

# Material Safety Data Sheets

## 1. IDENTIFICATION

Product Name	Lead(II) chloride
Other Names	Lead dichloride
Uses	No Data Available
Chemical Family	No Data Available
Chemical Formula	PbCl <sub>2</sub>
Chemical Name	No Data Available
Product Description	No Data Available
Company	Arman sina.co
Contact Information	<a href="mailto:info@armansina.com">info@armansina.com</a> <a href="http://www.armansina.com">www.armansina.com</a>

## 2. HAZARD IDENTIFICATION

Hazard Categories	<p>Acute toxicity, Oral (Category 4), H302</p> <p>Acute toxicity, Inhalation (Category 4), H332</p> <p>Carcinogenicity (Category 2), H351</p> <p>Reproductive toxicity (Category 1A), H360</p> <p>Specific target organ toxicity - repeated exposure (Category 1), Central nervous system, Kidney, Blood, H372</p> <p>Short-term (acute) aquatic hazard (Category 1), H400</p> <p>Long-term (chronic) aquatic hazard (Category 1), H410</p>	
Signal Word	Danger	
Hazard Statements	<p>H302 + H332</p> <p>H351</p> <p>H360</p> <p>H372</p> <p>H410</p> <p>Precautionary statement(s)</p> <p>P201</p> <p>P202</p> <p>P260</p> <p>P264</p> <p>P270</p> <p>P271</p> <p>P273</p> <p>P280</p> <p>P301 + P312 + P330</p> <p>P304 + P340 + P312</p> <p>P308 + P313</p> <p>P391</p> <p>P405</p>	<p>Harmful if swallowed or if inhaled.</p> <p>Suspected of causing cancer.</p> <p>May damage fertility or the unborn child.</p> <p>Causes damage to organs (Central nervous system, Kidney, Blood) through prolonged or repeated exposure.</p> <p>Very toxic to aquatic life with long lasting effects.</p> <p>Obtain special instructions before use.</p> <p>Do not handle until all safety precautions have been read and understood.</p> <p>Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.</p> <p>Wash skin thoroughly after handling.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Use only outdoors or in a well-ventilated area.</p> <p>Avoid release to the environment.</p> <p>Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.</p> <p>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.</p> <p>IF exposed or concerned: Get medical advice/ attention.</p> <p>Collect spillage.</p> <p>Store locked up.</p>

## Symbol



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Lead(II) chloride	PbCl <sub>2</sub>	7758-95-4	<= 100 %

### 4. FIRST AID MEASURES

<b>Swallowed</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>Eye</b>	Flush eyes with water as a precaution.
<b>Skin</b>	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
<b>Inhaled</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration. consult a physician.
<b>Advice to Doctor</b>	Show this material safety data sheet to the doctor in attendance.

### 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	No Data Available
<b>Flammability Conditions</b>	No Data Available
<b>Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
<b>Fire and Explosion Hazard</b>	Advice on protection against fire and explosion Provide appropriate exhaust ventilation at places where dust is formed.
<b>Hazardous Products of Combustion</b>	Hydrogen chloride gas Lead oxides
<b>Special Fire Fighting Instructions</b>	Wear self-contained breathing apparatus for firefighting if necessary.
<b>Personal Protective Equipment</b>	In the event of fire, wear self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	No Data Available
<b>Clean Up Procedures</b>	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
<b>Containment</b>	No Data Available
<b>Decontamination</b>	No Data Available
<b>Environmental Precautionary Measures</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
<b>Evacuation Criteria</b>	No Data Available
<b>Personal Precautionary Measures.</b>	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Advice on protection against fire and explosion Provide appropriate exhaust ventilation at places where dust is formed.
<b>Storage</b>	Storage conditions: Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place
<b>Container</b>	Tightly closed. Dry.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	Contains no substances with occupational exposure limit values..
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No Data Available
<b>Engineering Measures</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
<b>Personal Protection Equipment</b>	<p><b>Eye/face protection</b></p> <p>Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</p> <p><b>Skin protection</b></p> <p>Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.</p> <p>Full contact</p> <p>Material: Nitrile rubber</p> <p>Minimum layer thickness: 0.11 mm</p> <p>Break through time: 480 min</p> <p>Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p>

Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374  
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

No Data Available

Discharge into the environment must be avoided.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Special Hazards Precautions

#### Work Hygienic Practices

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	solid
Appearance	powder
Odour	No Data Available
Colour	beige
pH	No Data Available
Vapour Pressure	1 hPa at 547 ° C (1017 ° F)
Relative Vapour Density	No Data Available
Boiling Point	950 °C 1742 °F - lit.
Melting Point	501 °C (934 °F) - lit
Freezing Point	No Data Available
Solubility	In water: 10,000 g/l at 19.9 °C (67.8 °F)
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available

<b>Molecular Weight</b>	278.11 g/mol
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No information available.
<b>Potential for Dust Explosion</b>	No Data Available
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	The product is not flammable.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	No information available.
<b>Reactions That Release Gases or Vapours</b>	No information available.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available. No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	No Data Available
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid</b>	No Data Available
<b>Materials to Avoid</b>	Strong oxidizing agents, Strong acids
<b>Hazardous Decomposition Products</b>	In the event of fire: see section 5
<b>Hazardous Polymerisation</b>	No Data Available

## 11. TOXICOLOGICAL INFORMATION

### General Information

Lead salts have been reported to cross the placenta and to induce embryo- and fetomortality. They also have teratogenic effect in some animal species. No teratogenic effects have been reported with exposure to organometallic lead compounds. Adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal (e.g., mental) development have been reported. Excessive exposure can affect blood, nervous, and digestive systems. The synthesis of hemoglobin is inhibited and results in anemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Acute

#### Acute toxicity

LD50 Oral - Rat - > 1,947 mg/kg  
Remarks: (ECHA)  
LC50 Inhalation - Rat - male and female - 4 h - > 5.05 mg/l  
(OECD Test Guideline 403)  
LD50 Dermal - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 402)  
No data available

#### Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)  
Result: No skin irritation  
(EPISKIN Human Skin Model Test)

#### Serious eye damage/eye irritation

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

#### Respiratory or skin sensitization

Maximization Test - Guinea pig  
Result: Not a skin sensitizer.  
(OECD Test Guideline 406)

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

Suspected human carcinogens  
ACGIH: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

#### Reproductive toxicity

Known human reproductive toxicant

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure. - Central nervous system, Kidney, Blood

#### Aspiration hazard

No data available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxicity to fish  
static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.00117 mg/l - 96 h  
Remarks: (ECHA)

Toxicity to algae  
ErC50 - *Pseudokirchneriella subcapitata* (green algae) - 20.5 µg/l - 72 h  
(OECD Test Guideline 201)

<b>Persistence/Degradability</b>	The methods for determining the biological degradability are not applicable to inorganic substances.
<b>Mobility</b>	No Data Available
<b>Environmental Fate</b>	No Data Available
<b>Bioaccumulation Potential</b>	No Data Available
<b>Environmental Impact</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects. Discharge into the environment must be avoided.

### 13. DISPOSAL CONSIDERATIONS

<b>General Information</b>	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging : Dispose of as unused product
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<b>Special Precautions for Land Fill</b>	No Data Available
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### 14. TRANSPORT INFORMATION

#### Land Transport

<b>Proper Shipping Name</b>	<b>Lead dichloride</b>
<b>Class</b>	6.1
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	No Data Available
<b>UN Number</b>	2291
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

#### Sea Transport

<b>Proper Shipping Name</b>	<b>Lead dichloride</b>
<b>Class</b>	6.1
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	2291
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available
<b>EMS</b>	No Data Available

<b>Marine Pollutant</b>	No Data Available
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#### Air Transport

<b>Proper Shipping Name</b>	<b>Lead dichloride</b>
<b>Class</b>	6.1
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	2291
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

## 15. OTHER INFORMATION

Revision 2

### Key/Legend

< Less Than  
 > Greater Than  
 atm Atmosphere  
 CAS Chemical Abstracts Service (Registry Number)  
 cm<sup>2</sup> Square Centimetres  
 CO<sub>2</sub> Carbon Dioxide  
 COD Chemical Oxygen Demand  
 deg C (° C) Degrees Celcius  
 deg F (° F) Degrees Farenheit  
 g Grams  
 g/cm<sup>3</sup> Grams per Cubic Centimetre  
 g/l Grams per Litre  
 HSNO Hazardous Substance and New Organism  
 IDLH Immediately Dangerous to Life and Health  
 immiscible Liquids are insoluable in each other.  
 inHg Inch of Mercury  
 inH<sub>2</sub>O Inch of Water  
 K Kelvin  
 kg Kilogram  
 kg/m<sup>3</sup> Kilograms per Cubic Metre  
 lb Pound  
 LC<sub>50</sub> LC stands for lethal concentration. LC<sub>50</sub> is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.  
 LD<sub>50</sub> LD stands for Lethal Dose. LD<sub>50</sub> is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.  
 ltr or L Litre  
 m<sup>3</sup> Cubic Metre  
 mbar Millibar  
 mg Milligram  
 mg/24H Milligrams per 24 Hours  
 mg/kg Milligrams per Kilogram  
 mg/m<sup>3</sup> Milligrams per Cubic Metre  
 Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.  
 mm Millimetre  
 mmH<sub>2</sub>O Millimetres of Water  
 mPa.s Millipascals per Second  
 N/A Not Applicable  
 NIOSH National Institute for Occupational Safety and Health  
 NOHSC National Occupational Heath and Safety Commission  
 OECD Organisation for Economic Co-operation and Development  
 Oz Ounce  
 PEL Permissible Exposure Limit  
 Pa Pascal  
 ppb Parts per Billion  
 ppm Parts per Million  
 ppm/2h Parts per Million per 2 Hours  
 ppm/6h Parts per Million per 6 Hours  
 psi Pounds per Square Inch  
 R Rankine  
 RCP Reciprocal Calculation Procedure  
 STEL Short Term Exposure Limit  
 TLV Threshold Limit Value  
 tne Tonne  
 TWA Time Weighted Average  
 ug/24H Micrograms per 24 Hours  
 UN United Nations  
 wt Weight