

# LANTHANUM CHLORIDE

GHS Safety Data Sheet

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

LANTHANUM CHLORIDE

### OTHER NAMES

La-Cl<sub>3</sub>.7H<sub>2</sub>O, "lanthanum trichloride", "lanthanum trichloride heptahydrate"

### PRODUCT USE

Anhydrous trichloride of rare earth metal is often used to prepare the metal.

### SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,  
248, WORLI,  
MUMBAI- 400030.INDIA.

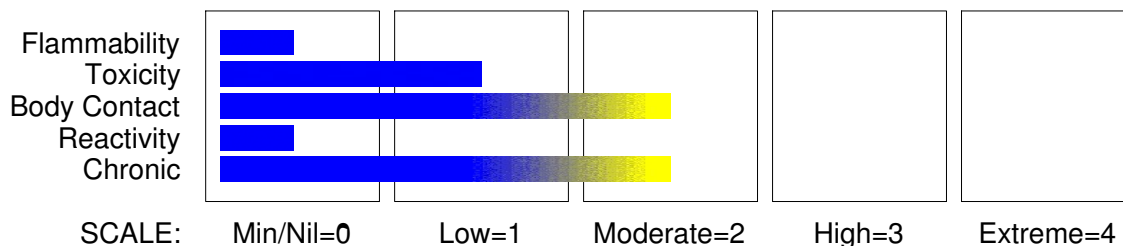
technical@sdfine.com

Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

### HAZARD RATINGS



## Section 2 - HAZARDS IDENTIFICATION

### GHS Classification

Acute Toxicity (Oral) Category 5

### EMERGENCY OVERVIEW

continued...

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## Section 2 - HAZARDS IDENTIFICATION

### HAZARD

WARNING

Determined by using GHS criteria:

H303

May be harmful if swallowed

### PRECAUTIONARY STATEMENTS

#### Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME               | CAS RN     | %    |
|--------------------|------------|------|
| lanthanum chloride | 10099-58-8 | > 99 |

## Section 4 - FIRST AID MEASURES

### SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

### EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - If pain persists or recurs seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

- If skin or hair contact occurs:
- Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.

### INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

### NOTES TO PHYSICIAN

Treat symptomatically.

## Section 5 - FIRE FIGHTING MEASURES

### EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.

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## Section 5 - FIRE FIGHTING MEASURES

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- Non combustible.
  - Not considered to be a significant fire risk, however containers may burn.
  - In a fire may decompose on heating and produce toxic / corrosive fumes.
- Decomposition may produce toxic fumes of: chlorides.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labelled container.

#### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment and dust respirator.
- Prevent spillage from entering drains, sewers or water courses.
- Recover product wherever possible. Avoid generating dust.
- Sweep / shovel up.
- If required, wet with water to prevent dusting.
- Put residues in labelled plastic bags or other containers for disposal.
- Wash area down with large quantity of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+ + + + + +

+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

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## Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

### SUITABLE CONTAINER

Glass container.

Plastic container.

Multi-ply woven plastic or paper bag with sealed plastic liner

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.

- Check that containers are clearly labelled.

Packaging as recommended by manufacturer.

### STORAGE INCOMPATIBILITY

Avoid storage with alkalis.

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

The following materials had no OELs on our records

- lanthanum chloride:

CAS:10099- 58- 8 CAS:10025- 84- 0 CAS:20211- 76- 1  
CAS:17272- 45- 6 CAS:12314- 13- 5

### MATERIAL DATA

as lanthanum

CEL TWA: 1 mg/m<sup>3</sup> (compare TLV-TWA yttrium)

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure to the vapours of some rare earth salts reportedly produces sensitivity to heat, itching and an increased perception of odour and taste. Other effects may include bronchiolitis, subacute bronchitis, acute transient chemical pneumonitis, focal hypertrophic emphysema, regional bronchiolar stricturing and cellular eosinophilia. In rare fatal cases of exposure to the rare-earth fluoride and/or oxide mixtures, delayed chemical hyperaemia has occurred. Lung granulomas have also been seen in experimental animals.

TLV TWA: 5 mg/m<sup>3</sup> (as respirable dust)

The concentration of respirable dust for application of this limit is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative lognormal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e..generally less than 5 µm.

### PERSONAL PROTECTION



#### EYE

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

#### HANDS/FEET

Wear chemical protective gloves, eg. PVC.  
Wear safety footwear.

#### OTHER

- Overalls.
- Eyewash unit.

#### RESPIRATOR

| Protection Factor | Half- Face Respirator | Full- Face Respirator | Powered Air Respirator |
|-------------------|-----------------------|-----------------------|------------------------|
| 10 x ES           | P1 Air- line*         | - -                   | PAPR- P1 -             |
| 50 x ES           | Air- line**           | P2                    | PAPR- P2               |
| 100 x ES          | -                     | P3                    | -                      |
|                   |                       | Air- line*            | -                      |
| 100+ x ES         | -                     | Air- line**           | PAPR- P3               |

\* - Negative pressure demand \*\* - Continuous flow.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult  
your

Occupational Health and Safety Advisor.

### ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

#### Type of Contaminant:

solvent, vapours, degreasing etc., evaporating  
from tank (in still air).

aerosols, fumes from pouring operations,  
intermittent container filling, low speed  
conveyer transfers, welding, spray drift,  
plating acid fumes, pickling (released at low  
velocity into zone of active generation)

direct spray, spray painting in shallow booths,  
drum filling, conveyer loading, crusher dusts,  
gas discharge (active generation into zone of  
rapid air motion)

grinding, abrasive blasting, tumbling, high  
speed wheel generated dusts (released at high  
initial velocity into zone of very high rapid  
air motion).

#### Air Speed:

0.25- 0.5 m/s (50- 100 f/min)

0.5- 1 m/s (100- 200 f/min.)

1- 2.5 m/s (200- 500 f/min.)

2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

#### Lower end of the range

1: Room air currents minimal or favourable to  
capture

2: Contaminants of low toxicity or of nuisance  
value only.

3: Intermittent, low production.

4: Large hood or large air mass in motion

#### Upper end of the range

1: Disturbing room air currents

2: Contaminants of high toxicity

3: High production, heavy use

4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### APPEARANCE

White crystalline lumps; hygroscopic. Soluble in water, alcohol and acids.

### PHYSICAL PROPERTIES

Solid.

Mixes with water.

Molecular Weight: 245.26

Melting Range (°C): Not available.

Solubility in water (g/L): Miscible

pH (1% solution): < 7

Volatile Component (%vol): Not applicable.

Relative Vapour Density (air=1): Not applicable.

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not applicable

State: Divided solid

Boiling Range (°C): Not applicable.

Specific Gravity (water=1): Not available.

pH (as supplied): Not applicable

Vapour Pressure (kPa): Not applicable.

Evaporation Rate: Not applicable

Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): > 91

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

##### EYE

Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

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## Section 11 - TOXICOLOGICAL INFORMATION

### SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

### INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

### CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Lanthanum is a member of the so-called light-group (the ceriums) of the rare earths (or lanthanides). No occupational diseases or cases of poisoning in workers producing rare earth elements have been described. Lanthanides because of their high density can produce significant lesions typically have little or no clinical importance. Occasional cases of suspected pneumoconiosis have however been reported. The toxicity of all elements in the cerium group has been investigated and found to be insignificant. The respiratory tracts of rats show pathogenic effects when injected intratracheally with the oxides producing a reduced effect when compared with salts. The main risks to workers involved in the production of rare earths are due to dust inhalation. Chronic lanthanum intoxication causes kidney and liver derangement and increases coagulation time. Lanthanides target the liver causing fatty liver degeneration and a decrease in liver glycogen and blood glucose levels.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

### TOXICITY AND IRRITATION

#### TOXICITY

Oral (rat) LD50: 4184 mg/kg

#### IRRITATION

Nil Reported

## Section 12 - ECOLOGICAL INFORMATION

No data for lanthanum chloride.

## Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

For small quantities: Cautiously make a 5% solution of the material in water or dilute acid. Control vigorous exotherm or fumes due to hydrolysis by rate of addition. Add dilute ammonium hydroxide slowly to pH 10. Filter. If no precipitation occurs adjust pH from 10 to 6 slowly.

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## Section 14 - TRANSPORTATION INFORMATION

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HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,  
IMDG

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## Section 15 - REGULATORY INFORMATION

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### REGULATIONS

lanthanum chloride (CAS: 10099-58-8) is found on the following regulatory lists;  
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have  
not been established

lanthanum chloride (CAS: 10025-84-0) is found on the following regulatory lists;  
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have  
not been established

lanthanum chloride (CAS: 17272-45-6) is found on the following regulatory lists;  
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have  
not been established

No data available for lanthanum chloride as CAS: 20211-76-1, CAS: 12314-13-5.

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## Section 16 - OTHER INFORMATION

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### INGREDIENTS WITH MULTIPLE CAS NUMBERS

| Ingredient Name    | CAS                                                                     |
|--------------------|-------------------------------------------------------------------------|
| lanthanum chloride | 10099- 58- 8, 10025- 84- 0, 20211- 76- 1, 17272-<br>45- 6, 12314- 13- 5 |

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.□□□

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