

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Revision Date 13.07.2017

Version 7.1

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**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No. 105326

Product name Lanthanum nitrate hexahydrate for analysis

REACH Registration Number A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. 10277-43-7

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

Identified uses Reagent for analysis, Chemical production  
For additional information on uses please refer to the Merck Chemicals portal ([www.merckgroup.com](http://www.merckgroup.com)).

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

Company Merck KGaA \* 64271 Darmstadt \* Germany \* Phone:+49 6151 72-0

Responsible Department LS-QHC \* e-mail: [prodsafe@merckgroup.com](mailto:prodsafe@merckgroup.com)

**1.4 Emergency telephone number** Please contact the regional company representation in your country.

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**SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

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Oxidizing solid, Category 2, H272

Serious eye damage, Category 1, H318

Acute aquatic toxicity, Category 1, H400

Chronic aquatic toxicity, Category 1, H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

*Hazard pictograms*



*Signal word*

Danger

*Hazard statements*

H272 May intensify fire; oxidizer.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

*Precautionary statements*

Prevention

P221 Take any precaution to avoid mixing with combustibles, heavy-metal compounds, acids and alkalis.

P273 Avoid release to the environment.

P280 Wear eye protection.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313 Get medical advice/ attention.

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## Reduced labelling (≤125 ml)

### Hazard pictograms



### Signal word

Danger

### Hazard statements

H318 Causes serious eye damage.

### Precautionary statements

P280 Wear eye protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313 Get medical advice/ attention.

CAS-No. 10277-43-7

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula	La(NO <sub>3</sub> ) <sub>3</sub> * 6 H <sub>2</sub> O	LaN <sub>3</sub> O <sub>9</sub> * 6 H <sub>2</sub> O (Hill)
EC-No.	233-238-0	
Molar mass	433,02 g/mol	

### Hazardous components (REGULATION (EC) No 1272/2008)

#### Chemical name (Concentration)

CAS-No.	Registration number	Classification
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lanthanum trinitrate hexahydrate (<= 100 % )		
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10277-43-7	*)	
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Oxidizing solid, Category 2, H272

Serious eye damage, Category 1, H318

Acute aquatic toxicity, Category 1, H400

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Chronic aquatic toxicity, Category 1, H410

M-Factor: 1

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

Risk of corneal clouding.

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

Irritation and corrosion

Risk of serious damage to eyes.

### 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

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### *Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

## **5.2 Special hazards arising from the substance or mixture**

Not combustible.

Ambient fire may liberate hazardous vapours.

Has a fire-promoting effect due to release of oxygen.

Fire may cause evolution of:

nitrogen oxides

## **5.3 Advice for firefighters**

### *Special protective equipment for firefighters*

In the event of fire, wear self-contained breathing apparatus.

### *Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

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Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

#### *Storage conditions*

Tightly closed. Do not store near combustible materials.

Recommended storage temperature see product label.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### **Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

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## Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

### *Eye/face protection*

Tightly fitting safety goggles

### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### *Other protective equipment*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective

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devices are carried out according to the instructions of the producer. These measures have to be properly documented.

## Environmental exposure controls

Do not let product enter drains.

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## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	solid
Colour	white
Odour	slight
Odour Threshold	No information available.
pH	ca. 3,4 at 50 g/l 25 °C
Melting point	69,9 °C
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable. Flammability (solids)
Lower explosion limit	No information available.

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Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	ca. 1.230 - 1.580 g/l at 20 °C Method: OECD Test Guideline 105
Partition coefficient: n-octanol/water	Not applicable for inorganic substances
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	The substance or mixture is classified as oxidizing with the category 2.

## 9.2 Other data

Bulk density 1.300 kg/m<sup>3</sup>

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

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## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Reducing agents, combustible substances

## 10.4 Conditions to avoid

Strong heating (decomposition).

## 10.5 Incompatible materials

no information available

## 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD50 Rat: 4.500 mg/kg

OECD Test Guideline 401

(anhydrous substance)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

#### *Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations

#### *Acute dermal toxicity*

This information is not available.

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## *Skin irritation*

slight irritation

## *Eye irritation*

Causes serious eye damage.

Risk of corneal clouding.

## *Sensitisation*

Maximisation Test Guinea pig

Result: negative

Method: OECD Test Guideline 406

(anhydrous substance)

## *Germ cell mutagenicity*

This information is not available.

## *Carcinogenicity*

This information is not available.

## *Reproductive toxicity*

This information is not available.

## *Teratogenicity*

This information is not available.

## *Specific target organ toxicity - single exposure*

This information is not available.

## *Specific target organ toxicity - repeated exposure*

This information is not available.

## *Aspiration hazard*

This information is not available.

## 11.2 Further information

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### 12.1 Toxicity

#### *Toxicity to fish*

semi-static test LC50 *Oncorhynchus mykiss* (rainbow trout): 1,0 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 203

(anhydrous substance)

#### *Toxicity to daphnia and other aquatic invertebrates*

semi-static test EC50 *Daphnia magna* (Water flea): 7 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

(anhydrous substance)

#### *Toxicity to algae*

static test ErC50 *Pseudokirchneriella subcapitata* (green algae): 2,1 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

(anhydrous substance)

#### *Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)*

semi-static test NOEC *Daphnia magna* (Water flea): 0,33 mg/l; 14 d

Analytical monitoring: yes

OECD Test Guideline 211

(referred to the cation) (anhydrous substance)

### 12.2 Persistence and degradability

#### *Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

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*Partition coefficient: n-octanol/water*

Not applicable for inorganic substances

*Bioaccumulation*

Bioconcentration factor (BCF): 0,4 - 828

Cyprinus carpio (Carp) 0,3 mg/l; 43 d

Temperature: 11 °C

Accumulation in aquatic organisms is expected.

## 12.4 Mobility in soil

No information available.

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

## 12.6 Other adverse effects

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

14.1 UN number	UN 1477
14.2 Proper shipping name	NITRATES, INORGANIC, N.O.S. (LANTHANNITRATE)
14.3 Class	5.1
14.4 Packing group	II
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	yes
Tunnel restriction code	E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

14.1 UN number	UN 1477
14.2 Proper shipping name	NITRATES, INORGANIC, N.O.S.
14.3 Class	5.1
14.4 Packing group	II
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	no

### Sea transport (IMDG)

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**14.1 UN number** UN 1477  
**14.2 Proper shipping name** NITRATES, INORGANIC, N.O.S. (LANTHANNITRATE)  
**14.3 Class** 5.1  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** yes  
**14.6 Special precautions for user** yes  
**EmS** F-A S-Q  
**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not relevant

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard SEVESO III  
Legislation OXIDIZING LIQUIDS AND SOLIDS  
P8  
Quantity 1: 50 t  
Quantity 2: 200 t

SEVESO III  
ENVIRONMENTAL HAZARDS  
E1  
Quantity 1: 100 t  
Quantity 2: 200 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

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Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1$  % (w/w).

### *National legislation*

Storage class 5.1B

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H272 May intensify fire; oxidizer.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

#### *Hazard pictograms*



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## *Signal word*

Danger

## *Hazard statements*

H272 May intensify fire; oxidizer.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

## *Precautionary statements*

### Prevention

P221 Take any precaution to avoid mixing with combustibles, heavy-metal compounds, acids and alkalis.

P273 Avoid release to the environment.

P280 Wear eye protection.

### Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313 Get medical advice/ attention.

## **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

## **Regional representation**

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*