

## Material Safety Data Sheet

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Date Updated: 17/MAR/2004  
Version 1.1  
According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

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### 1 - Product and Company Information

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Product Name	HEXADECYLTRIMETHYLAMMONIUM CHLORIDE
Product Number	52366
Company	Sigma-Aldrich Pty. Ltd. 12 Anella Avenue Castle Hill NSW 2154
Technical Phone #	+61 2 9841 0555 (1800 800 097)
Fax	+61 2 9841 0500 (1800 800 096)
Emergency Phone #	+44 8701906777 (1800 448 465)

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### 2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
CETYLTRIMETHYLAMMONIUM CHLORIDE	112-02-7	203-928-6	None
Formula	C19H42N.Cl		
Molecular Weight	320.01 AMU		
Synonyms	Adogen 444 * Arquad 16 * Arquad 16-29 * Arquad 16-50 * Arquad 16-25W * Barquat CT 29 * CETAC * CTMA * Dehyquart A * Dodigen 1383 * HTAC * Cetyltrimethylammonium chloride * Hexadecyltrimethylammonium chloride (6CI) * Intexan CTC 29 * Intexsan CTC 29 * Intexsan CTC 50 * Lebon TM 16 * Morpan CHA * Nissan Cation PB 40 * Palmityltrimethylammonium chloride * PB 40 * Pionin B 611 * Surfroyal CTAC * Swanol CA 2350 * N,N,N-Trimethyl-1-hexadecanaminium chloride * Trimethylhexadecylammonium chloride * Variquart E 228 * HEXADECYLTRIMETHYLAMMONIUM CHLORIDE		

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### 3 - Hazards Identification

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#### SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Irritating to skin. Risk of serious damage to eyes. Very toxic to aquatic organisms.

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### 4 - First Aid Measures

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#### AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

#### AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

#### AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

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### 5 - Fire Fighting Measures

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#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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### 6 - Accidental Release Measures

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#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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### 7 - Handling and Storage

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#### HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Keep tightly closed.

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### 8 - Exposure Controls / Personal Protection

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#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

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### 9 - Physical and Chemical Properties

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#### Appearance

Physical State: Solid

Color: White

Form: Powder

#### Property

Value

At Temperature or Pressure

pH	N/A
BP/BP Range	N/A
MP/MP Range	232 - 234 °C
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	Log Kow: 3.23
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

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## 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Hydrogen chloride gas.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## 11 - Toxicological Information

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RTECS NUMBER: ML9145000

### ACUTE TOXICITY

LD50

Skin

Rabbit

4300 UL/KG

24H

Remarks: Behavioral:Food intake (animal). Behavioral:Change in motor activity (specific assay). Nutritional and Gross

Metabolic:Weight loss or decreased weight gain.

### IRRITATION DATA

Skin

Rabbit

Remarks: Moderate irritation effect

Eyes

Rabbit

Remarks: Severe irritation effect

## SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

## CHRONIC EXPOSURE - MUTAGEN

Hamster

3600 UG/L

Cell Type: lung

Other mutation test systems

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## 12 - Ecological Information

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### ECOTOXICOLOGICAL EFFECTS

Test Type: LC50 Fish

Species: Lepomis macrochirus (Bluegill)

Time: 96 h

Value: 60 - 150 mg/l

Test Type: EC50 Daphnia

Species: Daphnia magna

Time: 48 h

Value: 10.7 - 11 mg/l

Test Type: LC50 Fish

Species: Brachydanio rerio

Time: 96 h

Value: 0.7 mg/l

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## 13 - Disposal Considerations

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### SUBSTANCE DISPOSAL

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.

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## 14 - Transport Information

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### RID/ADR

UN#: 3077

Class: 9

PG: III

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s

### IMDG

UN#: 3077

Class: 9

PG: III

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s

Marine Pollutant: No  
Severe Marine Pollutant: No  
Technical Name: Required

#### IATA

UN#: 3077  
Class: 9  
PG: III  
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s  
Inhalation Packing Group I: No  
Technical Name: Required

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#### 15 - Regulatory Information

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##### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xi N

Irritant. Dangerous for the environment.

R-PHRASES: 38 41 50

Irritating to skin. Risk of serious damage to eyes. Very toxic to aquatic organisms.

S-PHRASES: 26 39 60 61

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

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#### 16 - Other Information

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##### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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