Material Safety Data Sheet

May be used to comply with
OSHA’s Hazard Communication Standard.
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

Identity (As used on Label and List)
Immersion Gold CF Part A

Section 1

Manufacture’s Name
TRANSENE COMPANY, INC.
Address (Number, Street, City, State and ZIP Code)
DANVERS INDUSTRIAL PARK
10 ELECTRONICS AVENUE
DANVERS MA 01923

Emergency Telephone Number
CHEMTREC 1-800-424-9300 (24 hrs)

Telephone Number for Information
TEL. 978-777-7860  FAX 978-739-5640

Date Prepared
April 22, 2004
Preparer (optional)
Christopher Christuk

REV 1

Section II - Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))
OSHAPEL  ACGIH TLV  Other Limits
Recommended %

(EOPTINAL)
ETHYLENEDIAMINE CAS# 000107-15-3  10ppm  10ppm  < 5%
Potassium Fluoride CAS# 7789-23-3  Not Established  NE  < 5%

BALANCE AQUEOUS-NON HAZARDOUS

IN ADDITION, OTHER SUBSTANCES NOT HAZARDOUS PER THIS OSHA STANDARD MAY BE LISTED. WHERE PROPRIETY

INGREDIENT SHOWS, THE IDENTITY MAY BE MADE AVAILABLE AS PROVIDED IN THIS STANDARD.

Section III - Physical / Chemical Characteristics

** OF MIXTURE  * OF ETHYLENEDIAMINE

Boiling Point

**>240° *239F,115°C

Specific Gravity (H2O = 1)

**>1.0  *0.393-0.906 25/25°C

Vapor Pressure (mm Hg.)

**N/A  *10mmHg @20

Melting Point

**N/A  *N/A

Vapor Density (AIR = 1)

**N/A  *2.07

Evaporation Rate

(Butyl Acetate = 1)

**N/A  *N/A

Solubility in Water  **MIXES COMPLETELY  *MIXES COMPLETELY

Appearance and Odor

** Clear,  * COLORLESS LIQUID; AMMONIACAL ODOR

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)
**APPROX. 150°F  *NA:Non-flammable

Flammable Limits  NE  LEL  UEL

NE  14.2%@100°C

Extinguishing Media
Use media appropriate for surrounding fire

Special Fire Fighting Procedures
Wear NIOSH approved self-contained breathing apparatus

Unusual Fire and Explosion Hazards  N/A
Section V - Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>Unstable</th>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
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<table>
<thead>
<tr>
<th>Incompatibility (Materials to Avoid)</th>
<th>Strong acids.</th>
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</table>

Hazardous Decomposition or Byproducts
NITROGEN OXIDES WHEN BURNED.

<table>
<thead>
<tr>
<th>Hazardous Polymerization</th>
<th>May Occur</th>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
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<table>
<thead>
<tr>
<th>May Not Occur</th>
<th>X</th>
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</table>

Section VI - Health Hazard Data

Route(s) of Entry:
- Inhalation: YES
- Skin: YES
- Ingestion: YES

Health Hazards (Acute and Chronic)
- REPEATED EXCESSIVE EXPOSURES MAY CAUSE LIVER AND KIDNEY INJURY. DID NOT CAUSE CANCER IN LONG-TERM ANIMAL STUDIES. BIRTH DEFECTS ARE UNLIKELY. EXPOSURES HAVING NO EFFECT ON THE MOTHER SHOULD HAVE NO EFFECT ON THE FETUS. DID NOT CAUSE BIRTH DEFECTS IN ANIMALS; OTHER EFFECTS WERE SEEN IN THE FETUS ONLY AT DOSES WHICH CAUSED TOXIC EFFECTS TO THE MOTHER. IN ANIMAL STUDIES, HAS SHOWN NOT TO INTERFERE WITH REPRODUCTION. PREPONDERANCE OF NEGATIVE DATA INDICATES MINIMAL OR NO MUTAGENIC POTENTIAL.

Carcinogenicity
- NTP?: N/A
- IARC Monographs?: N/A
- OSHA Regulated?: N/A

Signs and Symptoms of Exposure
- EYE CONTACT: MAY CAUSE IRRITATION
- SKIN CONTACT & ABSORPTION: SHORT SINGLE EXPOSURE MAY CAUSE irritation.
- INGESTION: SINGLE DOSE ORAL TOXICITY IS LOW TO MODERATE. INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION OR ULCERATION. MAY CAUSE SEVERE BURNS OF MOUTH AND THROAT. THE LD50 IS 1460mg/kg FOR RATS AND 470 mg/kg FOR GUINEA PIGS.
- INHALATION: EXCESSIVE VAPOR CONCENTRATIONS ARE ATTAINABLE AND COULD BE HAZARDOUS ON SINGLE EXPOSURE. EXCESSIVE EXPOSURE MAY CAUSE SEVERE IRRITATION TO THE UPPER RESPIRATORY TRACT. MAY CAUSE RESPIRATORY SENSITIZATION IN SUSCEPTIBLE INDIVIDUALS.

Medical Conditions
- Generally Aggravated by Exposure: N/A

Emergency and First Aid Procedures
- EYES: IMMEDIATE AND CONTINUOUS IRRIGATION WITH FLOWING WATER FOR AT LEAST 15 MINUTES. PROMPT MEDICAL CONSULTATION IS ESSENTIAL.
- SKIN: IN CASES OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN IF IRRITATION PERSISTS. WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES OR OTHER ARTICLES THAT CANNOT BE DECONTAMINATED.
- INGESTION: DO NOT INDUCE VOMITING. GIVE LARGE AMOUNTS OF WATER OR MILK IF AVAILABLE AND TRANSPORT TO MEDICAL FACILITY.
- INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A PHYSICIAN.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
- LARGE SPILL- DIKE UP AND DILUTE WITH WATER. PUMP INTO APPROPRIATE CONTAINERS. SMALL SPILL- DILUTE WITH WATER AND RECOVER OR USE NON-COMBUSTIBLE ABSORBENT MATERIAL / SAND AND SHOVEL INTO SUITABLE CONTAINER.

Waste Disposal Method
- LARGE QUANTITIES COULD BE RECOVERED. OTHERWISE, INCINERATE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. DO NOT DUMP INTO SEwers, ON THE GROUND OR INTO ANY BODY OF WATER.

Precautions to be taken in handling and storing
- EXPOSURE GUIDELINES:
  - ACGIH TLV AND OSHA PEL ARE 10ppm. (ETHYLENEDIAMINE)

  - GROUND ALL TRANSFER EQUIPMENT. STORE BELOW 120F, 49C AND ABOVE 51F, 11C. HOLD BULK STORAGE UNDER NITROGEN BLANKET. COPPER AND ALLOYS OF COPPER SHOULD NOT BE USED AS THEY ARE QUICKLY CORRODED.

Other Precautions

Section VIII - Control Measures

Respiratory Protection (Specify Type)
- ATMOSPHERIC LEVELS SHOULD BE MAINTAINED BELOW THE EXPOSURE GUIDELINE.
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<thead>
<tr>
<th>Ventilation</th>
<th>Local Exhaust</th>
<th>Special</th>
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<tbody>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mechanical (General)</td>
<td>X</td>
<td>Other</td>
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<table>
<thead>
<tr>
<th>Protective Gloves</th>
<th>Eye Protection</th>
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</thead>
<tbody>
<tr>
<td>RUBBER</td>
<td>CHEMICAL GOGGLES</td>
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<thead>
<tr>
<th>Other Protective Clothing or Equipment</th>
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<tbody>
<tr>
<td>BOOTS, FULL BODY SUIT, FACE-SHEILD</td>
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<thead>
<tr>
<th>Work/Hygienic Practices</th>
<th>DOT CLASS: CHEMICALS N.O.S. NON-REGULATED</th>
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