

# MSDS MATERIAL SAFETY DATA SHEET

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Oakwood Products, Inc  
1741 Old Dunbar Road  
West Columbia, SC 29172  
www.oakwoodchemical.com

Phone Numbers:

Product Information	803-739-8800
Transportation Emergency	800-451-8346
Outside the USA	760-602-8700

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## MATERIAL IDENTIFICATION

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NAME: Bis(2-chloroethyl)ether

CAS#: [111-44-4]

CAT#: 2891

For R&D use only.

## HEALTH HAZARD INFORMATION

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### TOXIC

### FLAMMABLE

Harmful to skin, eyes, and respiratory system.

May be toxic if inhaled or swallowed.

Avoid prolonged exposure.

Do not breathe vapor.

Use caution when handling.

Exposure to any chemical should be limited.

To the best of our knowledge, the health hazards of this material have not been fully investigated.

Material is for research and development purposes only.

## EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Avoid all direct contact with product.

Wear protective safety goggles.

Wear chemical-resistant gloves.

Wear protective clothing and boots.

Ensure ventilation during use.

After contact with skin, wash immediately.

## FIRST AID

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**EYE CONTACT:** Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes while keeping eyes open. COLD water may be used. Seek medical attention.

**SKIN CONTACT:** After contact with skin, wash with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Wash any contaminated clothing before reusing.

**INHALATION:** Remove victim from source of exposure to fresh air. If breathing is difficult administer oxygen. Seek medical attention.

**INGESTION:** Do not induce vomiting. Give water to victim to drink. Seek medical attention.

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## FIRE MEASURES

**Extinguishing media:** carbon dioxide, dry chemical powder, alcohol or polymer foam.  
**Special fire-fighting procedures:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
**Unusual fire and explosion hazards/decomposition of product:** emits toxic fumes under fire conditions.

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## HANDLING AND STORAGE INFORMATION

**TOXIC  
FLAMMABLE  
AVOID PROLONGED USE  
AVOID ALL DIRECT CONTACT WITH MATERIAL  
Wash thoroughly after handling.**  
Do not breathe dust or vapor.  
Have safety shower and eye wash available.  
Do not get in eyes, on skin, on clothing.  
Keep container tightly closed.  
Store in a cool, dry, well-ventilated area.  
Ensure adequate ventilation during use.  
Use only in a chemical fume hood.  
Avoid sources of ignition.

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## ACCIDENTAL RELEASE MEASURES

**Steps to be taken if material is released or spilled:** Wear appropriate respirator, rubber boots and heavy rubber gloves. Scoop up and place in an appropriate container. Ventilate area and wash spill site after pickup is complete. Wash skin immediately with plenty of water. Absorb on sand or vermiculite and place in closed containers for disposal.

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## DISPOSAL INFORMATION

Dissolve in 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 laws.

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## PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: liquid  
MF: C<sub>4</sub>H<sub>8</sub>Cl<sub>2</sub>O  
MW: 143.01  
BP: 66-67°C/15mm Hg  
MP: no data  
DEN: 1.220  
N<sub>d</sub><sup>20</sup>: 1.4570  
FP: 55°C

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## REACTIVITY DATA

INCOMPATIBILITIES: strong oxidizing agents, strong acids and bases.  
HAZARDOUS DECOMPOSITION PRODUCTS: may evolve carbon monoxide, carbon dioxide,  
and hydrogen chloride.

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## TOXICITY INFORMATION

### ACUTE EFFECTS:

Toxic

Irritant

May be harmful by ingestion and inhalation.

Material is irritating to mucous membranes and upper respiratory tract.

RTECS: KN0876000

### IRRITATION DATA

SKN-RBT 10 MG/24H OPEN	JIHTAB 30,63,1948
SKN-RBT 500 MG OPEN MLD	UCDS** 12/29/1971
EYE-RBT 100 MG SEV	AJOPAA 29,1363,1946

### TOXICITY DATA

ORL-RAT LD50: 75 MG/KG	JIHTAB 30,63,1948
IHL-RAT LC50: 330 MG/M3/4H	85GMAT -,45,1982
ORL-MUS LD50: 209 MG/KG	ATDAEI 1,163,1992
IHL-MUS LC50: 650 MG/M3/2H	85GMAT -,45,1982
ORL-RBT LD50: 126 MG/KG	38MKAJ 2A,2518,1981
SKN-RBT LD50: 90 MG/KG	38MKAJ 2A,2518,1981
IHL-GPG LC50: 500 PPM/1H	85JCAE -,541,1986
SKN-GPG LD50: 300 MG/KG	JIHTAB 30,63,1948
ORL-MAM LD50: 112 MG/KG	GISAAA 39(4),86,1974

### TARGET ORGAN DATA

SENSE ORGANS AND SPECIAL SENSES (PTOSIS)

GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF SALIVARY  
GLANDS)

GASTROINTESTINAL (HYPERMOTILITY, DIARRHEA)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES  
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR  
COMPLETE INFORMATION.

### REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-NOT CLASSIFIABLE AS A HUMAN CARCINOGEN DTLVS\* TLV/BEI,1997

ACGIH TLV-STEL 58 MG/M3 (10 PPM) (SKIN) DTLVS\* TLV/BEI,1997

ACGIH TLV-TWA 29 MG/M3 (5 PPM) DTLVS\* TLV/BEI,1997

IARC CANCER REVIEW:ANIMAL LIMITED EVIDENCE IMEMDT 9,117,1975

IARC CANCER REVIEW:ANIMAL LIMITED EVIDENCE IMEMDT 71,1265,1999

IARC CANCER REVIEW:HUMAN NO ADEQUATE DATA IMEMDT 9,117,1975

IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMEMDT 71,1265,1999

IARC CANCER REVIEW:GROUP 3 IMEMDT 71,1265,1999

MSHA STANDARD-AIR:TWA 5 PPM (30 MG/M3) (SKIN)

DTLWS\* 3,16,1973

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OSHA PEL (GEN INDU):CL 15 PPM (90 MG/M3) (SKIN)  
CFRGBR 29,1910.1000,1994  
OSHA PEL (CONSTRUC):CL 15 PPM (90 MG/M3) (SKIN)  
CFRGBR 29,1926.55,1994  
OSHA PEL (SHIPYARD):CL 15 PPM (90 MG/M3) (SKIN)  
CFRGBR 29,1915.1000,1993  
OSHA PEL (FED CONT):CL 15 PPM (90 MG/M3) (SKIN)  
CFRGBR 41,50-204.50,1994  
OEL-AUSTRALIA:TWA 5 PPM (30 MG/M3);STEL 10 PPM (60 MG/M3);SKIN JAN  
1993  
OEL-AUSTRIA: MAK 5 PPM (30 MG/M3), SKIN, JAN1999  
OEL-AUSTRIA:TWA 10 PPM (60 MG/M3);SKIN JAN 1993  
OEL-BELGIUM:TWA 5 PPM (29 MG/M3);STEL 10 PPM (58 MG/M3);SKIN JAN 1993  
OEL-FINLAND:TWA 5 PPM (30 MG/M3);STEL 10 PPM (60 MG/M3);SKIN JAN 1993  
OEL-JAPAN: OEL 15 PPM (88 MG/M3), SKIN, JAN1999  
OEL-GERMANY:TWA 10 PPM (60 MG/M3);SKIN JAN 1993  
OEL-JAPAN:TWA 15 PPM (88 MG/M3);SKIN JAN 1993  
OEL-THE NETHERLANDS:TWA 5 PPM (30 MG/M3);SKIN JAN 1993  
OEL-POLAND: MAC(TWA) 10 MG/M3, MAC(STEL) 60 MG/M3, JAN1999  
OEL-THE PHILIPPINES:TWA 15 PPM (90 MG/M3);SKIN JAN 1993  
OEL-RUSSIA:STEL 0.6 MG/M3;SKIN JAN 1993  
OEL-RUSSIA:TWA 15 PPM;STEL 2 MG/M3;SKIN JAN 1993  
OEL-SWEDEN;CARCINOGEN JAN 1993  
OEL-SWITZERLAND:TWA 5 PPM (30 MG/M3);STEL 25 PPM (50 MG/M3);SKIN JAN  
1993  
OEL-THAILAND:TWA 15 PPM (90 MG/M3) JAN 1993  
OEL-TURKEY:TWA 15 PPM (90 MG/M3);SKIN JAN 1993  
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV  
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV  
NIOSH REL TO DICHLOROETHYLEETHER-AIR:CA TWA 5 PPM (SK);STEL 10 PPM  
NIOSH\* DHHS #92-100,1992  
NOHS 1974: HZD 84164; NIS 1; TNF 21; NOS 2; TNE 41  
ATSDR TOXICOLOGY PROFILE (NTIS\*\* PB/90/168683/AS)  
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY  
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES  
ON EPA IRIS DATABASE  
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, SEPTEMBER 1999  
NIOSH ANALYTICAL METHOD, 1994: DICHLOROETHYL ETHER, 1004  
U.S. INFORMATION  
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.  
THIS PRODUCT IS OR CONTAINS CHEMICAL(S) KNOWN TO THE STATE OF  
CALIFORNIA TO CAUSE CANCER.

To the best of our knowledge, the toxicological properties of this product have not been fully determined.

## TRANSPORT INFORMATION

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Toxic liquids, flammable, organic, n.o.s.  
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UN2929 II

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Phone: (803) 739-8800  
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Bis(2-chloroethyl)ether  
August 22, 2008

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*The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Oakwood shall not be held liable for any damage resulting from handling or from contact with the above product.*