1 Identification

Product identifier

Product name: Lanthanum(III) nitrate hexahydrate

Stock number: 12915
CAS Number: 10277-43-7
EC number: 233-238-0

Relevant identified uses of the substance or mixture and uses advised against.

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Department: Health, Safety and Environmental Department
Emergency telephone number:
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS03 Flame over circle
Ox. Sol. 2 H272 May intensify fire; oxidizer.

GHS07
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

Hazards not otherwise classified
No information known.

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms

GHS03 GHS07

Signal word Danger

Hazard statements
H272 May intensify fire; oxidizer.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P221 Take any precaution to avoid mixing with combustibles.
P200 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep away from clothing/combustible materials.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
C - Oxidizing materials
D2B - Toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)
( Hazardous Materials Identification System)
Health (acute effects) = 1
Flammability = 2
Physical Hazard = 2

Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS® Description: 10277-43-7 Lanthanum(III) nitrate hexahydrate

Identification number(s): EC number: 233-238-0
4 First-aid measures
Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing
Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures
Extinguishing media
Suitable extinguishing agents Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.
For safety reasons unsuitable extinguishing agents Halocarbon extinguisher
Special hazards arising from the substance or mixture
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
If this product is involved in a fire, the following can be released:
Nitrogen oxides (NOx)
Lanthanum oxide
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures
Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Environmental precautions: Do not allow material to be released to the environment without proper governmental permits.
Methods and material for containment and cleaning up: Ensure adequate ventilation.
Prevention of secondary hazards:
Acts as an oxidizing agent on organic materials such as wood, paper and fats
Keep away from combustible material.
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.

7 Handling and storage
Handling
Precautions for safe handling
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires:
Substance/product can reduce the ignition temperature of flammable substances.
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
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:
Store away from flammable substances.
Store away from reducing agents.
Do not store with organic materials.
Store away from metal powders.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection
Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: No data
Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.
Material of gloves Nitrile rubber, NBR

(Contd. on page 3)
Product name: Lanthanum(III) nitrate hexahydrate

Penetration time of glove material (in minutes) 480
Glove thickness 0.11 mm
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
- Form: Crystalline
- Color: White
- Odor: Odorless
- Odor threshold: Not determined.
- pH-value: Not applicable.

Change in condition
- Melting point/Melting range: 40 °C (104 °F)
- Boiling point/Boiling range: Not determined
- Sublimation temperature / start: Not determined
- Flammability (solid, gaseous): Contact with combustible material may cause fire.
- Ignition temperature: Not determined
- Decomposition temperature: Not determined
- Auto igniting: Not determined.

Danger of explosion: Not determined.
Explosion limits:
- Lower: Not determined
- Upper: Not determined
Vapor pressure:
- Density: Not determined
- Relative density: Not determined.
- Vapor density: Not applicable.
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with Water at 25 °C (77 °F): 1510 g/l
  Soluble
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - dynamic: Not applicable.
  - kinematic: Not applicable.
- Other information: No further relevant information available.

10 Stability and reactivity

Reactivity: May intensify fire; oxidizer.
Chemical stability: Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions:
- Reacts with reducing agents
- Reacts with flammable substances
Conditions to avoid: No further relevant information available.
Incompatible materials:
- Flammable substances
- Reducing agents
- Organic materials
- Metal powders
- Hazardous decomposition products: Lanthanum oxide

11 Toxicological information

Information on toxicological effects
- Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
- LD/LC50 values that are relevant for classification: No data
- Skin irritation or corrosion: Causes skin irritation.
- Eye irritation or corrosion: Causes serious eye irritation.
- Sensitization: No sensitizing effects known.
- Germ cell mutagenicity: No effects known.
- Carcinogenicity: No effects known.
- Reproductive toxicity: No effects known.
- Specific target organ system toxicity - repeated exposure: No effects known.
- Specific target organ system toxicity - single exposure: May cause respiratory irritation.
- Aspiration hazard: No effects known.
- Subacute to chronic toxicity: No effects known.
- Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information

Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
  - Do not allow material to be released to the environment without proper governmental permits.
  - Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
  - Avoid transfer into the environment.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

(Contd. on page 4)
Other adverse effects  No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation  Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
Recommended cleaning agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number  UN1477
DOT, IMDG, IATA

UN proper shipping name
DOT  Nitrates, inorganic, n.o.s. (Lanthanum(III) nitrate hexahydrate)
IMDG, IATA  NITRATES, INORGANIC, N.O.S. (Lanthanum(III) nitrate hexahydrate)

Transport hazard class(es)
DOT

Class  5.1 Oxidising substances.
Label  5.1

IMDG, IATA

Class  5.1 Oxidising substances.
Label  5.1

Packing group  III

Environmental hazards:  Not applicable.

Special precautions for user
EMS Number:  Warning: Oxidizing substances
F-A-S-Q

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  Not applicable.

Transport/Additional information:
DOT
Marine Pollutant (DOT):  No

UN “Model Regulation”:  UN1477, Nitrates, inorganic, n.o.s. (Lanthanum(III) nitrate hexahydrate), 5.1, III

15 Regulatory information

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

GHS label elements  The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Signal word  Danger

Hazard statements
H272 May intensify fire; oxidizer.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P221 Take any precaution to avoid mixing with combustibles.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep/Store away from clothing/combustible materials.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)  Substance is not listed.

California Proposition 65  Substance is not listed.

Prop 65 - Chemicals known to cause cancer  Substance is not listed.
Prop 65 - Developmental toxicity  Substance is not listed.
Prop 65 - Developmental toxicity, female  Substance is not listed.
Prop 65 - Developmental toxicity, male  Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)  Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Date of preparation / last revision 11/24/2015 / -

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
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LD50: Lethal dose, 50 percent
LC50: Lethal concentration, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)