCA Status:
This product is listed on the TSCA Inventory.

SARA (section 311/312):
- Reactive hazard: no
- Pressure hazard: no
- Fire hazard: no
- Immediate/acute: yes
- Delayed/chronic: yes

SARA 313 information:
This product contains the chemical or chemicals listed below which are subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 ("SARA") and the requirements of 40 CFR Part 372:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-no. (Trade secret no.)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (As An Integral Part Of The Dye or Pigment Molecule)</td>
<td>7440-50-8</td>
<td>&lt; 5 %</td>
</tr>
</tbody>
</table>
Copper Compound <= 16 %

Clean Water Act:
Contains priority pollutant copper at concentrations greater than 0.1%.

Volatile organic compounds VOC:
Remarks: Not tested

CERCLA information:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-no. (Trade secret no.)</th>
<th>Percentage</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPPER</td>
<td>7440-50-8</td>
<td>&lt; 5 %</td>
<td>5,000 LBS</td>
</tr>
<tr>
<td>COPPER COMPOUNDS</td>
<td>7440-50-8</td>
<td>&lt; 16 %</td>
<td></td>
</tr>
</tbody>
</table>

FDA:
Permitted for Use per Section: NONE

This product is not registered with the FDA.

Section 16 - Other information

Other precautions:
Keep containers tightly closed when not in use. Avoid contact with skin and eyes. Wear proper protective equipment. Wash thoroughly after handling. Keep in original containers at temperatures not exceeding 25 C.

Label information:
DANGER!
CORROSIVE TO SKIN AND EYES HARMFUL IF SWALLOWED OR INHALED

Avoid contact with eyes, skin and clothing. Wear proper protective equipment.

Skin contact: wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention. Wash contaminated clothing before reuse. Eye contact: flush with water for at least 15 minutes while holding eyelids open. Seek immediate medical attention. Inhalation: remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if respiratory irritation continues. Ingestion: seek medical attention immediately.

NFPA:
Health: 3 Flammability: 1 Reactivity: 0

This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to
be obtained from the use thereof. We assume no responsibility for damage or injury from
the use of the product described herein. Data provided here are typical and not intended
for use as product specifications. (R) and TM indicate trademarks of Clariant AG, its
business partners or suppliers.