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# SAFETY DATA SHEET

# SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 45893

NAME: Pentadecafluorotriethylamine

SYNONYMS: Perfluorotriethylamine

Tris(pentafluoroethyl)amine

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) SKIN CORROSION/IRRITATION (CATEGORY 2), H315 EYE DAMAGE/IRRITATION (CATEGORY 2A), H319 FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

# GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

**PICTOGRAM** 

SIGNAL WORD WARNING

**HAZARD STATEMENT(S)** 

H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION.

PRECAUTIONARY STATEMENT(S)

P264 WASH SKIN THOROUGHLY AFTER HANDLING. P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/

FACE PROTECTION.

P302 + P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND

WATER.

P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR

SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.

P332 + P313 IF SKIN IRRITATION OCCURS: GET MEDICAL

ADVICE/ ATTENTION.

P337 + P313 IF EYE IRRITATION PERSISTS: GET MEDICAL

ADVICE/ ATTENTION.

P362 TAKE OFF CONTAMINATED CLOTHING AND WASH

BEFORE REUSE.

HAZARDS NOT OTHERWISE NONE

CLASSIFIED (HNOC) OR NOT COVERED BY GHS

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:  $C_6F_{15}N$ 

MW: 371.05

CAS-NO. 359-70-6

PURITY:  $\geq 95\%$  (GC)

# **HAZARDOUS COMPONENTS**

COMPONENT	CLASSIFICATION	CONCENTRATION
Pentadecafluorotriethylamine		
	-	-

# SECTION 4. FIRST-AID MEASURES

#### **DESCRIPTION OF FIRST AID MEASURES**

**GENERAL ADVICE** CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA

SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT

OF DANGEROUS AREA.

IF INHALED REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A

> POSITION COMFORTABLE FOR BREATHING. GET MEDICAL ADVICE/ATTENTION IF YOU FEEL UNWELL.

IN CASE OF SKIN REMOVE/TAKE OFF IMMEDIATELY ALL

CONTACT CONTAMINATED CLOTHING. GENTLY WASH WITH

PLENTY OF SOAP AND WATER. IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION.

IN CASE OF EYE RINSE CAUTIOUSLY WITH WATER FOR SEVERAL **CONTACT** 

MINUTES. REMOVE CONTACT LENSES, IF PRESENT

AND EASY TO DO. CONTINUE RINSING. IF EYE IRRITATION PERSISTS: GET MEDICAL

ADVICE/ATTENTION.

GET MEDICAL ADVICE/ATTENTION IF YOU FEEL IF SWALLOWED

UNWELL. RINSE MOUTH.

MOST IMPORTANT ACUTE: REDNESS.

SYMPTOMS AND THE MOST IMPORTANT KNOWN SYMPTOMS AND

**EFFECTS, BOTH ACUTE** EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

AND DELAYED SECTION 2.2) AND/OR IN SECTION 11

INDICATION OF ANY NO DATA AVAILABLE

IMMEDIATE MEDICAL ATTENTION AND

SPECIAL TREATMENT

**NEEDED** 

# SECTION 5. FIRE AND EXPLOSION DATA

# **EXTINGUISHING MEDIA**

SUITABLE DRY CHEMICAL, FOAM, WATER SPRAY, CARBON

**EXTINGUISHING MEDIA** DIOXIDE. **SPECIAL HAZARDS** ARISING FROM THE SUBSTANCE OR MIXTURE CARBON OXIDES NITROGEN OXIDES HALOGENATED

**COMPOUNDS** 

ADVICE FOR **FIREFIGHTERS**  WEAR SELF-CONTAINED BREATHING APPARATUS IF

POSSIBLE.

**FURTHER INFORMATION** 

WARNING: HIGHLY TOXIC HF GAS IS PRODUCED

DURING COMBUSTION.

TAKE CARE AS IT MAY DECOMPOSE UPON COMBUSTION OR IN HIGH TEMPERATURES TO

GENERATE POISONOUS FUME.

# SECTION 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL** PRECAUTIONS, **PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES** 

USE PERSONAL PROTECTIVE EQUIPMENT. KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK. ENSURE ADEQUATE VENTILATION. ENTRY TO NON-INVOLVED PERSONNEL SHOULD BE CONTROLLED AROUND THE LEAKAGE AREA BY ROPING OFF, ETC.

**ENVIRONMENTAL PRECAUTIONS** 

PREVENT PRODUCT FROM ENTERING DRAINS.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP** 

ABSORB SPILLED MATERIAL IN A SUITABLE ABSORBENT (E.G. RAG, DRY SAND, EARTH, SAW-DUST). IN CASE OF LARGE AMOUNT OF SPILLAGE, CONTAIN A SPILL BY BUNDING. ADHERED OR COLLECTED MATERIAL SHOULD BE PROMPTLY DISPOSED OF, IN ACCORDANCE WITH APPROPRIATE

LAWS AND REGULATIONS.

REFERENCE TO OTHER **SECTIONS** 

FOR DISPOSAL SEE SECTION 13.

#### SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

HANDLING IS PERFORMED IN A WELL VENTILATED PLACE. WEAR SUITABLE PROTECTIVE EQUIPMENT. PREVENT GENERATION OF VAPOUR OR MIST. WASH HANDS AND FACE THOROUGHLY AFTER HANDLING. USE A VENTILATION, LOCAL EXHAUST IF VAPOUR OR

AEROSOL WILL BE GENERATED.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

**CONDITIONS FOR SAFE** KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL

**STORAGE, INCLUDING** AND DARK PLACE.

**ANY INCOMPATIBILITIES** STORE UNDER INERT GAS.

STORE AWAY FROM INCOMPATIBLE MATERIALS SUCH

AS OXIDIZING AGENTS.

**AIR-SENSITIVE** 

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**

#### COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

# **EXPOSURE CONTROLS**

**APPROPRIATE** FOLLOW SAFE INDUSTRIAL

ENGINEERING ENGINEERING/LABORATORY PRACTICES WHEN CONTROLS HANDLING ANY CHEMICAL. INSTALL A CLOSED

SYSTEM OR LOCAL EXHAUST. ALSO INSTALL SAFETY

SHOWER AND EYE BATH.

# PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT

FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS

NIOSH (US) OR EN 166(EU).

**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.

**BODY PROTECTION** COMPLETE SUIT PROTECTING AGAINST CHEMICALS,

FLAME RETARDANT PROTECTIVE CLOTHING, AND THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC

WORKPLACE.

**RESPIRATORY** VAPOR RESPIRATOR. FOLLOW LOCAL AND NATIONAL

**PROTECTION** REGULATIONS.

CONTROL OF ENVIRONMENTAL EXPOSURE DO NOT LET PRODUCT ENTER DRAINS.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

# INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Colorless to light yellow clear liquid

ODOUR NO DATA AVAILABLE
ODOUR THRESHOLD NO DATA AVAILABLE
PH NO DATA AVAILABLE

MELTING

POINT/FREEZING POINT

BOILING POINT 72 °C

FLASH POINT

EVAPOURATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY 1.76

WATER SOLUBILITY NO DATA AVAILABLE PARTITION COEFFICIENT: NO DATA AVAILABLE

N- OCTANOL/WATER

AUTO-IGNITION NO DATA AVAILABLE

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

TEMPERATURE

VISCOSITY

EXPLOSIVE PROPERTIES

OXIDIZING PROPERTIES

NO DATA AVAILABLE

NO DATA AVAILABLE

NO DATA AVAILABLE

# OTHER SAFETY INFORMATION

NO DATA AVAILABLE

# SECTION 10. STABILITY AND REACTIVITY

**REACTIVITY** NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE

CONDITIONS.

POSSIBILITY OF HAZARDOUS REACTIONS NO SPECIAL REACTIVITY HAS BEEN REPORTED.

CONDITIONS TO AVOID NO

NO DATA AVAILABLE

INCOMPATIBLE MATERIALS **OXIDIZING AGENTS** 

HAZARDOUS DECOMPOSITION PRODUCTS CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN

OXIDES (NOX), HYDROGEN FLUORIDE

#### SECTION 11. TOXICOLOGICAL INFORMATION

#### INFORMATION ON TOXICOLOGICAL EFFECTS

**ACUTE TOXICITY** IHL-MUS LC50:1340 G/M3

IHL-RAT LC50:1420 G/M3

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** NO DATA AVAILABLE **SENSITISATION** 

GERM CELL NO DATA AVAILABLE

CARCINOGENICITY

MUTAGENICITY

IARC: NO COMPONENT 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 COMPONENT OF THIS PRODUCT PRESENT AT

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

CARCINOGEN BY NTP.

NO COMPONENT OF THIS PRODUCT PRESENT AT OSHA:

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

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

**TOXICITY - SINGLE** 

**EXPOSURE** 

NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN** 

TOXICITY - REPEATED

**EXPOSURE** 

NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL **INFORMATION**  RTECS: KH2155170

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

NO DATA AVAILABLE

OTHER ADVERSE EFFECTS NO DATA AVAILABLE

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

WASTE TREATMENT METHODS

PRODUCT OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS

TO A LICENSED DISPOSAL COMPANY. 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.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

# **SECTION 14.** TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S

(Pentadecafluorotriethylamine)

UN NUMBER: 3267 CLASS: 8 PACKING GROUP: III

**IMDG** 

PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S

(Pentadecafluorotriethylamine)

UN NUMBER: 3267
CLASS: 8
PACKING GROUP: III
EMS-NO: F-A, S-B

**IATA** 

PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S

(Pentadecafluorotriethylamine)

UN NUMBER: 3267 CLASS: 8 PACKING GROUP: III

#### SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO

THE REPORTING REQUIREMENTS OF SARA TITLE III,

SECTION 302.

SARA 313 COMPONENTS 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.

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Pentadecafluorotriethylamine 359-70-6

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Pentadecafluorotriethylamine 359-70-6

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

Pentadecafluorotriethylamine 359-70-6

#### SECTION 16. OTHER INFORMATION

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

H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION.

#### 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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VERSION: 3.2 REVISION DATE: 11/29/2021