BASF Corporation

Material Safety Data Sheet

Original Date: 11/16/1993
Revision Date: 02/03/2003

BASF CORPORATION
1609 BIDDLE AVENUE

WYANDOTTE, MI 48192
(734) 324-5244

EMERGENCY TELEPHONE: (800) 424-9300 CHEMTREC
(800) 832-HELP (BASF Hotline)
BOTH NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, & HOLIDAYS.

SECTION 1 - PRODUCT INFORMATION

TOLUENE DIAMINE TDA

Product ID: NPU 508700
Common Chemical Name:
Mixed Isomers of Toluenediamine
Synonyms:
TDA
Molecular Formula:
C7 H10 N2
Chemical Family: Aromatic Amine
Molecular Wt.: NOT ESTABLISHED

SECTION 2 - INGREDIENTS

Chemical Name:	CAS	Amount
Toluenediamine	25376-45-8	100.0 %

PEL/TLV NOT ESTABLISHED

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview
Color: Light Yellow
Form/Appearance: Solid
Odor: Ammonia
WARNING STATEMENT:
CAUTION:
SOLID TOLUENEDIAMINE MAY CAUSE TRANSIENT MECHANICAL IRRITATION OF THE EYES AND SKIN. MOLTEN MATERIAL CAUSES THERMAL BURNS. ACUTE OVER-EXPOSURE TO TOLUENEDIAMINE MAY RESULT IN JAUNDICE, ABNORMAL LIVER FUNCTION, KIDNEY INJURY AND ANEMIA. 2,4-TOLUENEDIAMINE CAUSED LIVER CANCER IN MALE AND FEMALE RATS, MAMMARY TUMORS IN FEMALE RATS AND LYMPHOMAS AND LIVER TUMORS IN FEMALE MICE.
Potential Health Effects
Primary Routes of Exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

SECTION 3 - HAZARDS IDENTIFICATION (cont)

Acute Overexposure Effects:

Contact with solid toluenediamine may cause transient mechanical irritation of the eyes and skin. Contact with molten material causes thermal burns.

2,4-Toluenediamine and its isomers are considered to be highly toxic by ingestion. Acute overexposure to toluenediamine may result in jaundice and abnormal liver function caused by liver injury. Kidney injury may also result from overexposure. This material has been reported to cause methemoglobinemia, a condition in which the blood is unable to carry oxygen, in rabbits and rodents. Methemoglobinemia may result in cyanosis, blue-colored skin, unconsciousness and death. Toluenediamine is skin absorbed.

Chronic Overexposure Effects:

Chronic overexposure to toluenediamine may cause liver and kidney injury. In a National Toxicology Program (NTP) study, 2,4-toluenediamine caused liver cancer in male and female rats, mammary tumors in female rats and lymphomas and liver tumors in female mice.

2,4-Toluenediamine has been classified in Group 2B by IARC (chemicals which are possibly carcinogenic to humans) and is included in the NTP Annual Report on Carcinogens. 2,5-Toluenediamine has been included in Group 3 by IARC (agents which cannot be classified).

First Aid Procedures - Aggravated Medical Conditions:

Individuals with preexisiting diseases of the liver or kidneys may have increased susceptibility to excessive exposures.

SECTION 4 - FIRST AID MEASURES

First Aid Procedures - Skin:

Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. Get immediate medical attention.

First Aid Procedures - Eyes:

Immediately rinse eyes with running water for 15 minutes. Get immediate medical attention.

First Aid Procedures - Ingestion:

If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

First Aid Procedures - Inhalation:

Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

First Aid Procedures - Notes to Physicians:

None known.

First Aid Procedures - Aggravated Medical Conditions:

Individuals with preexisiting diseases of the liver or kidneys may have increased susceptibility to excessive exposures.

First Aid Procedures - Special Precautions:

None

SECTION 5 - FIRE FIGHTING MEASURES

	Typical	Low/High	Deg.	Method
Flash Point:	~ 284		F	NONE SPECIFIED

SECTION 5 - FIRE FIGHTING MEASURES (cont)

	Typical	Low/High	Deg.	Method
Autoignition:	~ 842		F	NONE SPECIFIED

Extinguishing Media:

Use water, dry extinguishing media, carbon dioxide (CO2) or foam.

Fire Fighting Procedures:

Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

Unusual Hazards:

There are no known unusual fire or explosion hazards.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General:

Spills should be contained and placed in suitable containers for disposal in a RCRA-licensed facility. This material is RCRA-hazardous due to its properties.

SECTION 7 - STORAGE AND HANDLING

General:

Nitrogen pad for storage.

Other Storage and Handling Data:

No other specific storage requirements.

SECTION 8 - PERSONAL PROTECTION

Clothing:

Gloves, coveralls, apron, boots as necessary to prevent skin contact.

Eyes:

Chemical Goggles

Respiration:

If dusts are generated, wear a NIOSH/MSHA approved dust repirator as necessary. If vapors are generated, use an approved organic vapor respirator.

Ventilation:

Use local exhaust to control dusts.

Explosion Proofing:

None required.

Other Personal Protection Data:

Eyewash fountains and safety showers must be easily accessible. Avoid all contact. Shower after handling.

SECTION 9 - PHYSICAL PROPERTIES

Color:	Light Yellow					
Form/Appearance:	Solid					
Odor:	Ammonia					
Odor Intensity:	Slight					
	Typical	Low/High	U.O.M.			
Specific Gravity:	1.04			@	105	DEG C
Bulk Density:	8.68		LB/GAL			
pH:	NOT AVAILABLE					

SECTION 9 - PHYSICAL PROPERTIES (cont)

	Typical	Low/High	Deg.	@	Pressure
Boiling Pt:	541		F	1	ATMOSPHERES
Freezing Pt:	< 210		F	1	ATMOSPHERES
Decomp. Tmp:	NOT AVAILABLE				

Solubility in Water Description: Soluble

pH: Basic Product is Shipped as a Liquid

Vapor Pressure: 0.00034 mmHg @ 100 deg F (37.8 C)

Vapor Pressure: 1 mmHg @ 223 deg F (106.5 C)

Shipping Temperature 250 deg F (121 C)

Melting Point: 210.2 deg F (99 C)

SECTION 10 - STABILITY AND REACTIVITY

Stability Data:

Stable.

Incompatability:

Oxidizers

Conditions/Hazards to Avoid:

None known.

Hazardous Decomposition/Polymerization:

Hazardous Decomposition Products: CO, COx, NO, NOx and HCN.

Corrosive Properties:

Not Corrosive.

Oxidizer Properties:

Not an oxidizer

Other Reactivity Data:

None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicology Test Data:

Rat, Oral LD50 - 270 MG/KG

Very Toxic

Rat, Dermal LD50 - 1200 MG/KG

Moderately Toxic

Mouse, Oral LD50 - 350 MG/KG

Very Toxic

Rat, Acute Intraperitoneal LD50 - 230 MG/KG

Very Toxic

Mouse, Acute Intraperitoneal LD50 - 240 MG/KG

Very Toxic

Rat, Acute Intravenous LD50 - 350 MG/KG

Very Toxic

Mouse, Acute Intravenous LD50 - 90 MG/KG

Very Toxic

SECTION 12 - ECOLOGICAL INFORMATION

No applicable data for this section.

SECTION 13 - DISPOSAL CONSIDERATION

Waste Disposal:
Incinerate in a licensed facility. Do not discharge into waterways or sewer systems.

Container Disposal:
Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing or other means to prevent unauthorized reuse. Other containers must be disposed of in a RCRA licensed facility.

SECTION 14 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name:
SEE BELOW
DOT Technical Name:
SEE BELOW
DOT Primary Hazard Class:
SEE BELOW
DOT Secondary Hazard Class:
SEE BELOW
DOT Label Required:
SEE BELOW
DOT Placard Required:
SEE BELOW
DOT Poison Constituent:
SEE BELOW
BASF Commodity Codes: UN/NA Code: 1709 E/R Guide: 151
Bill of Lading Description:
RQ, HOT, 2,4 TOLUENEDIAMINE, 6.1, UN 1709, PG III

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory Status
Listed on Inventory: YES
SARA - 313 Listed Chemicals:
CAS: 25376-45-8 AMOUNT: 100.0 %
NAME: Toluenediamine

RCRA Haz. Waste No .: U221
CERCLA: YES Reportable Qty.: (If YES)
XXXXXXX XXXXXXXXXXXXXX 10 LB

SECTION 16 - OTHER INFORMATION

Hazard Ratings:
BASF currently uses the National Paint & Coating Association (NPCA) rating system. The use of an asterisk (*) in the HMIS rating indicates the potential for chronic health effects.

	Health:	Fire:	Reactivity:	Special:
HMIS	4	1	0	NA

This product is hazardous or contains components which are hazardous according to the OSHA Hazard Communication Standard.

SECTION 16 - OTHER INFORMATION (cont)

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END OF DATA SHEET