Safety Data Sheet

# ZL-27A

## SECTION 1: IDENTIFICATION

### 1.1. PRODUCT IDENTIFIER

Trade name: ZL-27A

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

Relevant identified uses of the substance or mixture: Non-destructive testing
Restricted to professional users.

Uses advised against : None known.

### 1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company and address: **Magnaflux**
155 Harlem Ave.
60025 Glenview, IL
USA
847-657-5300
www.magnaflux.com/Magnaflux

Distributor: Address:

E-mail: support@magnaflux.com

SDS date: 8/27/2024

SDS Version: 5.0

### 1.4. EMERGENCY TELEPHONE NUMBER

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 “First aid measures”.
Emergency number: CHEMTREC 800-424-9300

## SECTION 2: HAZARD(S) IDENTIFICATION

### OSHA/HCS STATUS

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

### 2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Asp. Tox. 1; H304, May be fatal if swallowed and enters airways.

### 2.2. LABEL ELEMENTS

Hazard pictogram(s):

Signal word: Danger

| | |
|---|---|
| Hazard statement(s): | May be fatal if swallowed and enters airways. (H304) |
| Precautionary statement(s): | |
| General: | - |
| Prevention: | - |
| Response: | IF SWALLOWED: Immediately call a POISON CENTER/doctor. (P301+P310)<br>Do NOT induce vomiting. (P331) |
| Storage: | - |
| Disposal: | Dispose of contents/container in accordance with local regulation (P501) |
| Additional labelling: | 19.17 % of the mixture consists of ingredients of unknown toxicity. |

### 2.3. OTHER HAZARDS

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. SUBSTANCES

Not applicable. This product is a mixture.

### 3.2. MIXTURES

| Product/substance | Identifiers | % w/w | Classification | Note |
|---|---|---|---|---|
| Distillates (petroleum), hydrotreated light | CAS No.: 64742-47-8 | 25-40% | Asp. Tox. 1, H304 | [19] |
| Triphenylphosphate | CAS No.: 115-86-6 | 1-3% | | |

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### OTHER INFORMATION

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

## SECTION 4: FIRST-AID MEASURES

### 4.1. DESCRIPTION OF FIRST AID MEASURES

| | |
|---|---|
| General information: | If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).<br>Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink. |
| Inhalation: | Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her. |

| | |
|---|---|
| Skin contact: | Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.<br>If skin irritation occurs: Get medical advice/attention. |
| Eye contact: | If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport. |
| Ingestion: | IF SWALLOWED: Immediately call a POISON CENTER/doctor.<br>Do not induce vomiting! If vomiting occurs, keep head facing down so that vomit does not get into the lungs. Call a doctor or ambulance. Symptoms of chemical pneumonia can appear after several hours. People who have swallowed the product should therefore be kept under medical attention for at least 48 hours. |
| Burns: | Not applicable. |

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

This product contains substances that can cause chemical pneumonia if swallowed. Symptoms of chemical pneumonia may appear after several hours.

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

IF exposed or concerned:
Get immediate medical advice/attention.

### INFORMATION TO MEDICS

Bring this safety data sheet or the label from this product.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. EXTINGUISHING MEDIA

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Carbon oxides (CO / CO2)

### 5.3. ADVICE FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Avoid direct contact with spilled substances.
Ensure adequate ventilation, especially in confined areas.
Contaminated areas may be slippery.

### 6.2. ENVIRONMENTAL PRECAUTIONS

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

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

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. REFERENCE TO OTHER SECTIONS

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: HANDLING AND STORAGE

### 7.1. PRECAUTIONS FOR SAFE HANDLING

Avoid direct contact with the product.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

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

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

| | |
|---|---|
| Recommended storage material: | Always store in containers of the same material as the original container. |
| Storage conditions: | No specific requirements |
| Incompatible materials: | Strong acids, strong bases, strong oxidizing agents, and strong reducing agents. |

### 7.3. SPECIFIC END USE(S)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. CONTROL PARAMETERS

Triphenylphosphate
Long term exposure limit (OSHA Table Z-1) (mg/m$^3$): 3
Long term exposure limit (ACGIH TLV) (mg/m$^3$): 3
Long term exposure limit (NIOSH REL) (mg/m$^3$): 3

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

### 8.2. EXPOSURE CONTROLS

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

| | |
|---|---|
| General recommendations: | Smoking, drinking and consumption of food is not allowed in the work area. |
| Exposure scenarios: | There are no exposure scenarios implemented for this product. |
| Exposure limits: | Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational |

| | |
|---|---|
| | hygiene limit values above. |
| Appropriate technical measures: | The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.<br>Apply standard precautions during use of the product. Avoid inhalation of vapours. |
| Hygiene measures: | In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face. |
| Measures to avoid environmental exposure: | Keep damming materials near the workplace. If possible, collect spillage during work. |

### INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

Generally: Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment:

| Type | Class | Colour | Standards | |
|---|---|---|---|---|
| In case of inadequate ventilation wear respiratory protection. 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. | | | | |

Skin protection:
No specific requirements.

Hand protection:

| Material | Glove thickness (mm) | Breakthrough time (min.) | Standards | |
|---|---|---|---|---|
| Nitrile | 0,38 | > 480 | EN374-2, EN374-3, EN388 |  |

Eye protection:

| Type | Standards | |
|---|---|---|
| Safety glasses | EN166 |  |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

| | |
|---|---|
| Physical state: | Liquid |
| Color: | Green |
| Odor: | Mild |
| Odor threshold (ppm): | No data available |
| pH: | Neutral |
| Density (g/cm$^3$): | 0.925 |
| Relative density: | 0.925 (68 °F) |
| Kinematic viscosity: | 10.23 centistokes |
| Particle characteristics: | Not applicable - product is a liquid |

### PHASE CHANGES

| | |
|---|---|
| Melting point/freezing point (°F): | Not applicable - product is a liquid |
| Softening point/range (°F): | Does not apply to liquids. |
| Boiling point (°F): | No data available |
| Vapor pressure: | No data available |
| Relative vapor density: | No data available |
| Decomposition temperature (°F): | No data available |

### DATA ON FIRE AND EXPLOSION HAZARDS

| | |
|---|---|
| Flash point (°F): | >200 |
| Flash point (°C): | >93 |
| Flammability (°F): | No data available |
| Auto-ignition temperature (°F): | No data available |
| Explosion limits (% v/v): | No data available |

### SOLUBILITY

| | |
|---|---|
| Solubility in water: | No data available |
| n-octanol/water coefficient (LogKow): | No data available |
| Solubility in fat (g/L): | No data available |

### 9.2. OTHER INFORMATION

| | |
|---|---|
| Evaporation rate (n-butylacetate = 100): | No data available |
| VOC (g/L): | 176 |
| Other physical and chemical parameters: | No data available. |
| Oxidizing properties: | No data available |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. REACTIVITY
No data available.

### 10.2. CHEMICAL STABILITY
The product is stable under the conditions, noted in section 7 “Handling and storage”.

### 10.3. POSSIBILITY OF HAZARDOUS REACTIONS, INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCIES
None known.

### 10.4. CONDITIONS TO AVOID
Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

### 10.5. INCOMPATIBLE MATERIALS
Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 10.6. HAZARDOUS DECOMPOSITION PRODUCTS
The product is not degraded when used as specified in section 1.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

**ACUTE TOXICITY**

| | |
|---|---|
| Product/substance | Distillates (petroleum), hydrotreated light |
| Species: | Rat |
| Route of exposure: | Oral |
| Test: | LD50 |
| Result: | > 5000 mg/kg |

| | |
|---|---|
| Product/substance | Distillates (petroleum), hydrotreated light |
| Species: | Rabbit |
| Route of exposure: | Dermal |
| Test: | LD50 |
| Result: | > 5000 mg/kg |

| | |
|---|---|
| Product/substance | Distillates (petroleum), hydrotreated light |
| Species: | Rat |
| Route of exposure: | Inhalation |
| Test: | LC50 (4 hours) |
| Result: | > 5000 mg/m$^3$ |

| | |
|---|---|
| Product/substance | Triphenylphosphate |
| Species: | Rat |
| Route of exposure: | Oral |
| Test: | LD50 |
| Result: | 3500 mg/kg |

| | |
|---|---|
| Product/substance | Triphenylphosphate |
| Species: | Rabbit |
| Route of exposure: | Dermal |
| Test: | LD50 |
| Result: | > 10000 mg/kg |

| | |
|---|---|
| Product/substance | 2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione |
| Species: | Rat |
| Route of exposure: | Oral |
| Test: | LD50 |

| | |
|---|---|
| Result: | >10000 mg/kgbw |

| | |
|---|---|
| Product/substance | 2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione |
| Species: | Rabbit |
| Route of exposure: | Dermal |
| Test: | LD50 |
| Result: | >2000 mg/kgbw |

### SKIN CORROSION/IRRITATION
Based on available data, the classification criteria are not met.

### SERIOUS EYE DAMAGE/IRRITATION
Based on available data, the classification criteria are not met.

### RESPIRATORY SENSITISATION
Based on available data, the classification criteria are not met.

### SKIN SENSITISATION
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
Based on available data, the classification criteria are not met.

### STOT-REPEATED EXPOSURE
Based on available data, the classification criteria are not met.

### ASPIRATION HAZARD
May be fatal if swallowed and enters airways.

### LONG TERM EFFECTS
None known.

### OTHER INFORMATION
None known.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. TOXICITY

| | |
|---|---|
| Product/substance | 7-(diethylamino)-4-methyl-2-benzopyrone |
| Species: | Fish |
| Duration: | 96 hours |
| Test: | LC50 |
| Result: | 15.3 mg/L |

| | |
|---|---|
| Product/substance | 7-(diethylamino)-4-methyl-2-benzopyrone |
| Species: | Daphnia, Daphnia magna |
| Duration: | 48 hours |
| Test: | LC50 |
| Result: | 9.7 mg/L |

| | |
|---|---|
| Product/substance | 2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione |

| | |
|---|---|
| Species: | Fish, Danio rerio |
| Duration: | 96 hours |
| Test: | LC50 |
| Result: | 172.247 mg/L |

| | |
|---|---|
| Product/substance | 2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione |
| Test method: | OECD 202 |
| Species: | Daphnia, Daphnia magna |
| Duration: | 48 hours |
| Test: | EC50 |
| Result: | 0.17 mg/L |

| | |
|---|---|
| Product/substance | 2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione |
| Test method: | OECD 201 |
| Species: | Algae, Desmodesmus subspicatus |
| Duration: | 72 hours |
| Test: | EC50 |
| Result: | 381.3 mg/L |

### 12.2. PERSISTENCE AND DEGRADABILITY
Based on available data, the classification criteria are not met.

### 12.3. BIOACCUMULATIVE POTENTIAL
Based on available data, the classification criteria are not met.

### 12.4. MOBILITY IN SOIL
No data available.

### 12.5. RESULTS OF PBT AND VPVB ASSESSMENT
This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

### 12.6. OTHER ADVERSE EFFECTS
None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

### RCRA HAZARDOUS WASTE ("P" AND "U" LIST) (40 CFR 261)
None of the components are listed

### SPECIFIC LABELLING

### CONTAMINATED PACKING
Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: TRANSPORT INFORMATION

| | 14.1 UN / ID | 14.2 UN proper shipping name | 14.3 Hazard class(es) | 14.4 PG* | 14.5 Env** | Other information: |
|---|---|---|---|---|---|---|
| DOT | Not regulated for transport | - | | - | No | See below for additional information. |
| IMDG | Not regulated for transport | - | | - | No | See below |

| | 14.1 UN / ID | 14.2 UN proper shipping name | 14.3 Hazard class(es) | 14.4 PG* | 14.5 Env** | Other information: |
|---|---|---|---|---|---|---|
| | | | | | | for additional information. |
| IATA | Not regulated for transport | - | | - | No | See below for additional information. |

* Packing group

** Environmental hazards

**ADDITIONAL INFORMATION**

DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.
IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.
This product is within scope of the regulations of transport of dangerous goods.

### 14.6. SPECIAL PRECAUTIONS FOR USER

Not applicable.

### 14.7. TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

No data available.

## SECTION 15: REGULATORY INFORMATION

### 15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

### 15.2. U.S. FEDERAL REGULATIONS

| | |
|---|---|
| TSCA (the non-confidential portion): | Distillates (petroleum), hydrotreated light is listed<br>Triphenylphosphate is listed<br>7-(diethylamino)-4-methyl-2-benzopyrone is listed<br>2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione is listed |
| Clean Air Act: | None of the components are listed |
| EPCRA Section 302: | None of the components are listed |
| EPCRA Section 304: | None of the components are listed |
| EPCRA section 313: | None of the components are listed |
| CERCLA: | None of the components are listed |

**STATE REGULATIONS**

| | |
|---|---|
| California / Prop. 65: | See product label for Prop 65 Statement (if applicable) |
| Massachusetts / Right To Know Act: | Triphenylphosphate is listed |

| | |
|---|---|
| New Jersey / Right To Know Act: | Triphenylphosphate / Substance number: 1951<br>— |
| New York / Right To Know Act: | Triphenylphosphate is listed<br>Triphenylphosphate is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds<br>— |
| Pennsylvania / Right To Know Act: | Triphenylphosphate is listed<br>— |

**NFPA**

Health hazard: 1
Fire hazard: 1
Instability hazard: 0

### 15.4. RESTRICTIONS FOR APPLICATION

Restricted to professional users.

### 15.5. DEMANDS FOR SPECIFIC EDUCATION

No specific requirements.

### 15.6. ADDITIONAL INFORMATION

Not applicable.

### 15.7. CHEMICAL SAFETY ASSESSMENT

No

### 15.8. SOURCES

OSHA Hazard Communication Standard (29 CFR 1910.1200)

## SECTION 16: OTHER INFORMATION

**FULL TEXT OF H-PHRASES AS MENTIONED IN SECTION 3**

H304, May be fatal if swallowed and enters airways.

**THE FULL TEXT OF IDENTIFIED USES AS MENTIONED IN SECTION 1**

None known.

**ABBREVIATIONS AND ACRONYMS**

ACGIH = American Conference of Governmental Industrial Hygienists
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances
EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

## ADDITIONAL INFORMATION

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

## THE SAFETY DATA SHEET IS VALIDATED BY

Magnaflux

## OTHER

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product.
Information in this safety data sheet cannot be used as a product specification.
Country-language: US-en