

Prepared according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 10/28/2016

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Version: 1.1

**SECTION 1: IDENTIFICATION****1.1. PRODUCT IDENTIFIER**

Product name : ZL-56  
Product code : Not available

**1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST**

Use of the substance/mixture : Non-Destructive Testing

**1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET****Manufacturer**

Magnaflux  
155 Harlem Ave.  
Glenview, IL 60025 - USA  
T: 847-657-5300

**Distributor****1.4. EMERGENCY TELEPHONE NUMBER**

Emergency number : CHEMTREC 800-424-9300

**SECTION 2: HAZARDS IDENTIFICATION****2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE****GHS classification**

Acute Tox. 4 (Dermal)  
Acute Tox. 4 (Inhalation)  
Skin Irrit. 2  
Eye Dam. 1  
STOT SE 3

**2.2. LABEL ELEMENTS****GHS labeling**

Hazard pictograms (GHS) :



Signal word (GHS) :

Danger

Hazard statements (GHS) :

Harmful in contact with skin or if inhaled. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

Precautionary statements (GHS) :

Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash hands, forearms and face thoroughly after handling. If on skin: Wash with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Call a poison center/doctor if you feel unwell. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3. OTHER HAZARDS**

No additional information available

**2.4. UNKNOWN ACUTE TOXICITY (GHS)**

46% of the mixture consists of ingredient(s) of unknown acute dermal toxicity.  
46% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. SUBSTANCE

Not applicable

#### 3.2. MIXTURES

Name	Product identifier	%
Tributyloxyethyl phosphate	(CAS No) 78-51-3	49.97
Alcohols, C12-15, ethoxylated propoxylated	(CAS No) 68551-13-3	30.16
Alcohols, C12-14-secondary, ethoxylated	(CAS No) 84133-50-6	16.45
Coumarin, 7-(diethylamino)-4-methyl-	(CAS No) 91-44-1	2.35

### SECTION 4: FIRST AID MEASURES

#### 4.1. DESCRIPTION OF FIRST AID MEASURES

- First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
- First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

#### 4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Symptoms/injuries after inhalation : Harmful if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause respiratory irritation.
- Symptoms/injuries after skin contact : Harmful in contact with skin. Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
- Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
- Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

#### 4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1. EXTINGUISHING MEDIA

- Suitable extinguishing media : Water fog. Foam. dry chemical powder. Carbon dioxide.
- Unsuitable extinguishing media : Do not use water jet.

#### 5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

#### 5.3. ADVICE FOR FIREFIGHTERS

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

#### 6.2. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

- For containment : Dike and contain spill. Stop leak if safe to do so. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

#### 6.3. REFERENCE TO OTHER SECTIONS

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

## SECTION 7: HANDLING AND STORAGE

### 7.1. PRECAUTIONS FOR SAFE HANDLING

- Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

### 7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

- Storage conditions : Keep out of the reach of children. Store tightly closed in a dry, cool and well-ventilated place.

### 7.3. SPECIFIC END USE(S)

Not available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. CONTROL PARAMETERS

Tributyloxyethyl phosphate (78-51-3)	
ACGIH	Not applicable
OSHA	Not applicable
Alcohols, C12-15, ethoxylated propoxylated (68551-13-3)	
ACGIH	Not applicable
OSHA	Not applicable
Alcohols, C12-14-secondary, ethoxylated (84133-50-6)	
ACGIH	Not applicable
OSHA	Not applicable
Coumarin, 7-(diethylamino)-4-methyl- (91-44-1)	
ACGIH	Not applicable
OSHA	Not applicable

### 8.2. EXPOSURE CONTROLS

- Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
- Hand protection : Wear chemically resistant protective gloves.
- Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls : Maintain levels below Community environmental protection thresholds.
- Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : Liquid
- Appearance : Oily
- Color : Green
- Odor : Mild
- Odor threshold : No data available
- pH : Neutral
- Melting point : No data available
- Freezing point : No data available
- Boiling point : Initial: ~235 °C (~455 °F)

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Flash point	: > 93.3 °C (>200 °F)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not flammable
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: 1.01
Relative vapor density at 20 °C	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: 15.2 - 18.6 cSt
Viscosity, dynamic	: No data available

## 9.2. OTHER INFORMATION

VOC content : 0 g/l

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. REACTIVITY

No dangerous reaction known under conditions of normal use.

### 10.2. CHEMICAL STABILITY

Stable under normal storage conditions.

### 10.3. POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

### 10.4. CONDITIONS TO AVOID

Heat. Incompatible materials.

### 10.5. INCOMPATIBLE MATERIALS

Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents.

### 10.6. HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity : Harmful in contact with skin or if inhaled.

ZL-56	
LD50 oral rat	> 2000 mg/kg (Calculated acute toxicity estimate)
LD50 dermal rabbit	> 1000 but ≤ 2000 mg/kg (Calculated using ATE values)
LC50 inhalation rat	> 10.0 but ≤ 20.0 mg/l/4h (Calculated using ATE values)
Tributyoxyethyl phosphate (78-51-3)	
LD50 oral rat	3 g/kg
Alcohols, C12-15, ethoxylated propoxylated (68551-13-3)	
LD50 oral rat	1350 mg/kg
LD50 dermal rat	2000 mg/kg
Alcohols, C12-14-secondary, ethoxylated (84133-50-6)	
LD50 oral rat	2100 mg/kg
Coumarin, 7-(diethylamino)-4-methyl- (91-44-1)	
LD50 oral rat	5 g/kg

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Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.
Reproductive toxicity	: Based on available data, the classification criteria are not met.
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: Harmful if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Harmful in contact with skin. Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/injuries after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. TOXICITY

Ecology - general : May cause long-term adverse effects in the aquatic environment.

#### Tributyloxyethyl phosphate (78-51-3)

LC50 fish 1	10.4 - 12.0 mg/l (96 h - Pimephales promelas [flow-through])
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#### Alcohols, C12-14-secondary, ethoxylated (84133-50-6)

LC50 fish 1	3.2 mg/l (96 h - Pimephales promelas)
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EC50 Daphnia 1	3.2 mg/l (48 h - water flea)
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### 12.2. PERSISTENCE AND DEGRADABILITY

#### ZL-56

Persistence and degradability	Not established.
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### 12.3. BIOACCUMULATIVE POTENTIAL

#### ZL-56

Bioaccumulative potential	Not established.
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#### Tributyloxyethyl phosphate (78-51-3)

BCF fish 1	3.65
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Partition coefficient n-octanol/water	3.65 - 4.78
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### 12.4. MOBILITY IN SOIL

No additional information available

### 12.5. OTHER ADVERSE EFFECTS

Effect on the global warming : No known effects from this product.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. WASTE TREATMENT METHODS

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

## SECTION 14: TRANSPORT INFORMATION

In accordance with DOT/TDG/IATA/IMDG

DOT (non-bulk) : Not Regulated &lt;119 gallons

DOT (bulk) UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol,C6-17 (secondary) poly (3-6) Ethoxylate), 9, III, Marine Pollutant

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TDG	: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol,C6-17 (secondary) poly (3-6) Ethoxylate), 9, III, Marine Pollutant
IATA	: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol,C6-17 (secondary) poly (3-6) Ethoxylate), 9, III, Marine Pollutant
IMDG	: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Alcohol,C6-17 (secondary) poly (3-6) Ethoxylate), 9, III, Marine Pollutant

**ADDITIONAL INFORMATION**

Other information	: No supplementary information available.
Special transport precautions	: Do not handle until all safety precautions have been read and understood.

**SECTION 15: REGULATORY INFORMATION**

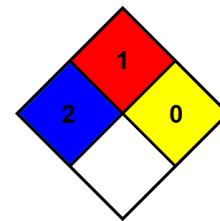
**15.1. FEDERAL REGULATIONS**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories, except for:

Alcohols, C12-14-secondary	CAS No 126950-60-5
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NFPA health hazard	: 2
NFPA fire hazard	: 1
NFPA reactivity	: 0



**15.2. US STATE REGULATIONS**

<b>ZL-56</b>	
State or local regulations	This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**SECTION 16: OTHER INFORMATION**

Date of issue	: 10/28/2016
Revision date	: 05/22/2018
Other information	: None.

*Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.*