SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
- **Trade name**: Tris(N,N'-di-i-propylformamidinato)lanthanum(III), (99.999+%-%-La) PURATREM La-FMD
- **Item number**: 57-1200
- **CAS Number**: 1034537-36-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

1.3 Details of the supplier of the safety data sheet
- **Manufacturer/Supplier**: Strem Chemicals, Inc.
  7 Mulliken Way
  NEWBURYPORT, MA 01950
  USA
  info@strem.com

1.4 Emergency telephone number:
- **Emergency**: CHEMTREC: + 1 (800) 424-9300
- **During normal opening times**: +1 (978) 499-1600

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
- **Classification according to Regulation (EC) No 1272/2008**
  - GHS05 corrosion
  - Skin Corr. 1B  H314  Causes severe skin burns and eye damage.
  - GHS07
  - Eye Irrit. 2  H319  Causes serious eye irritation.

2.2 Label elements
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
  - GHS05

- **Signal word** Danger
- **Hazard statements**
  - H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P231 Handle under inert gas.
Safety data sheet  
according to 1907/2006/EC, Article 31

Printing date 11.05.2018 Revision: 11.05.2018

Trade name: Tris(N,N'-di-i-propylformamidinato)lanthanum(III), (99.999+%-La) PURATREM La-FMD

P262 Do not get in eyes, on skin, or on clothing. 
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P422 Store contents under inert gas.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances
· CAS No. Description
  1034537-36-4 Lanthanum tris(formamidinate)

SECTION 4: First aid measures

· 4.1 Description of first aid measures
· General information: Immediately remove any clothing soiled by the product.
· After inhalation: In case of unconsciousness place patient stably in side position for transportation.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
· 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media
· Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· 5.2 Special hazards arising from the substance or mixture No further relevant information available.
· 5.3 Advice for firefighters
· Protective equipment: No special measures required.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
· 6.2 Environmental precautions: No special measures required.
· 6.3 Methods and material for containment and cleaning up:
  Use neutralising agent.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Thorough dedusting.
Open and handle receptacle with care.

Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: Not required.
Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Respiratory protection: Not required.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
**Trade name:** Tris(N,N'-di-i-propylformamidinato)lanthanum(III), (99.999+%-La) PURATREM La-FMD

### Eye protection:
- Tightly sealed goggles

### 9.1 Information on basic physical and chemical properties
#### General Information
- **Form:** Powder
- **Appearance:** Whitish
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.

#### Change in condition
- **Melting point/freezing point:** 181 °C
- **Initial boiling point and boiling range:** Undetermined.

#### Flash point:
- Not applicable.

#### Flammability (solid, gas):
- Not determined.

#### Ignition temperature:
- **Decomposition temperature:** Not determined.

#### Auto-ignition temperature:
- Not determined.

#### Explosive properties:
- Product does not present an explosion hazard.

#### Explosion limits:
- **Lower:** Not determined.
- **Upper:** Not determined.

#### Vapour pressure:
- Not applicable.

#### Density at 20 °C:
- 0.55 g/cm³
- **Relative density:** Not determined.
- **Vapour density:** Not applicable.
- **Evaporation rate:** Not applicable.

#### Solubility in / Miscibility with water:
- Insoluble.

#### Partition coefficient: n-octanol/water:
- Not determined.

#### Viscosity:
- **Dynamic:** Not applicable.
- **Kinematic:** Not applicable.

#### Solvent content:
- **Organic solvents:** 0.0 %
- **VOC (EC):** 0.00 %

### 9.2 Other information
- No further relevant information available.

### SECTION 10: Stability and reactivity
#### 10.1 Reactivity
- No further relevant information available.
10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions
No dangerous reactions known.

10.4 Conditions to avoid
No further relevant information available.

10.5 Incompatible materials:
No further relevant information available.

10.6 Hazardous decomposition products:
No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalative LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanthanum tris(formamidinate)</td>
<td>&gt;1,000 mg/kg (rat) (Estimated)</td>
<td>&gt;1,000 mg/kg (rat) (Estimated)</td>
<td>2.70 mg/l (rat) (OECD Test Guideline 403)</td>
</tr>
</tbody>
</table>

Primary irritant effect:

- Skin corrosion/irritation
  Causes severe skin burns and eye damage.

- Serious eye damage/irritation
  Causes serious eye irritation.

- Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.

- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  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
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

12.5 Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
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### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1 UN-Number</th>
<th>UN3263</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>ADR</td>
</tr>
<tr>
<td>IMDG, IATA</td>
<td>CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Lanthanum tris(formamidinate))</td>
</tr>
</tbody>
</table>

#### 14.3 Transport hazard class(es)
- ADR, IMDG, IATA

| 14.4 Packing group | ADR, IMDG, IATA | II |

#### 14.5 Environmental hazards:
- ADR, IMDG, IATA

| 14.6 Special precautions for user | Warning: Corrosive substances. |
| EMS Number | F-A,S-B |
| Segregation groups | Alkalis |
| Stowage Category | B |
| Segregation Code | SG35 Stow "separated from" acids. |

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Not applicable.

#### Transport/Additional information:

| 14.8 Limited quantities (LQ) | 1 kg |
| ADR | Code: E2 |
| Excerpted quantities (EQ) | Maximum net quantity per inner packaging: 30 g |
| IMDG | Maximum net quantity per outer packaging: 500 g |

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(Contd. of page 7)
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Technical Department.
- Contact: Technical Director
- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2