

**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.

**U.S. Department of Labor**

Occupational Safety and Health Administration  
 (Non-Mandatory Form)  
 Form Approved  
 OMB NO. 1218-0072

**Identity** (As used on Label and List)  
 PSE - 300

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Section I**

Manufacturer's Name TRANSENE COMPANY, INC.	Emergency Telephone Number CHEMTREC 1-800-424-9300 (24 hrs)
Address (Number, Street, City, State and ZIP Code) DANVERS INDUSTRIAL PARK	Telephone Number for Information TEL 978-777-7860 FAX 978-739-5640
<b>10 ELECTRONICS AVENUE</b>	Date Prepared DEC 2, 92 REVISED NOVEMBER 5, 1997
<b>DANVERS MA 01923</b>	Preparer (optional) MARTIN HECHT

**Section II - Hazardous Ingredients / Identity Information**

Hazardous Components ( Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended % (optional)
ETHYLENEDIAMINE >60%	CAS# 000107-15-3	10ppm	10ppm
PYROCATECHOL >10%	CAS# 120-80-9	5ppm	5ppm

BALANCE AQUEOUS-NON HAZARDOUS

THIS DOCUMENT IS PREPARED PURSUANT TO THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910,1200)  
 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 <sup>O</sup> *239F,115C	Specific Gravity ( H2O = 1)	**>1.0 *0.393-0.906 25/25C
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    ** AMBER/PINK LIQUID; AMMONIACAL ODOR. * COLORLESS LIQUID; AMMONIACAL ODOR		

**Section IV - Fire and Explosion Hazard Data**

Flash Point (Method Used) **APPROX. 150 <sup>O</sup> F      *101F, 38C	Flammable Limits	LEL 2.6 % @100 <sup>O</sup> C	UEL 14.2%@100 <sup>O</sup> C
Extinguishing Media    WATER FOG, ALCOHOL FOAM, CO2, DRY CHEMICAL.	Special Fire Fighting Procedures		
Unusual Fire and Explosion Hazards    N/A			

**Section V -Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	X	AUTOIGNITION TEMPERATURE IN AIR IS APPROXIMATELY 763F, 406C.

Incompatibility (Materials to Avoid) ACID, OXIDIZING MATERIAL, HALOGENATED ORGANIC COMPOUNDS, ALDEHYDES, KECONES, AND ACRYLATES. MIXTURE WITH THESE MATERIALS WILL RESULT IN A TEMPERATURE AND/OR PRESSURE INCREASE.

Hazardous Decomposition or Byproducts  
NITROGEN OXIDES WHEN BURNED.

Hazardous Polymerization	May Occur		Conditions to Avoid
	May Not Occur	X	

**Section VI - Health Hazard Data**

Route(s) of Entry:	Inhalation ?	Skin?	Ingestion?
	YES	YES	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 NI 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?	IARC Monographs?	OSHA Regulated?
	N/A	N/A	N/A

Signs And Symptoms of Exposure  
EYE CONTACT: MAY CAUSE SEVERE IRRITATION WITH CORNEAL INJURY WHICH MAY RESULT IN PERMANENT IMPAIRMENT OF VISION, EVEN BLINDNESS. VAPORS MAY IRRITATE EYES.  
SKIN CONTACT & ABSORPTION: SHORT SINGLE EXPOSURE MAY CAUSE SEVERE BURNS. HAS CAUSED ALLERGIC SKIN REACTIONS IN HYMANS. ; A SINGLE PROLONGED EXPOSURE MAY RESULT IN THE MATERIAL BEING ABSORBED IN HARMFUL AMOUNTS. THE LD50 FOR SKIN ABSORPTION IN RABBITS IS 657 mg/kg.  
INGESTION: SINGLE DOSE ORAL TOXICITY IS LOW TO MODERATE. INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION OR ULCRATION. MAY CAUSE SEVERE BURNS OF MOUTH AND THROAT. THE LD50 IS 1460mg/kg FOR RATS AND 470 mg/kg FOR GUINEA PIGS.  
INHILATION: 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 30 MINUTES IS IMPERATIVE. 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.  
INHILATION: 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 SEWRS, ON THE GROUND OR INTO ANY BODY OF WATER. THE DOW CHEMICAL COMPANY MAY BE CONTRACTED FOR ADVICE.

Precautions to be taken in handling and storing EXPOSURE GUIDELINES:  
ACGIH TLV AND OSHA PEL ARE 5ppm.(PYROCATECHOL) - 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.  
WHEN RESPIRATORY PROTECTION IS NEEDED USE AN APPROVED AIR-PURIFYING RESPIRATOR.

Ventilation	Local Exhaust	Special
	Mechanical (General)	Other
	X	
	X	

Protective Gloves RUBBER	Eye Protection CHEMICAL GOGGLES
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Other Protective Clothing or Equipment  
BOOTS, FULL BODY SUIT, FACE-SHEILD

Work/Hygienic Practices DOT CLASS: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.  
(ETHYLENEDIAMINE & PYROCATECHOL)  
UN3266