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# Material Safety Data Sheet

# Trioctylamine

Section 1: Chemical Product and Company Identification

**Product Name:** Trioctylamine

**CAS#**: 1116-76-3 **RTECS**: RG8225000

Synonym: N,N-Dioctyloctan-1-amine

Tri-n-octylamine

Chemical Name: Trioctylamine Chemical Formula: C24H51N

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# Section 2: Composition and Information on Ingredients

Composition:

NameCAS #By WeightTrioctylamine1116-76-3 $\geqslant 98.0\%$ 

Toxicological Data on Ingredients: Not applicable.

## Section 3: Hazards Identification

## Inhalation

Causes respiratory tract irritation. May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dyspnea, and death. May cause liver and kidney damage. May cause cardiac abnormalities. Can produce delayed pulmonary edema. Inhalation at high concentrations may cause CNS depression and asphixiation.

# Skin

Causes skin irritation. May cause severe irritation and possible burns.

Eyes

Causes eye irritation. May cause chemical conjunctivitis.

#### Ingestion

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause cardiac disturbances. May cause methemoglobinemia, cyanosis, convulsions, and death. May cause central nervous system depression.

#### Hazards

When heated, vapors may form explosive mixtures with air: indoors, outdoors, and sewers explosion hazards.

#### **EC Risk Phrase**

R 36/38

UN (DOT)

2735

# Section 4: First Aid Measures

#### Ingestion

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

#### Inhalation

Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. DO NOT use mouth-to-mouth respiration. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

#### Skin

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

# Eyes

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

# Section 5: Fire and Explosion Data

#### Flash Point

147

## Autoignition

315

#### Fire Fighting

Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode when heated. Combustible material; may burn but does not ignite readily. Runoff from fire control or dilution water may cause pollution. Extinguishing media: Use water spray to cool fire-exposed containers. Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray.

#### **Fire Potential**

Combustible material: may burn but does not ignite readily.

## Section 6: Accidental Release Measures

## Small spills/leaks

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, using the appropriate protective equipment. Provide ventilation.

# Section 7: Handling and Storage

#### Storage

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

#### Handling

Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.

# Section 8: Exposure Controls/Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits** 

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Trioctylamine	none listed	none listed	none listed

**OSHA Vacated PELs:** Trioctylamine No OSHA Vacated PELs are listed for this chemical.

## **Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.

Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

# **Section 9: Physical and Chemical Properties**

Physical State: Clear liquid

Appearance: Clear colorless liquid

Odor: Not available. pH: Not available.

Vapor Pressure: 0.075 (20 C)

VaporDensity:12.1

EvaporationRate:Not available.

Viscosity: Not available.

Boiling Point: 365 deg C

Freezing/Melting Point:-39.deg C

**Decomposition Temperature:**Not available. **Solubility:** completely miscible with water **Specific Gravity/Density:**.0.812 g/cm3

Molecular Formula:C24H51N Molecular Weight:353.68

# Section 10: Stability and Reactivity Data

**Chemical Stability:** Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources.

Incompatibilities with Other Materials: Acids, acid chlorides, carbon dioxide, strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, oxides of nitrogen, carbon dioxide.

Hazardous Polymerization: Will not occur.

# **Section 11: Toxicological Information**

## RTECS#:

**CAS#** 1116-76-3: **LD50/LC50:**Not available.

**Carcinogenicity:** 

CAS# 1116-76-3: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No data available. **Teratogenicity:** No data available.

Reproductive Effects: No data available.

**Neurotoxicity:** No data available. **Mutagenicity:** No data available.

Other Studies: See actual entry in RTECS for complete information.

# Section 12: Ecological Information

No information available.

# **Section 13: Disposal Considerations**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

# Section 14: Transport Information

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	TRIOCTYLAM		No
Shipping Name:	INE		information
	TOA		available.
Hazard Class:	9		
UN Number:	UN3082		
Packing Group:	III		

# **Section 15: Other Regulatory Information**

#### **US FEDERAL**

#### **TSCA**

CAS# 1116-76-3 is listed on the TSCA inventory.

## **Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

#### **Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

# **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

#### **SARA**

#### Section 302 (RQ)

None of the chemicals in this material have an RQ.

# Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

## Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

## **Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

## **STATE**

CAS# 1116-76-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

# **European/International Regulations**

# **European Labeling in Accordance with EC Directives**

## **Hazard Symbols:**

e c

# **Risk Phrases:**

R 11 Highly flammable.

R 36/37/38 Irritating to eyes, respiratory system and skin.

# **Safety Phrases:**

S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 29 Do not empty into drains.

## WGK (Water Danger/Protection)

CAS# 1116-76-3: 2

Canada - DSL/NDSL

CAS# 1116-76-3 is listed on Canada's NDSL List.

Canada - WHMIS WHMIS: Not available.

**Canadian Ingredient Disclosure List** 

**Exposure Limits** 

# **Section 16: Other Information**

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 05:35 PM

Last Updated: 05/21/2013 12:00 PM

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