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Wood Dale, IL 60191 USA

SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 30428

NAME: TETRAMETHYLAMMONIUM BROMIDE

24 HOUR EMERGENCY

TELEPHONE:

(800) 535-5053(USA)

352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE:

(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) ACUTE TOXICITY, ORAL (CATEGORY 2), H300

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H300 FATAL IF SWALLOWED.

PRECAUTIONARY STATEMENT(S)

P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS

PRODUCT.

P301 + P310 + P330 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER/

DOCTOR. RINSE MOUTH.

P405 STORE LOCKED UP.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED

WASTE DISPOSAL PLANT.

HAZARDS NOT

OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS NONE

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_4H_{12}BrN$

MW: 154.05

CAS-NO. 64-20-0

PURITY: \geq 99% (ASSAY BY TITRATION)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
TETRAMETHYLAMMONIUM BROMIDE		
	ACUTE TOX. 2; H300	<= 100 %

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE SHOW THIS MATERIAL SAFETY DATA SHEET TO THE

DOCTOR IN ATTENDANCE.

IF INHALED AFTER INHALATION: FRESH AIR

IN CASE OF SKIN CONTACT IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH

WATER/ SHOWER.

IN CASE OF EYE CONTACT

AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF

WATER. REMOVE CONTACT LENSES.

IF SWALLOWED: GIVE WATER TO DRINK (TWO GLASSES

AT MOST). SEEK MEDICAL ADVICE IMMEDIATELY. IN EXCEPTIONAL CASES ONLY, IF MEDICAL CARE IS NOT AVAILABLE WITHIN ONE HOUR, INDUCE VOMITING (ONLY IN PERSONS WHO ARE WIDE AWAKE AND FULLY CONSCIOUS), ADMINISTER ACTIVATED CHARCOAL (20 - 40 G IN A 10% SLURRY) AND CONSULT A DOCTOR AS

QUICKLY AS POSSIBLE.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

SECTION 2.2) AND/OR IN SECTION 11

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA SUITABLE EXTINGUISHING MEDIA

WATER FOAM CARBON DIOXIDE (CO2) DRY POWDER

UNSUITABLE EXTINGUISHING MEDIA

FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF

EXTINGUISHING AGENTS ARE GIVEN.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR CARBON OXIDES

NITROGEN OXIDES (NOX) HYDROGEN BROMIDE GAS

MIXTURE

COMBUSTIBLE. DEVELOPMENT OF HAZARDOUS

COMBUSTION

GASES OR VAPOURS POSSIBLE IN THE EVENT OF FIRE.

ADVICE FOR FIREFIGHTERS

STAY IN DANGER AREA ONLY WITH SELF-CONTAINED BREATHING APPARATUS. PREVENT SKIN CONTACT BY KEEPING A SAFE DISTANCE OR BY WEARING SUITABLE

PROTECTIVE CLOTHING.

FURTHER INFORMATION

SUPPRESS (KNOCK DOWN) GASES/VAPORS/MISTS WITH A WATER SPRAY JET. PREVENT FIRE EXTINGUISHING WATER FROM CONTAMINATING SURFACE WATER OR

THE GROUND WATER SYSTEM.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL
PRECAUTIONS,
PROTECTIVE
EQUIPMENT AND
EMERGENCY
PROCEDURES

ADVICE FOR NON-EMERGENCY PERSONNEL: AVOID INHALATION OF DUSTS. AVOID SUBSTANCE CONTACT. ENSURE ADEQUATE VENTILATION. EVACUATE THE DANGER AREA, OBSERVE EMERGENCY PROCEDURES,

CONSULT AN EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PRECAUTIONS

DO NOT LET PRODUCT ENTER DRAINS.

METHODS AND
MATERIALS FOR
CONTAINMENT AND
CLEANING UP

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS. OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE SECTIONS 7 AND 10). TAKE UP CAREFULLY. DISPOSE OF

PROPERLY. CLEAN UP AFFECTED AREA. AVOID

GENERATION OF DUSTS.

REFERENCE TO OTHER SECTIONS

REFERENCE TO OTHER FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY

TIGHTLY CLOSED. DRY. KEEP IN A WELL-VENTILATED PLACE. KEEP LOCKED UP OR IN AN AREA ACCESSIBLE ONLY TO QUALIFIED OR AUTHORIZED PERSONS.

INCOMPATIBILITIES

HYGROSCOPIC!

STORAGE CLASS (TRGS 510): 6.1A: COMBUSTIBLE, ACUTE TOXIC CAT. 1 AND 2 / VERY TOXIC HAZARDOUS

MATERIALS

Store at RT

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2 NO

OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

INGREDIENTS WITH WORKPLACE CONTROL PARAMETERS

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

EXPOSURE CONTROLS

APPROPRIATE CHANGE CONTAMINATED CLOTHING. PREVENTIVE SKIN PROTECTION RECOMMENDED. WASH HANDS AFTER

CONTROLS WORKING WITH SUBSTANCE.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT

STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). SAFETY

GLASSES

SKIN PROTECTION HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED

PRIOR TO USE. USE PROPER GLOVE REMOVAL
TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER
SURFACE) TO AVOID SKIN CONTACT WITH THIS

PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY

HANDS.

FULL CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: DERMATRIL® (KCL 740, SIZE M)

SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: DERMATRIL® (KCL 740, SIZE M)

TEST METHOD: EN374 IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE EC APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER

FAMILIAR WITH THE SPECIFIC SITUATION OF

ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY

SPECIFIC USE SCENARIO.

BODY PROTECTION PROTECTIVE CLOTHING

RESPIRATORY PROTECTION

RECOMMENDED FILTER TYPE: FILTER TYPE P3
THE ENTREPENEUR HAS TO ENSURE THAT
MAINTENANCE, CLEANING AND TESTING OF

RESPIRATORY PROTECTIVE DEVICES ARE CARRIED OUT ACCORDING TO THE INSTRUCTIONS OF THE PRODUCER.

THESE MEASURES HAVE TO BE PROPERLY

DOCUMENTED.

REQUIRED WHEN DUSTS ARE GENERATED.

OUR RECOMMENDATIONS ON FILTERING RESPIRATORY

PROTECTION ARE BASED ON THE FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND OTHER

ACCOMPANYING STANDARDS RELATING TO THE USED

RESPIRATORY PROTECTION SYSTEM.

CONTROL OF ENVIRONMENTAL EXPOSURE DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE WHITE CRYSTALLINE
ODOUR NO DATA AVAILABLE
ODOUR THRESHOLD NO DATA AVAILABLE
PH NO DATA AVAILABLE
MELTING NO DATA AVAILABLE

POINT/FREEZING POINT

INITIAL BOILING POINT NO DATA AVAILABLE

AND BOILING RANGE

FLASH POINT NO DATA AVAILABLE EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR

EXPLOSIVE LIMITS

VAPOUR PRESSURE
VAPOUR DENSITY
RELATIVE DENSITY
WATER SOLUBILITY
PARTITION
NO DATA AVAILABLE

COEFFICIENT: N-OCTANOL/WATER

AUTO-IGNITION NO DATA AVAILABLE

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

VISCOSITY NO DATA AVAILABLE EXPLOSIVE NO DATA AVAILABLE

PROPERTIES

OXIDIZING PROPERTIES NO DATA AVAILABLE

OTHER SAFETY INFORMATION

NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY THE FOLLOWING APPLIES IN GENERAL TO FLAMMABLE

> ORGANIC SUBSTANCES AND MIXTURES: IN CORRESPONDINGLY FINE DISTRIBUTION, WHEN WHIRLED UP A DUST EXPLOSION POTENTIAL MAY

GENERALLY BE ASSUMED.

THE PRODUCT IS CHEMICALLY STABLE UNDER **CHEMICAL STABILITY**

STANDARD AMBIENT CONDITIONS (ROOM

TEMPERATURE).

POSSIBILITY OF **HAZARDOUS** REACTIONS

VIOLENT REACTIONS POSSIBLE WITH:

STRONG OXIDIZING AGENTS

CONDITIONS TO

AVOID

AVOID MOISTURE.

INCOMPATIBLE MATERIALS

NO DATA AVAILABLE

HAZARDOUS DECOMPOSITION

PRODUCTS

IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY LD50 ORAL - RAT - 50 MG/KG

REMARKS:

BEHAVIORAL: ALTERED SLEEP TIME (INCLUDING

CHANGE IN RIGHTING REFLEX).

BEHAVIORAL: SOMNOLENCE (GENERAL DEPRESSED

ACTIVITY).

BEHAVIORAL: TREMOR.

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

SKIN NO DATA AVAILABLE

CORROSION/IRRITATION

SERIOUS EYE NO DATA AVAILABLE DAMAGE/EYE IRRITATION

RESPIRATORY OR SKIN

SENSITISATION

NO DATA AVAILABLE

GERM CELL MUTAGENICITY NO DATA AVAILABLE

CARCINOGENICITY

IARC: NO INGREDIENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS

IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED

HUMAN CARCINOGEN BY IARC.

NTP: NO INGREDIENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED

CARCINOGEN BY NTP.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT

LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA'S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE NO DATA AVAILABLE

TOXICITY

SPECIFIC TARGET ORGAN TOXICITY -SINGLE EXPOSURE INHALATION - MAY CAUSE RESPIRATORY IRRITATION.

SPECIFIC TARGET ORGAN TOXICITY -REPEATED EXPOSURE NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL INFORMATION

RTECS: BS7600000

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

NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY NO DATA AVAILABLE

PERSISTENCE AND DEGRADABILITY

NO DATA AVAILABLE

BIOACCUMULATIVE

POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL NO DATA AVAILABLE

RESULTS OF PBT AND VPVB ASSESSMENT

PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT

CONDUCTED

OTHER ADVERSE

EFFECTS

NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT WASTE MATERIAL MUST BE DISPOSED OF IN

ACCORDANCE WITH THE NATIONAL AND LOCAL REGULATIONS. LEAVE CHEMICALS IN ORIGINAL

CONTAINERS. NO MIXING WITH OTHER WASTE. HANDLE UNCLEANED CONTAINERS LIKE THE PRODUCT ITSELF.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: TOXIC SOLIDS, ORGANIC, N.O.S.

(TETRAMETHYLAMMONIUM BROMIDE)

UN NUMBER: 2811
CLASS: 6.1
PACKING GROUP: II
REPORTABLE QUANTITY

(RO):

POISON INHALATION

HAZARD:

NO

IMDG

PROPER SHIPPING NAME: TOXIC SOLIDS, ORGANIC, N.O.S.

(TETRAMETHYLAMMONIUM BROMIDE)

UN NUMBER: 2811
CLASS: 6.1
PACKING GROUP: II
EMS-NO: F-A, S-A

MARINE POLLUTANT: NO

IATA

PROPER SHIPPING NAME: TOXIC SOLIDS, ORGANIC, N.O.S.

(TETRAMETHYLAMMONIUM BROMIDE)

UN NUMBER: 2811 CLASS: 6.1 PACKING GROUP: II

SECTION 15. REGULATORY INFORMATION

CERCLA REPORTABLE OUANTITY

THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A CERCLA RQ.

SARA 304 EXTREMELY HAZARDOUS SUBSTANCES REPORTABLE QUANTITY THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 304 EHS RO.

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES THRESHOLD PLANNING OUANTITY

THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPO.

SARA 311/312 HAZARDS SARA 311/312 HAZARDS

SARA 313 THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL

COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

CLEAN AIR ACT

THIS PRODUCT NEITHER CONTAINS, NOR WAS MANUFACTURED WITH A CLASS I OR CLASS II ODS AS DEFINED BY THE U.S. CLEAN AIR ACT SECTION 602 (40 CFR 82, SUBPT. A, APP.A + B).

THIS PRODUCT DOES NOT CONTAIN ANY HAZARDOUS AIR POLLUTANTS (HAP), AS DEFINED BY THE U.S. CLEAN AIR ACT SECTION 112 (40 CFR 61).

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS LISTED UNDER THE U.S. CLEAN AIR ACT SECTION 112(R) FOR ACCIDENTAL RELEASE PREVENTION (40 CFR 68.130, SUBPART F).

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS LISTED UNDER THE U.S. CLEAN AIR ACT SECTION 111 SOCMI INTERMEDIATE OR FINAL VOC'S (40 CFR 60.489).

CLEAN WATER ACT

THIS PRODUCT DOES NOT CONTAIN ANY HAZARDOUS SUBSTANCES LISTED UNDER THE U.S. CLEANWATER ACT, SECTION 311, and TABLE 116.4A.

THIS PRODUCT DOES NOT CONTAIN ANY HAZARDOUS CHEMICALS LISTED UNDER THE U.S. CLEANWATER ACT, SECTION 311, and TABLE 117.3.

THIS PRODUCT DOES NOT CONTAIN ANY TOXIC POLLUTANTS LISTED UNDER THE U.S. CLEAN WATER ACT SECTION 307

THIS PRODUCT DOES NOT CONTAIN ANY PRIORITY POLLUTANTS RELATED TO THE U.S. CLEAN WATER ACT

US STATE REGULATIONS

MASSACHUSETTS RIGHT TO KNOW

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

MAINE CHEMICALS OF HIGH CONCERN

PRODUCT DOES NOT CONTAIN ANY LISTED CHEMICALS

VERMONT CHEMICALS OF HIGH CONCERN

PRODUCT DOES NOT CONTAIN ANY LISTED CHEMICALS

WASHINGTON CHEMICALS OF HIGH CONCERN

PRODUCT DOES NOT CONTAIN ANY LISTED CHEMICALS

THE INGREDIENTS OF THIS PRODUCT ARE REPORTED IN THE FOLLOWING INVENTORIES:

TSCA ALL SUBSTANCES LISTED AS ACTIVE ON THE TSCA

INVENTORY

TSCA LIST

NO SUBSTANCES ARE SUBJECT TO A SIGNIFICANT NEW USE RULE. NO SUBSTANCES ARE SUBJECT TO TSCA 12(B) EXPORT NOTIFICATION REQUIREMENTS.

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H300 FATAL IF SWALLOWED.

MSDS LEGEND

MW: MOLECULAR WEIGHT MF: MOLECULAR FORMULA

VOC: VOLATILE ORGANIC COMPOUNDS

ACGIH: AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL

HYGINISTS

CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV: THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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