

# SAFETY DATA SHEET

according to the OSHA  
Hazard Communication Standard

Version 8.15  
Revision Date 07/21/2026  
Print Date 07/22/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : PbS core-type quantum dots, oleic acid coated, fluorescence  $\lambda_{em} > 1600$  nm, 10 mg/ml in toluene

Product Number : 747084  
Brand : Aldrich

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : Not Available

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### Hazards for the product as supplied

Flammable liquids : Category 2

Skin irritation : Category 2

|                                                    |                                       |
|----------------------------------------------------|---------------------------------------|
| Reproductive toxicity                              | : Category 1A                         |
| Specific target organ toxicity - single exposure   | : Category 3 (Central nervous system) |
| Specific target organ toxicity - repeated exposure | : Category 2                          |
| Aspiration hazard                                  | : Category 1                          |
| Short-term (acute) aquatic hazard                  | : Category 2                          |
| Long-term (chronic) aquatic hazard                 | : Category 3                          |

#### Other hazards

None known.

#### GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H360 May damage fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H401 Toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
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.

**Response:**

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P331 Do NOT induce vomiting.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture  
CAS-No. : Not Assigned

**Components**

| Chemical name | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|---------------|-------------------|-----------------------|--------------|
| Toluene       | 108-88-3*         | >= 90 - <= 100        | -            |
| Lead sulphide | 1314-87-0*        | >= 1 - < 2.5          | -            |

\* Indicates that the identifier is a CAS No.  
Actual concentration is withheld as a trade secret

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#### SECTION 4. FIRST AID MEASURES

|                                                             |                                                                                                                                                                          |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : Show this safety data sheet to the doctor in attendance.                                                                                                               |
| If inhaled                                                  | : After inhalation: fresh air. Call in physician.                                                                                                                        |
| In case of skin contact                                     | : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.                                           |
| In case of eye contact                                      | : After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.                                                                     |
| If swallowed                                                | : After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately. |
| Most important symptoms and effects, both acute and delayed | : The most important known symptoms and effects are described in the labelling (see section 2 GHS label elements) and/or in section 11                                   |
| Protection of first-aiders                                  | : For personal protection see section 8.                                                                                                                                 |
| Notes to physician                                          | : No data available                                                                                                                                                      |

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#### SECTION 5. FIREFIGHTING MEASURES

|                                |                                                                                |
|--------------------------------|--------------------------------------------------------------------------------|
| Unsuitable extinguishing media | : For this substance/mixture no limitations of extinguishing agents are given. |
|--------------------------------|--------------------------------------------------------------------------------|

|                                       |                               |
|---------------------------------------|-------------------------------|
| Specific hazards during fire fighting | : Pay attention to flashback. |
|---------------------------------------|-------------------------------|

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

|                      |                 |
|----------------------|-----------------|
| Hazardous combustion | : Carbon oxides |
|----------------------|-----------------|

products

Sulphur oxides

Lead oxides

Specific extinguishing methods : No data available

Further information : Remove container from danger zone and cool with water.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Do not breathe vapours, aerosols.  
Avoid substance contact.  
Ensure adequate ventilation.  
Keep away from heat and sources of ignition.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:  
Wear appropriate personal protective equipment, as indicated in Section 8.

Environmental precautions : Do not let product enter drains.  
Risk of explosion.

Methods and materials for containment and cleaning up : Cover drains. Collect, bind, and pump off spills.  
Observe possible material restrictions (see sections 7 and 10).  
Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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## SECTION 7. HANDLING AND STORAGE

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For precautions see section 2 GHS label elements

- Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.  
Take precautionary measures against static discharge.
- Advice on safe handling : Work under hood. Do not inhale substance/mixture.  
Avoid generation of vapours/aerosols.
- Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place.  
Keep away from heat and sources of ignition.  
Keep locked up or in an area accessible only to qualified or authorised persons.
- Storage class : 3, Flammable liquids
- Recommended storage temperature : 36 - 46 °F / 2 - 8 °C
- Further information on storage stability : Do not freeze.  
Keep refrigerated.  
Handle and store under inert gas.  
Air and light sensitive.  
Moisture sensitive.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

| Components    | CAS-No.   | Value type<br>(Form of exposure) | Control parameters /<br>Permissible concentration | Basis        |
|---------------|-----------|----------------------------------|---------------------------------------------------|--------------|
| Toluene       | 108-88-3  | TWA                              | 100 ppm<br>375 mg/m <sup>3</sup>                  | OSHA P0      |
|               |           | STEL                             | 150 ppm<br>560 mg/m <sup>3</sup>                  | OSHA P0      |
|               |           | TWA                              | 200 ppm                                           | OSHA Z-2     |
|               |           | CEIL                             | 300 ppm                                           | OSHA Z-2     |
|               |           | Peak                             | 500 ppm                                           | OSHA Z-2     |
|               |           | TWA                              | 20 ppm                                            | ACGIH        |
|               |           | TWA                              | 100 ppm<br>375 mg/m <sup>3</sup>                  | NIOSH REL    |
|               |           | ST                               | 150 ppm<br>560 mg/m <sup>3</sup>                  | NIOSH REL    |
| Lead sulphide | 1314-87-0 | TWA                              | 0.05 mg/m <sup>3</sup><br>(Lead)                  | ACGIH        |
|               |           | PEL                              | 0.05 mg/m <sup>3</sup><br>(Lead)                  | OSHA<br>CARC |
|               |           | TWA                              | 0.05 mg/m <sup>3</sup><br>(Lead)                  | NIOSH REL    |

### Biological occupational exposure limits

| Components    | CAS-No.   | Control parameters | Biological specimen | Sampling time                                            | Permissible concentration | Basis     |
|---------------|-----------|--------------------|---------------------|----------------------------------------------------------|---------------------------|-----------|
| Toluene       | 108-88-3  | Toluene            | In blood            | Prior to last shift of workweek                          | 0.02 mg/l                 | ACGIH BEI |
|               |           | Toluene            | Urine               | End of shift (As soon as possible after exposure ceases) | 0.03 mg/l                 | ACGIH BEI |
|               |           | o-Cresol           | Urine               | End of shift (As soon as possible after exposure ceases) | 0.3 mg/g creatinine       | ACGIH BEI |
| Lead sulphide | 1314-87-0 | Lead (Lead)        | In blood            | Not critical                                             | 200 µg/l                  | ACGIH BEI |

**Engineering measures** : No data available

### Personal protective equipment

Respiratory protection : required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be

properly documented.

#### Hand protection

Remarks : required

Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Safety glasses

Skin and body protection : Flame retardant antistatic protective clothing.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : colourless

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/ range : -135.4 °F / -93.0 °C

Boiling point/boiling range : 231.1 °F / 110.6 °C

Flash point : 39.2 °F / 4.0 °C

Method: closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Flammability (liquids) : No data available

Burning rate : No data available

Self-ignition : 995.0 °F / 535.0 °C

|                                                     |                                                |
|-----------------------------------------------------|------------------------------------------------|
| Upper explosion limit /<br>Upper flammability limit | : 7 %(V)                                       |
| Lower explosion limit /<br>Lower flammability limit | : 1.2 %(V)                                     |
| Vapour pressure                                     | : 21.8 mmHg (68.0 °F / 20.0 °C)                |
| Relative vapour density                             | : No data available                            |
| Relative density                                    | : No data available                            |
| Density                                             | : 0.86 g/cm <sup>3</sup> (77.00 °F / 25.00 °C) |
| Water solubility                                    | : No data available                            |
| Partition coefficient: n-<br>octanol/water          | : No data available                            |
| Autoignition temperature                            | : 995 °F / 535 °C                              |
| Decomposition<br>temperature                        | : No data available                            |
| Viscosity, dynamic                                  | : No data available                            |
| Viscosity, kinematic                                | : No data available                            |
| Flow time                                           | : No data available                            |
| Explosive properties                                | : Not classified as explosive.                 |
| Oxidizing properties                                | : none                                         |
| Particle characteristics<br>Particle size           | : No data available                            |

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## SECTION 10. STABILITY AND REACTIVITY

|                                       |                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------|
| Reactivity                            | : Vapours may form explosive mixture with air.                                            |
| Chemical stability                    | : The product is chemically stable under standard ambient conditions (room temperature) . |
| Possibility of hazardous<br>reactions | : No data available                                                                       |
| Conditions to avoid                   | : Warming.                                                                                |
| Incompatible materials                | : Strong oxidizing agents                                                                 |

Hazardous decomposition : For Hazardous combustion products in the event of products fire: see section 5

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## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Mixture

##### Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

##### Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

##### Serious eye damage/eye irritation

No data available

##### Respiratory or skin sensitization

No data available

##### Germ cell mutagenicity

No data available

##### Carcinogenicity

IARC: 2A - Group 2A: Probably carcinogenic to humans (Lead sulphide)

NTP: RAHC - Reasonably anticipated to be a human carcinogenThe reference note has been added by TD based on the background information of the NTP. (Lead sulphide)

OSHA: OSHA specifically regulated carcinogen (Lead sulphide)

##### Reproductive toxicity

No data available

##### Specific target organ toxicity - single exposure

No data available

##### Specific target organ toxicity - repeated exposure

No data available

##### Aspiration hazard

Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

### 11.2 Additional Information

Lung irritation, chest pain, pulmonary edema, Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce, and scrotum in animals.

Stomach - Irregularities - Based on Human Evidence

## Components

### Toluene

#### Acute toxicity

LD50 Oral - Rat - male - 5,580 mg/kg  
(Directive 67/548/EEC, Annex V, B.1.)  
LC50 Inhalation - Rat - male - 4 h - 25.7 mg/l - vapour  
(OECD Test Guideline 403)  
LD50 Dermal - Rabbit - male - > 5,000 mg/kg  
Remarks: (ECHA)

#### Skin corrosion/irritation

Skin - Rabbit  
Result: irritating - 4 h  
(Regulation (EC) No. 440/2008, Annex, B.4)

#### Serious eye damage/eye irritation

Eyes - Rabbit  
Result: No eye irritation  
(OECD Test Guideline 405)

#### Respiratory or skin sensitization

Maximisation Test - Guinea pig  
Result: negative  
(Regulation (EC) No. 440/2008, Annex, B.6)

#### Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test  
Test system: Mouse lymphoma test  
Result: negative  
Test Type: Ames test  
Test system: *S. typhimurium*  
Result: negative  
Species: Rat - Bone marrow  
Result: negative  
Remarks: (ECHA)

#### Carcinogenicity

No data available

#### Reproductive toxicity

Suspected of damaging the unborn child.

#### Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Central nervous system  
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

#### Specific target organ toxicity - repeated exposure

Inhalation - May cause damage to organs through prolonged or repeated exposure.  
- Central nervous system  
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

#### Aspiration hazard

Aspiration may cause pulmonary oedema and pneumonitis.

## Lead sulphide

### Acute toxicity

Acute toxicity estimate Oral - 500.1 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute toxicity estimate Inhalation - 4 h - 1.6 mg/l - dust/mist

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Dermal: No data available

No data available

### Skin corrosion/irritation

Remarks: No data available

### Serious eye damage/eye irritation

Remarks: No data available

### Respiratory or skin sensitization

No data available

### Germ cell mutagenicity

No data available

### Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

NTP:

The reference note has been added by TD based on the background information of the NTP.

### Reproductive toxicity

May damage the unborn child. Positive evidence from human epidemiological studies.

May damage fertility. Positive evidence from human epidemiological studies.

### Specific target organ toxicity - single exposure

No data available

### Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

### Aspiration hazard

No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **Toluene:**

|                                                                        |                                                                                                                                                                                                |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                                       | : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l<br>End point: mortality<br>Exposure time: 96 h<br>Test Type: flow-through test<br>Analytical monitoring: yes<br>Remarks: (ECHA)          |
| Toxicity to daphnia and other aquatic invertebrates                    | : EC50 (Ceriodaphnia dubia (water flea)): 3.78 mg/l<br>End point: mortality<br>Exposure time: 48 h<br>Analytical monitoring: yes<br>Method: US-EPA                                             |
| Toxicity to fish (Chronic toxicity)                                    | : NOEC (Oncorhynchus kisutch (coho salmon)): 1.39 mg/l<br>End point: Growth inhibition<br>Exposure time: 40 d<br>Test Type: flow-through test<br>Analytical monitoring: yes<br>Remarks: (ECHA) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC (Ceriodaphnia dubia (water flea)): 0.74 mg/l<br>End point: reproduction rate<br>Exposure time: 7 d<br>Analytical monitoring: yes<br>Method: US-EPA                                      |
| Toxicity to microorganisms                                             | : EC50 (Bacteria): 84 mg/l<br>Exposure time: 24 h<br>Test Type: static test<br>Remarks: (ECHA)                                                                                                 |

##### **Lead sulphide:**

|                                                     |                                                                                                                |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | : LC50 (Pimephales promelas (fathead minnow)): 0.915 mg/l<br>Exposure time: 96 h<br>Remarks: (ECOTOX Database) |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 0.138 mg/l<br>Exposure time: 48 h<br>Remarks: (ECOTOX Database)           |
| M-Factor (Acute aquatic toxicity)                   | : 1                                                                                                            |

M-Factor (Chronic aquatic : 1  
toxicity)

## **Persistence and degradability**

### **Components:**

#### **Toluene:**

Biodegradability : aerobic  
Result: Readily biodegradable.  
Biodegradation: 86 %  
Exposure time: 20 d  
Remarks: (IUCLID)

#### **Lead sulphide:**

Biodegradability : Remarks: The methods for determining  
biodegradability are not applicable to inorganic  
substances.

## **Bioaccumulative potential**

### **Components:**

#### **Toluene:**

Bioaccumulation : Species: Leuciscus idus (Golden orfe)  
Bioconcentration factor (BCF): 90  
Exposure time: 3 d  
Concentration: 0.05 mg/l

Partition coefficient: n- : log Pow: 2.73 (68 °F / 20 °C)  
octanol/water pH: 7  
Remarks: Bioaccumulation is not expected.

#### **Lead sulphide:**

Bioaccumulation : Remarks: No data available

Partition coefficient: n- : Remarks: Not applicable for inorganic substances  
octanol/water

## **Mobility in soil**

### **Components:**

#### **Lead sulphide:**

Stability in soil : Remarks: No data available

## **Other adverse effects**

### **Components:**

#### **Lead sulphide:**

Results of PBT and vPvB : PBT/vPvB: Not applicable for inorganic substances assessment

### Endocrine disrupting properties

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN/ID No. : UN 1294  
Proper shipping name : Toluene solution  
Class : 3  
Packing group : II  
Labels : Class 3 - Flammable liquids  
Packing instruction (cargo : 364  
aircraft)  
Packing instruction : 353  
(passenger aircraft)

#### IMDG-Code

UN number : UN 1294  
Proper shipping name : TOLUENE SOLUTION  
  
Class : 3  
Packing group : II  
Labels : 3  
EmS Code : F-E, S-D  
Marine pollutant : no

### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### National Regulations

#### 49 CFR

UN/ID/NA number : UN 1294  
Proper shipping name : Toluene SOLUTION  
  
Class : 3  
  
Packing group : II

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Labels : Class 3 - Flammable liquids  
 ERG Code : 130  
 Marine pollutant : no  
 Poison Inhalation Hazard : No

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

| Components    | CAS-No.   | Component RQ (lbs) | Calculated product RQ (lbs) |
|---------------|-----------|--------------------|-----------------------------|
| Lead sulphide | 1314-87-0 | 10                 | 833                         |

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Fire Hazard  
 Acute Health Hazard  
 Chronic Health Hazard

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

|               |           |                  |
|---------------|-----------|------------------|
| Toluene       | 108-88-3  | >= 90 - <= 100 % |
| Lead sulphide | 1314-87-0 | >= 1 - < 5 %     |

### US State Regulations

#### Massachusetts Right To Know

|               |           |
|---------------|-----------|
| Toluene       | 108-88-3  |
| Lead sulphide | 1314-87-0 |

#### Pennsylvania Right To Know

|               |           |
|---------------|-----------|
| Toluene       | 108-88-3  |
| Lead sulphide | 1314-87-0 |

#### Maine Chemicals of High Concern

|         |          |
|---------|----------|
| Toluene | 108-88-3 |
|---------|----------|

#### Vermont Chemicals of High Concern

|               |           |
|---------------|-----------|
| Toluene       | 108-88-3  |
| Lead sulphide | 1314-87-0 |

#### Washington Chemicals of High Concern

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**California Prop. 65**

WARNING: This product can expose you to chemicals including Lead sulphide, which is/are known to the State of California to cause cancer, and Toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). **The components of this product are reported in the following inventories:**

US TSCA : All substances listed as active on the TSCA inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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**SECTION 16. OTHER INFORMATION****Full text of other abbreviations**

|                 |                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------|
| ACGIH           | : USA. ACGIH Threshold Limit Values (TLV)                                                   |
| ACGIH BEI       | : ACGIH - Biological Exposure Indices (BEI)                                                 |
| NIOSH REL       | : USA. NIOSH Recommended Exposure Limits                                                    |
| OSHA CARC       | : OSHA Specifically Regulated Chemicals/Carcinogens                                         |
| OSHA P0         | : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)                        |
| OSHA Z-2        | : USA. Occupational Exposure Limits (OSHA) - Table Z-2                                      |
| ACGIH / TWA     | : 8-hour, time-weighted average                                                             |
| NIOSH REL / TWA | : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| NIOSH REL / ST  | : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday    |
| OSHA CARC / PEL | : Permissible exposure limit (PEL)                                                          |
| OSHA P0 / TWA   | : 8-hour time weighted average                                                              |
| OSHA P0 / STEL  | : Short-term exposure limit                                                                 |
| OSHA Z-2 / TWA  | : 8-hour time weighted average                                                              |
| OSHA Z-2 / CEIL | : Acceptable ceiling concentration                                                          |
| OSHA Z-2 / Peak | : Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift      |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -

International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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