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MATERIAL SAFETY DATA SHEET

TMB (3'3'5'5'- TETRAMETHYLBENZIDINE)
(TMBM and TMBE)
Catalog Number OORA01684

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SECTION 1:----- CHEMICAL IDENTIFICATION-----

NAME: 3'3'5'5'- TETRAMETHYLBENZIDINE

SECTION 2:----- COMPOSITION/INFORMATION ON INGREDIENTS-----

SUBSTANCE NAME	CAS #
3'3'5'5'- TETRAMETHYLBENZIDINE	54827-17-7

SECTION 3:----- HAZARDS IDENTIFICATION-----

EMERGENCY OVERVIEW

IRRITANT.

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

HMIS RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 1

FOR ADDITIONAL INFORMATION ON TOXICITY, PLEASE REFER TO SECTION 11.

SECTION 4:-----FIRST-AID MEASURES-----

ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN. INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT, CALL A PHYSICIAN. DERMAL EXPOSURE

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER. EYE EXPOSURE

IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

SECTION 5:-----FIRE FIGHTING MEASURES-----

AUTOIGNITION

TEMP N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

SUITABLE: WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER, OR APPROPRIATE FOAM. FIREFIGHTING

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6:-----ACCIDENTAL RELEASE MEASURES-----

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

METHODS FOR CLEANING UP

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL

PICKUP IS COMPLETE.

SECTION 7:-----HANDLING AND STORAGE-----

HANDLING

USER EXPOSURE: AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

STORAGE

SUITABLE: KEEP TIGHTLY CLOSED.

SECTION 8:-----EXPOSURE CONTROLS/PERSONAL PROTECTION-----

ENGINEERING

CONTROLS

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED

UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). WHERE RISK

ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE

APPROPRIATE USE A DUST MASK TYPE N95 (US) OR TYPE P1 (EN 143) RESPIRATOR.

HAND: COMPATIBLE CHEMICAL-RESISTANT GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

SECTION 9:-----PHYSICAL AND CHEMICAL PROPERTIES-----

APPEARANCE PHYSICAL STATE: LIQUID

SECTION 10:-----STABILITY AND REACTIVITY -----

STABILITY

STABLE

CONDITIONS TO AVOID: MOISTURE. LIGHT.

MATERIALS TO AVOID: AVOID CONTACT WITH METALS., STRONG ACIDS, STRONG OXIDIZING

AGENTS HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE,

NITROGEN OXIDES. HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION 11:-----TOXICOLOGICAL INFORMATION-----

ROUTE OF EXPOSURE

SKIN CONTACT: CAUSES SKIN IRRITATION.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE

SKIN. EYE CONTACT: CAUSES EYE IRRITATION.

INHALATION: MAY BE HARMFUL IF INHALED. MATERIAL IS IRRITATING TO

MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES

HAVE NOT BEEN THOROUGHLY INVESTIGATED.

TOXICITY DATA

INTRAPERITONEAL

MOUSE

135 MG/KG

LD50

ORAL

QUAIL

> 316 MG/KG

LD50

CHRONIC EXPOSURE - MUTAGEN

SPECIES: MOUSE

ROUTE: INTRAPERITONEAL

DOSE: 112500 UG/KG

MUTATION TEST: MICRONUCLEUS

TEST SPECIES: MOUSE

DOSE: 30700 UG/L

CELL TYPE: LYMPHOCYTE

MUTATION TEST: MUTATION IN MAMMALIAN SOMATIC CELLS.

MUTATION TEST: HISTIDINE REVERSION (AMES)

SECTION 12:-----ECOLOGICAL INFORMATION-----

DATA NOT YET AVAILABLE

SECTION 13:-----DISPOSAL CONSIDERATIONS-----

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL

INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE,

AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14:-----TRANSPORT INFORMATION-----

DOT

PROPER SHIPPING NAME: NONE

NON-HAZARDOUS FOR TRANSPORT: THIS SUBSTANCE IS CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT.

IATA

NON-HAZARDOUS FOR AIR TRANSPORT: NON-HAZARDOUS FOR AIR TRANSPORT.

SECTION 15:-----REGULATORY INFORMATION-----

EU ADDITIONAL CLASSIFICATION

SYMBOL OF DANGER: XI

INDICATION OF DANGER:

IRRITANT. R: 36/37/38

RISK STATEMENTS: IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. S: 26-36

SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE

IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR SUITABLE PROTECTIVE CLOTHING.

US CLASSIFICATION AND LABEL TEXT

INDICATION OF DANGER: IRRITANT.

RISK STATEMENTS: IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE

IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR SUITABLE PROTECTIVE CLOTHING.

UNITED STATES REGULATORY

INFORMATION SARA LISTED: NO

TSCA INVENTORY ITEM: YES

CANADA REGULATORY INFORMATION

WHMIS CLASSIFICATION: THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR, AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

DSL: YES

NDSL: NO

SECTION 16:-----OTHER INFORMATION-----

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. MANUFACTURER SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING FROM CONTACT WITH THE ABOVE PRODUCT.