

# Material Safety Data Sheet

Complies with EC no. 1907/2006  
Issue Date: 3/28/2018

## Section 1: Chemical Product and Company Identification

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Cat#: 21321

Part Name: ERL 4221

Supplier: Ladd Research  
83 Holly Court  
Williston, VT 05495 USA  
Telephone: 1-802-658-4961

Identified uses: Laboratory use, manufacture of substances

## Section 2: Hazards Identification

Hazard Overview

Causes eye irritation.

May cause allergic skin reaction.

GHS Classification

Eye Irritation Category 2B

Skin Sensitizer Category 1B

Signal word: Danger



## Hazard and Precautionary Statements

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280A	Wear protective gloves
P301A	IF SWALLOWED do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.
P301D	IF SWALLOWED, induce vomiting as directed by medical personnel.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305B	IF IN EYES, Separate eyelids with finger tips.
P340	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P351	Rinse cautiously with water for several minutes.
P361	Remove/Take off immediately all contaminated clothing.

## NFPA Rating

Hazard Ratings:

These ratings are an independent assesment of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
1	1	0

## Section 3: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	EINECS	CAS#	% in product
1	7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester	219-207-4	0002386870	81 - 90

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**Section 4: First Aid Measures**

Flush eyes with flowing water for at least 15 minutes.  
 If breathing is difficult, contact emergency personnel.  
 If swallowed, induce vomiting as directed by medical personnel.  
 If swallowed, wash out mouth with water if person is conscious.  
 Remove contaminated clothing.  
 Remove to fresh air.  
 Separate eyelids with finger tips.  
 Wash skin with deluge of water for at least 15 minutes.

**Section 5: Fire Fighting Measures**

Flash point, deg F.: 245                                Method: PMCC  
 UEL: no data            LEL: no data                                Autoignition temperature, deg. F.: no data  
 Flammability Classification: no data                                Flame Propagation Rate: no data  
 Hazardous Combustion Products: oxides of carbon

**Section 6: Accidental Release Measures**

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Absorb liquids on absorbent material.  
 Contain spilled liquids.  
 Prevent contact with combustible materials.  
 Protect personnel from exposure.  
 Remove ignition sources.  
 Ventilate the area.

**Section 7: Handling and Storage**

Store at room temp

**Section 8: Exposure Controls/ Personal Protection****OSHA (ACGIH) Exposure Limits**

		TWA		STEL		CEILING	
		ppm	mg/	ppm	mg/m3	ppm	mg/m3
CAS#: 0002386870	IDLH: NE						
OSHA		NE	NE	NE	NE	NE	NE
ACGIH		NE	NE	NE	NE	NE	NE

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

Use chemical splash goggles and face shield.  
 Use latex or equivalent gloves.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product. Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product. Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

**Section 9: Physical and Chemical Properties**

Formula:	mixture	vapor pressure:	<0.01 mm Hg
Formula Weight:	mixture	vapor density:	~8.7
boiling point:	170 C	Specific gravity:	1.16
melting point:	-26 C	ph:	no data
solubility:	<0.02%	appearance:	transparent off-white liquid

**Section 10: Stability and Reactivity**

Chemical Stability stable

Conditions to Avoid: temperatures above 170 C

Incompatibility with other materials: amines, acids, bases

Hazardous Decomposition Products: oxides of carbon

Hazardous Polymerization: may occur with elevated temperatures

**Section 11: Toxicological Information**

Acute Data: LD 50, oral, rat: 4.49 ml/kg

Subchronic data: no data

**Section 12: Ecological Information**

no data

**Section 13: Disposal Considerations**

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
0002386870	not listed	not listed

**Section 14: Transportation Data**

Proper Shipping Name NOT REGULATED

Chemical Name

UN

Class

PG

**Section 15: Regulatory Information**

All components of this product are on the TSCA public inventory.

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
0002386870	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#

0002386870 not listed

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
0002386870	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
0002386870	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
0002386870	Not listed	Not listed

**Section 16: Other Information**

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The information presented is believed to be correct and is the most accurate information available to us at this time. However, Ladd Research makes no warranty, express or implied, and assumes no liability for this information and the product described herein.