

Flammable Carbon

ALDRICH CHEMICAL INC./SUB OF SIGMA-ALDRICH CORP -- TETRAETHYL ORTHOSILICATE, 99+%, 2

## MSDS Safety Information

FSC: 6850  
 MSDS Date: 05/18/1989  
 MSDS Num: BKNLL  
 LIIN: 00N015008  
 Tech Review: 06/27/1995  
 Product ID: TETRAETHYL ORTHOSILICATE, 99+%, 23620-9  
 Responsible Party  
 Cage: 60928  
 Name: ALDRICH CHEMICAL CO INC./SUB OF SIGMA-ALDRICH CORP  
 Address: 1001 W. ST. PAUL AVE  
 Box: 355  
 City: MILWAUKEE WI 53201 US  
 Info Phone Number: 414-273-3850/FAX -4979  
 Emergency Phone Number: 414-273-3850  
 Review Ind: N

## Contractor Summary

Cage: 60928  
 Name: ALDRICH CHEMICAL CO INC  
 Address: 1001 WEST ST PAUL AVE  
 Box: 355  
 City: MILWAUKEE WI 53233 US  
 Phone: 414-273-3850

## Ingredients

Cas: 78-10-4  
 RTECS #: VV9450000  
 Name: ETHYL SILICATE  
 % by Wt: 99+  
 OSHA PEL: 100 PPM  
 ACGIH TLV: 10 PPM; 9293  
 Ozone Depleting Chemical: N

## Health Hazards Data

LD50 LC50 Mixture: SEE SUPP DATA  
 Route Of Entry Inds - Inhalation: YES  
 Skin: YES  
 Ingestion: YES  
 Carcinogenicity Inds - NTP: NO  
 IARC: NO  
 OSHA: NO  
 Effects of Exposure: ACUTE: MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION. CAUSES SKIN IRRITATION. VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. EXPOSURE CAN CAUSE: N AUSEA, HEADACHE AND VOMITING.  
 Explanation Of Carcinogenicity: NONE SPECIFIED BY MANUFACTURER.  
 Signs And Symptoms Of Overexposure: SEE HEALTH HAZARDS.  
 Medical Cond Aggravated By Exposure: NONE SPECIFIED BY MANUFACTURER.  
 First Aid: IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL MD.  
 INGEST: CALL MD IMMEDIATELY (FP N).

=====  
 Handling and Disposal  
 =====

Spill Release Procedures: EVACUATE AREA. WEAR NIOSH/MSHA APPROVED SCBA, RUBBER BOOTS AND HEAVY RUBBER GLOVES. ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Methods: THIS COMBUSTIBLE MATERIAL MAY BE BURNED IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL LAWS.

Handling And Storage Precautions: KEEP TIGHTLY CLOSED. MOISTURE-SENSITIVE. KEEP AWAY FROM HEAT AND OPEN FLAME. STORE IN A COOL, DRY PLACE.

Other Precautions: DO NOT BREATHE VAPOR. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. IRRITANT. ELECTRONIC GRADE.

=====  
 Fire and Explosion Hazard Information  
 =====

Flash Point Text: 116F,47C

Extinguishing Media: CO\*2, DRY CHEMICAL POWDER, ALCOHOL OR POLYMER FOAM.

Fire Fighting Procedures: WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N). PREVENT CONTACT WITH SKIN AND EYES. COMBUSTIBLE.

Unusual Fire/Explosion Hazard: VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND FLASH BACK. UNDER FIRE CONDITIONS, MATERIAL MAY DECOMPOSE TO FORM FLAMMABLE (SEE SUPP DATA)

=====  
 Control Measures  
 =====

Respiratory Protection: WEAR APPROPRIATE NIOSH/MSHA APPROVED RESPIRATOR.

Ventilation: MECHANICAL EXHAUST REQUIRED.

Protective Gloves: CHEMICAL-RESISTANT GLOVES.

Eye Protection: CHEMICAL WORKERS GOGGLES (FP N).

Other Protective Equipment: PROTECTIVE CLOTHING, SAFETY SHOWER AND EYE BATH.

Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health: EXPLO HAZ: AND/OR EXPLOSIVE MIXTURES IN AIR. EMITS TOXIC FUMES UNDER FIRE CONDITIONS. LD50-LC50 MIX: LD50: (ORL, RAT)=6270 MG/KG, (SKN, RBT)=5878 MG/KG.

=====  
 Physical/Chemical Properties  
 =====

HCC: F4

B.P. Text: 334F,168C

Vapor Pres: <1.0 @ 20C

Vapor Density: 7.2

Spec Gravity: 0.934

Appearance and Odor: COLORLESS LIQUID.

=====  
 Reactivity Data  
 =====

Stability Condition To Avoid: MAY DECOMPOSE ON EXPOSURE TO MOIST AIR OR WATER.

Materials To Avoid: STRONG OXIDIZING AGENTS, STRONG ACIDS.

Hazardous Decomposition Products: TOXIC FUMES OF: CO, CO\*2, SIO\*X.

Conditions To Avoid Polymerization: NONE SPECIFIED BY MANUFACTURER.

=====  
 Toxicological Information  
 =====

Ecological Information  
=====MSDS Transport Information  
=====Regulatory Information  
=====Other Information  
=====Transportation Information  
=====

Responsible Party Cage: 60928  
Trans ID NO: 20234  
Product ID: TETRAETHYL ORTHOSILICATE, 99+%, 23620-9  
MSDS Prepared Date: 05/18/1989  
Review Date: 10/18/1991  
Article W/O MSDS: N  
Multiple KIT Number: 0  
Unit Of Issue: NK  
Container QTY: NK

Detail DOT Information  
=====

DOT PSN Code: NZO  
DOT Proper Shipping Name: TETRAETHYL SILICATE  
Hazard Class: 3  
UN ID Num: UN1292  
DOT Packaging Group: III  
Label: FLAMMABLE LIQUID  
Special Provision: B1,T1  
Packaging Exception: 150  
Non Bulk Pack: 203  
Bulk Pack: 242  
Max Qty Pass: 60 L  
Max Qty Cargo: 220 L  
Vessel Stow Req: A

Detail IMO Information  
=====

IMO PSN Code: OKQ  
IMO Proper Shipping Name: TETRAETHYL SILICATE  
IMDG Page Number: 3384  
UN Number: 1292  
UN Hazard Class: 3.3  
IMO Packaging Group: III  
Subsidiary Risk Label: -  
EMS Number: 3-06  
MED First Aid Guide NUM: 360

Detail IATA Information  
=====

IATA UN ID Num: 1292  
IATA Proper Shipping Name: TETRAETHYL SILICATE  
IATA UN Class: 3  
IATA Label: FLAMMABLE LIQUID  
UN Packing Group: III  
Packing Note Passenger: 309

Max Quant Pass: 60L  
Max Quant Cargo: 220L  
Packaging Note Cargo: 310

=====  
Detail AFI Information  
=====

AFI Proper Shipping Name: TETRAETHYL SILICATE  
AFI Hazard Class: 3  
AFI UN ID NUM: UN1292  
AFI Packing Group: III  
Special Provisions: P5  
Back Pack Reference: A7.3  
=====

HAZCOM Label  
=====

Product ID: TETRAETHYL ORTHOSILICATE, 99+%, 23620-9  
Cage: 60928  
Company Name: ALDRICH CHEMICAL CO INC  
Street: 1001 WEST ST PAUL AVE  
PO Box: 355  
City: MILWAUKEE WI  
Zipcode: 53233 US  
Health Emergency Phone: 414-273-3850  
Date Of Label Review: 04/24/1991  
Label Date: 04/24/1991  
Chronic Hazard IND: N  
Eye Protection IND: YES  
Skin Protection IND: YES  
Signal Word: WARNING  
Respiratory Protection IND: YES  
Health Hazard: Slight  
Contact Hazard: Moderate  
Fire Hazard: Moderate  
Reactivity Hazard: None  
Hazard And Precautions: ACUTE: CAUSES SKIN, EYES, MUCOUS MEMBRANE, AND  
UPPER RESPIRATORY TRACT IRRITATION. AVOID BREATHING VAPOR/MIST. KEEP  
CONTAINER CLOSED. USE WITH ADEQUATE VENTILATION. AVOID CONTACT WITH  
EYES, SKIN AND C LOTHING. WASH THOROUGHLY AFTER HANDLING.

=====  
Disclaimer (provided with this information by the compiling agencies):  
This information is formulated for use by elements of the Department of  
Defense. The United States of America in no manner whatsoever expressly  
or implied warrants, states, or intends said information to have any  
application, use or viability by or to any person or persons outside the  
Department of Defense nor any person or persons contracting with any  
instrumentality of the United States of America and disclaims all  
liability for such use. Any person utilizing this instruction who is not  
a military or civilian employee of the United States of America should  
seek competent professional advice to verify and assume responsibility  
for the suitability of this information to their particular situation  
regardless of similarity to a corresponding Department of Defense or  
other government situation.