

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Standard JIS Z 7250:2000, and EU REACH Regulations

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** **LEAD STYPHNATE – NORMAL**  
**CAS Number:** 15245-44-0  
**Synonyms:** Lead trinitroresorcinate  
**Chemical Family:** Styphnic acid salt  
**Formula:** C<sub>6</sub>HN<sub>3</sub>O<sub>8</sub>Pb  
**Product Use:** Initiating explosive  
**U.N. Number:** UN 0130  
**U.N. Dangerous Goods Class:** Explosive, 1.1A  
**Manufacturer/Responsible Party:** Olin Winchester, LLC  
**Manufacturers' Address:** 600 Powder Mill Road, East Alton, IL 62024 [www.winchester.com](http://www.winchester.com)  
**Emergency Telephone Number:** US/Canada: 1-800-424-9300  
Outside US/Canada: 703-527-3887  
**SDS Control Group:** 618-258-3507 (Technical Information Only)

Olin SDS No.: 00080.0001

Issue Date: 6/1/15

Revision Date: 02/28/2019

Revision No.: 5

## 2. HAZARDS IDENTIFICATION

**DANGER!**

EXPLOSIVE. KEEP AWAY FROM HEAT AND SPARKS. DO NOT SUBJECT TO MECHANICAL SHOCK. KEEP WETTED WITH WATER. CAN CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. HARMFUL IF INHALED, SWALLOWED OR ABSORBED THROUGH THE SKIN. CONTAINS A MATERIAL WHICH MAY CAUSE BLOOD, KIDNEY, NERVOUS SYSTEM AND REPRODUCTIVE ADVERSE EFFECTS. MAY CAUSE CANCER BASED ON EFFECTS IN LABORATORY ANIMALS. TOXIC TO AQUATIC LIFE. POSSIBLE LONG LASTING ENVIRONMENTAL EFFECTS.

US DOT SYMBOLS



CANADA (WHMIS) SYMBOLS

This Product is not subject to WHMIS

Class 3.2 Explosive

GHS HAZARD SYMBOLS



**GHS Classifications:**

Explosive Division 1.1  
STOT RE Category 1  
Carcinogenicity Category 1A  
Reproductive Toxicity Category 1A  
Aquatic Environment, Chronic II

**Signal Word:**

Danger

**Hazard Statements :**

H201: Explosive; mass explosion hazard  
H350: May cause cancer  
H360: May damage fertility or the unborn child  
H372: Causes damage to nervous system, kidney, and hematopoietic system through prolonged or repeated exposure  
H411: Toxic to aquatic life with long lasting effects

**Target organs:**

Nervous, renal and hematopoietic systems

**Precautionary Statements:**

P102: Keep out of reach of children  
P210: Keep away from heat/sparks/open flame/hot surfaces  
P230: Keep wetted with water  
P240: Ground/bond container and receiving equipment  
P250: Do not subject to shock/friction  
P260: Do not breathe dust/fume/gas/mist/vapors/spray  
P264: Wash hands thoroughly after handling  
P270: Do not eat, drink or smoke when using this product  
P271: Use only outdoors or in a well-ventilated area  
P273: Avoid release to the environment  
P280: Wear protective gloves/protective clothing/eye protection/face protection

**GHS Pictograms:**

Explosive; Pictogram: exploding bomb  
Specific Target Organ Toxicity; Pictogram Code: GHS08  
Environment; Pictogram Code: GHS09

**EU Classifications:**

Hazard Symbols

E, T, N

Risk Phrases	R3: Extreme risk of explosion by shock, friction, fire or other sources of ignition R23/25: Toxic by inhalation and if swallowed R45 (Category 1): May cause cancer R48: Danger of serious damage to health by prolonged exposure R60: May impair fertility R63: Possible risk of harm to the unborn child R51/53: Toxic to aquatic organisms and many cause long-term adverse effects in the aquatic environment
Safety Phrases	S2: Keep out of reach of children S15: Keep away from heat S20/21: When using do not eat, drink or smoke S22: Do not breathe dust S28: After contact with skin, wash immediately with plenty of soap and water S33: Take precautionary measures against static discharges S35: This material and its container must be disposed of in a safe way S39: Wear eye/face protection S48: Keep wetted with water S51: Use only in well-ventilated areas S57: Use appropriate containment to avoid environmental contamination

### Health Hazards or Risks From Exposure

This material is an organic lead compound. Dust or fume can cause eye irritation consisting of redness, swelling, and pain. May cause conjunctivitis with repeated exposures. Skin contact with dust may cause irritation consisting of redness and/or swelling. May be harmful if absorbed through skin. Harmful if inhaled. Inhalation of high concentrations may cause respiratory and nasal irritation, coughing, and difficulty breathing. Ingestion may cause nausea, vomiting, constipation, cramps, and or stomach pain. Chronic exposure to lead can cause kidney damage, anemia, reproductive effects, developmental effects and permanent nervous system damage in humans including changes in cognitive function. Occupational exposure to lead is associated with lung and stomach cancer. Lead is classified as a probable human carcinogen

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% By Weight	CAS Number	EINECS/ ELINCS #
Normal lead styphnate	100	15245-44-0	239-290-0

### 4. FIRST AID MEASURES

<u>Eye Contact:</u>	Immediately flush out fume or particles with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician at once.
<u>Skin Contact:</u>	Wash skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and launder before reuse. If skin irritation or rash develops and persists or recurs, get medical attention..
<u>Inhalation:</u>	If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. If breathing is difficult, give oxygen. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention.
<u>Ingestion:</u>	If ingested, immediately call a physician. Induce vomiting if possible, as directed by medical personnel. Never give anything by mouth to an unconscious person.

#### Medical Conditions Aggravated By Exposure:

Exposure may aggravate an existing dermatitis, blood condition, asthma, kidney disease, emphysema, or other respiratory disease.

#### Recommendations To Physicians:

There is no specific antidote for this chemical. Remove from exposure and treat symptoms.

### 5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
Explosive	Yes	Flammable	Not applicable
Combustible	Not applicable	Pyrophoric	No
Flash Point (°C):	Not applicable	Burning Rate of Material:	Not applicable
Lower Explosive Limit:	Not applicable	Autoignition Temp.:	No data

Upper Explosive Limit: | Not applicable |

Flammability Classification: (defined by 29 CFR 1910.1200) | Explosive

Unusal Fire and Explosion Hazards:

Do not subject to mechanical shock. Material involved in a fire may not be totally destroyed and will still be subject to detonation. Dust may cause an ignitable and/or an explosive atmosphere.

Extinguishing Media:

Water spray. Apply by mechanical means only.

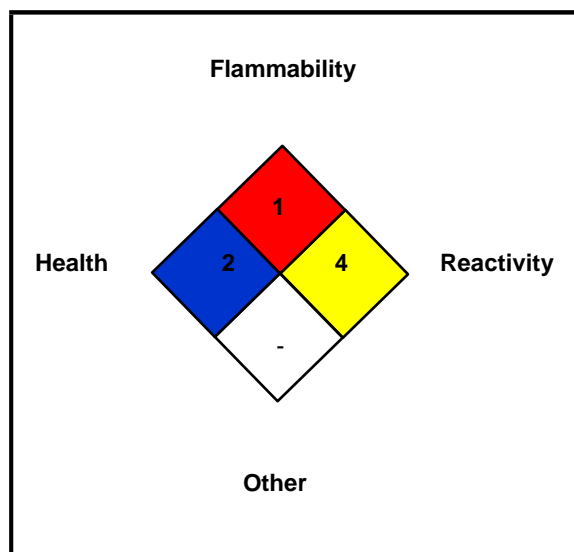
Special Firefighting Procedures:

Fire involved cargo may explode. Fight all fires from an explosion resistant location. Evacuate all non-essential personnel.

Use water to cool containers exposed to fire. Do not move material exposed to or involved in a fire. Use extreme caution working around this material and avoid any form of mechanical shock. Keep material wet if possible. "DO NOT ALLOW TO DRY."

Firefighters must wear self-contained breathing apparatus (SCBA) and full protective equipment. Structural firefighters' protective clothing will only provide limited protection.

Prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas, if practical.

**NFPA RATING SYSTEM****HMIS RATING SYSTEM**

HEALTH HAZARD (BLUE)		3*	
FLAMMABILITY HAZARD (RED)		1	
PHYSICAL HAZARD (YELLOW)		4	
<b>PROTECTIVE EQUIPMENT</b>			
EYES	PPE CODE	RESPIRATORY	HEARING
	C	See Sect. 8	See Sect. 8

**Hazard Scale:** 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

**6. ACCIDENTAL RELEASE MEASURES**

**FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC AT 800-424-9300.**

Spill Response:

A SPILL OF THIS PRODUCT WILL REPRESENT AN EXPLOSION HAZARD. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Clean-up of this material will require extreme caution. Use non-sparking equipment and keep material wet at all times. If a large spill occurs call 1-888-289-1911 for technical assistance.

Accidental Release Procedures:

If a large spill occurs create a dike and flood with large amounts of water. Prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. See Section 13 for waste disposal.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling:

DO NOT SUBJECT TO MECHANICAL SHOCK. Avoid dispersion of dust in air. Dust should be removed by washing or HEPA vacuuming. Use appropriate personal protective equipment (see Section 8). Workers should wash hands thoroughly after handling. Eating, drinking and smoking should be prohibited in areas where this material is handled and stored.

### Conditions for Safe Storage:

Store in accordance with local regulations. Store in a cool, dry, well-ventilated place away from all sources of ignition. Do not store at temperatures above 65.5°C (150°F). Product has a 2 year shelf life. Store as prescribed by Bureau of Alcohol, Tobacco and Firearms guidelines for explosive storage. Store away from Acids, Class B & C explosives, strong oxidizers, and caustics. Avoid mechanical impact or shock and electrical discharge.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters:

CAS #	CHEMICAL NAME	ACGIH TLV	OSHA PEL	INTERNATIONAL OELS
15245-44-0	Normal lead styphnate	None established	None established	None established

### Engineering Controls:

Local explosion-proof exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general explosion-proof exhaust ventilation.

### Respiratory Protection:

Not normally needed. Maintain airborne contaminant concentrations below guidelines listed above. Use an appropriate approved air-purifying respirator equipped with HEPA cartridges/canisters where there is the potential for exceeding established occupational exposure limits.

### Eye/Face Protection:

Use safety glasses.

### Hand Protection:

Gloves recommended

### Skin Protection:

Wear impervious gloves and other protective clothing (aprons, coveralls) as appropriate to prevent skin contact when using this product.

### Hearing Protection:

Not normally needed.

### General Hygiene:

Do not eat, drink, or smoke while using this product. Wash hands thoroughly after use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Appearance:</i>	Hexagonal plates	<i>Physical State:</i>	Solid
<i>Molecular Weight:</i>	450.3	<i>Odor:</i>	None
<i>Boiling Point (°F):</i>	Not applicable	<i>Melting point:</i>	Not applicable
<i>Vapor Pressure (mm Hg):</i>	Not applicable	<i>Freezing point:</i>	Not applicable
<i>Vapor Density (air = 1):</i>	Not applicable	<i>Bulk Density (g/cc):</i>	1.5
<i>Specific gravity (g/cc):</i>	3	<i>Viscosity (cps):</i>	Not applicable
<i>pH:</i>	5 – 6 (solution)	<i>Decomposition Temperature:</i>	Explodes at 270 °C (518 °F)
<i>Solubility in Water (20 °C):</i>	< 0.02 %	<i>Evaporation Rate:</i>	Not applicable
<i>Volatiles, Percent by volume:</i>	Not applicable	<i>Octanol/water partition coefficient:</i>	Unknown

## 10. STABILITY AND REACTIVITY

### Stability:

Will explode with mechanical impact or shock

### Possibility of Hazardous Reactions:

Hazardous polymerization will not occur

### Incompatible Materials:

Acetylene, chlorine

### Hazardous Decomposition Products:

Nitrogen oxides, carbon monoxide, lead oxides, carbon dioxide, lead dust/fume, irritating aldehydes and ketones.

### Conditions to Avoid:

Heat, mechanical impact or shock, electrical discharge. Contact with incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

Potential Routes of Entry: Inhalation, Skin, and by Ingestion.

Effects Of Acute Exposure:

	Normal lead styphnate
Inhalation LC <sub>50</sub>	No data; believed to be toxic
Skin Contact LD <sub>50</sub>	No data; believed to be toxic
Ingestion LD <sub>50</sub>	No data; believed to be toxic
Irritation	Eye, skin and respiratory irritant
Sensitization	No data

Other Adverse Effects:

Target Organ Toxicity:

No reported target organ toxicity from this product. Lead has caused nervous system, kidney and hematopoietic system damage in humans and laboratory animals.

Reproductive Toxicity:

This product is not known or reported to cause reproductive effects. Lead has been shown to reduce male reproductive function in humans and laboratory animals.

Teratogenicity (Birth Defects):

This product is not known or reported to cause developmental toxicity. Lead has been shown to affect fetal development including birth defects.

Mutagenicity:

This product is not known or reported to be mutagenic. Lead has been shown to be mutagenic in several *in vitro* assays.

Carcinogenicity:

IARC and US EPA list lead and lead compounds as probable human carcinogens (Group 2A) based on sufficient evidence from animal studies and limited evidence from human studies (epidemiology). NTP classifies lead and lead compounds as reasonably anticipated to be human carcinogens.

## 12. ECOLOGICAL INFORMATION

Environmental Effects:

PRODUCT: Product has not been tested for environmental properties.

COMPONENTS:

Lead:

LC<sub>50</sub> (48 hrs.) to bluegill Sunfish (*Lepomis macrochirus*) is reported to be 2-5 mg/l. Lead is toxic to waterfowl.

Environmental Fate:

MOBILITY:

Dissolved lead may migrate through soil.

PERSISTANCE/DEGRADABILITY:

Not biodegradable. Lead may persist and accumulate in the environment.

BIOACCUMULATION:

No data

## 13. DISPOSAL CONSIDERATIONS

Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding the treatment, storage and disposal for hazardous and nonhazardous wastes.

## 14. TRANSPORT INFORMATION

Regulatory Information for US DOT, IATA, IMO, and ADR:

Proper Shipping Name:

Lead trinitroresorcinate, wetted

Hazard Class Number and Description: Explosive 1.1A

UN Identification Number: UN 0130

Packing Group: PGII

DOT Label(s) Required: 1.1A/1.1 Placard

Marine Pollutant: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

Special Comments: Forbidden on passenger or cargo only aircraft. Forbidden on passenger vessel. Subject to 49 CFR176.84 stowage E and codes 2E, 6E.

Explosive substances of Division 1.1 Compatibility Group A (1.1A) are forbidden for transportation if dry or not desensitized, unless incorporated in a device.

If shipment of the explosive substance is to take place at a time that freezing weather is anticipated, the water contained in the explosive substance must be mixed with denatured alcohol so that freezing will not occur.

Additional Information:

North American Emergency Response Guidebook Number (2004): 112

U.S. DEPARTMENT OF TRANSPORTATION SHIPPING REGULATIONS: This product is classified as dangerous goods under 49 CFR 172.101. Note: May be reclassified domestically as an ORM-D if packaged as a consumer commodity per 49 CFR 173.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is classified as Dangerous Goods.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is classified as Dangerous Goods.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is classified as Dangerous Goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is classified by the United Nations Economic Commission for Europe to be dangerous goods.

**15. REGULATORY INFORMATION**US FEDERAL

TSCA	This chemical is listed on the Toxic Substance Control Act inventory.				
CERCLA:	Not listed				
SARA 313:	Lead and Lead compounds				
SARA 311/312:	<u>Health:</u>	Acute – Yes Chronic - Yes	<u>Fire:</u> No	<u>Reactivity:</u> Yes	<u>Release of Pressure:</u> No
SARA 302 EHS List:	Not listed.				

STATE RIGHT-TO-KNOW STATUS

Component	California	New Jersey	Pennsylvania	Massachusetts	Michigan
Normal lead styphnate	X	Not listed	Not listed	X	Not listed

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65)

Warning! This product contains detectable amounts of a chemical known to the State of California to cause cancer and/or birth defects or other reproductive harm.

## GHS CLASSIFICATION

Explosive Division 1.1  
STOT RE Category 1  
Carcinogenicity Category 1A  
Reproductive Toxicity Category 1A  
Aquatic Environment, Chronic II

## EUROPEAN REGULATIONS

### Hazard Classification

Danger Symbols: E, T, N

Risk Phrases: R3, R23/25, R48, R60, R63, R51/53

Safety Phrases: S2, S15, S20/21, S22, S28, S33, S35, S39, S48, S51, S57

German WGK Classification: 3

## CANADIAN REGULATIONS

DSL/NDSL Inventory: This chemical is listed on the DSL

IDL: Not listed

CEPA PRIORITIES LIST: Not listed

WHMIS: This product is not subject to WHMIS. It is regulated as a Class 3.2 Explosive in Canada.

## JAPANESE REGULATIONS

Existing National Inventory of Chemical Substances (ENCS): Listed

Japanese Priority Assessment Chemical Substances: Not listed

## OTHER INTERNATIONAL CHEMICAL INVENTORIES

Swiss Giftliste List of Toxic Substances: Listed

Australian Inventory (AICS): Listed

## 16. OTHER INFORMATION

REVISIONS: 05

DATE: 02/28/2019

PREPARED BY: Olin Winchester, LLC

OTHER: Additional information available from: [www.winchester.com](http://www.winchester.com)

**NOTICE:** THE INFORMATION IN THIS SDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. OLIN BELIEVES THIS INFORMATION TO BE RELIABLE AND CURRENT AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.