

## MATERIAL SAFETY DATA SHEET

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### SECTION 1 – CHEMICAL IDENTIFICATION

Trade Name: DCE 410 Date of Issue: April 12, 1993  
Synonym: 7-Oxabicyclo [4.1.0] heptane 3-  
carboxylic acid, 2-ethylhexyl ester Revised Date: January 31, 2007  
Formula: C<sub>15</sub>H<sub>26</sub>O<sub>3</sub>  
Chemical Family: Aliphatic epoxides  
Chemical Use: As an acid scavenger in aviation  
hydraulic fluids.  
Telephone Number: Information (281) 474-3271  
Emergency Number: Chemtrec (800) 424-9300 Domestic  
(703) 527-3887 International 0

#### HMIS Hazard Rating

Health: 1	4 = Extreme
Fire: 2	3 = High
Reactivity: 0	2 = Moderate
PPE rating to be supplied by user depending on use conditions.	1 = Slight 0 = Least

### SECTION 2 – HAZARDS IDENTIFICATION

Inhalation: May cause slight irritation.  
Skin Contact: May cause slight irritation.  
Eye Contact: May cause moderate irritation.  
Ingestion: May cause slight irritation.

### SECTION 3 – COMPOSITION

<u>Components</u>	<u>Percentage</u>	<u>TLV (ppm)</u>	<u>CAS #</u>
7-Oxabicyclo [4.1.0] heptane 3-carboxylic acid, 2-ethylhexyl ester	>97	Not Established	62256-00-2

### SECTION 4 – FIRST AID MEASURES

- Inhalation: Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, administer artificial respiration. Get medical attention.
- Skin Contact: Immediately remove contaminated clothing and shoes. Wipe excess material from skin and flush with water for at least 15 minutes. Use soap if available or follow by washing with soap and water. Do not reuse contaminated clothing without laundering. Get medical attention.
- Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
- Ingestion: Get medical attention immediately.

## **SECTION 5 – FIREFIGHTING MEASURES**

- Extinguishing Media: Use water, foam, or dry chemical.
- Special Firefighting Procedures/Precautions: Firefighters should wear NIOSH approved self-contained breathing apparatus. Responders should wear protective clothing to prevent skin contact. Move containers from fire area. If unable to move, cool sealed containers with water.
- Unusual Fire and Explosion Information: Toxic vapors may be emitted upon thermal decomposition
- Environmental Note: Prevent entry into waterways

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Protective Measures:** Evacuate area of unprotected personnel. Eliminate sources of ignition. Stay upwind and out of low areas. Wear personal protective equipment (See section 8) when responding to spills.

**Spill Management:** Stop source of leak if safe to do so. Dike and contain spill. Use water spray (fog) to reduce vapors. If vapor cloud forms, blanket area with water fog and foam. Use vacuum truck or pump to storage/salvage vessels. Clean up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Spray area with water to remove trace residue. Contain runoff from residue flush and dispose of properly. Prevent entry into waterways, sewer, or confined areas. Remove contaminated trace residues from soil and dispose of in same manner as material. For small spills, clean up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and dispose of material properly.

**Disposal:** Proper disposal should be evaluated based on regulatory status of this material (refer to section 13).

## **SECTION 7 – HANDLING AND STORAGE**

Containers do not have to be grounded and bonded when material is transferred, but it is recommended as a good practice. Store in a cool, dry place. Keep away from heat, sparks, and flames.

## **SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION**

Respiratory Protection:	NIOSH approved respiratory protection for organic vapors.
Ventilation:	Utilize local exhaust to control vapors. Do not rely on general exhaust.
Protective Gloves:	Utilize appropriate impervious chemical gloves.
Eye Protection:	Chemical goggles and face shield.
Other Protective Equipment:	Wear additional protective clothing to prevent skin contact. This may include aprons, chemical resistant boots, and chemical resistant suits.
Work Practices:	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point:	541°F (283°C)
Melting Point:	Not Established.
Molecular Weight:	254.37
Volatility/Vol (%):	Not Established
Vapor Pressure (mm Hg):	0.02 at 68°F (20°C)
Vapor Density (Air = 1):	>1
Solubility in H <sub>2</sub> O:	Negligible.
Appearance/Odor:	Pale yellow liquid / Faint, burnt odor.
Odor Threshold:	Not Established.
Specific Gravity (H <sub>2</sub> O = 1):	0.993 at 68°F (25°C)
pH:	Not Established.
Viscosity (cps)	Not Established
Evap. Rate (Butyl Acetate = 1):	<1
Flash Point:	260°F (127°C) PMCC, ASTM D93
Lower Explosive Limit:	Not Established.
Upper Explosive Limit:	Not Established.
Autoignition Temperature:	Not Established.

## **SECTION 10 – STABILITY AND REACTIVITY**

Chemical Stability:	Stable.
Conditions to Avoid:	Incompatible materials.
Incompatible Materials:	Acids, bases, and oxidizing agents.
Decomposition Products:	Oxides of carbon.
Hazardous Polymerization:	Will not occur.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

**Carcinogenicity listed by: NTP: No                      IARC: No                      OSHA: No**

**ACGIH** TLV: Not Established STEL: Not Established  
**OSHA** PEL: Not Established STEL: Not Established

## **SECTION 12 – ECOLOGICAL INFORMATION**

No data available.

## **SECTION 13 – DISPOSAL INFORMATION**

Place in a city, state, or federally permitted disposal facility. Handle in accordance with all applicable regulations.

## **SECTION 14 – TRANSPORTATION INFORMATION**

Proper Shipping Name:	Not hazardous for transport.
Primary Hazard Class:	Not Applicable.
Secondary Hazard Class:	Not Applicable.
Identification Number:	Not Applicable.
Packing Group:	Not Applicable.
Reportable Quantity:	Not Applicable.
Marine Pollutant:	Not Applicable.
Label(s) Required:	Not Applicable.

## **SECTION 15 – REGULATORY INFORMATION**

### **U.S. Regulations:**

**TSCA:** All substances are listed on, or are exempt from reporting.  
TSCA 12(b) Export Notification: Not Listed

### **SARA Hazard Notification:**

Hazard Categories Under Title III:	Acute.
Section 302 Extremely Hazardous Substances:	Not Listed.
Section 313 Toxic Chemicals:	Not Listed.
CERCLA RQ:	Not Listed.

California Proposition 65: Not Listed

### **European Regulations:**

EINECS Number: 263-471-3

### **Canadian Regulations:**

Listed on the DSL.

**Japanese Regulations:**

Not listed on the ENCS.

**Australian Regulations:**

Listed on the AICS.

**Korean Regulations:**

Not listed on the ECL.

**SECTION 16 – OTHER INFORMATION**

**PPE Codes (NPCA-HMIS)**

<b>A</b> – Glasses	<b>G</b> – Glasses, Gloves, Vapor Respirator
<b>B</b> – Glasses, Gloves	<b>H</b> – Goggles, Gloves, Apron, Vapor Respirator
<b>C</b> – Glasses, Gloves, Apron	<b>I</b> – Glasses, Gloves, Dust/Vapor Respirator
<b>D</b> – Faceshield, Gloves, Apron	<b>J</b> – Goggles, Gloves, Apron, Dust/Vapor Respirator
<b>E</b> – Glasses, Gloves, Dustmask	<b>K</b> – Supplied Air, Gloves, Full Protective Suit, Boots
<b>F</b> – Glasses, Gloves, Apron, Dust Respirator	

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