SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Lanthanum Sulfide

Product Code: LA-S-05

CAS Number: 12031-49-1

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351
Emergency telephone number: +1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

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

GHS02 Flame
GHS07 Water-react. 3 H261 In contact with water releases flammable gas.
GHS07 Skin Irrit. 2 H315 Causes skin irritation.
GHS07 Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

Hazard statements:

No data available
GHS label elements
GHS label elements, including precautionary statements

GHS pictogram

GHS02
GHS07
Signal word
Warning
Hazard statements
H261 In contact with water releases flammable gas.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P231+P232 Handle under inert gas. Protect from moisture.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face 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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
B6 - Reactive flammable material
D1B - Toxic material causing immediate and serious toxic effects
D2B - Toxic material causing other toxic effects

Classification system
HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

1
1
2

Health (acute effects) = 1
Flammability = 1
Physical Hazard = 2
Other hazards

Results of PBT and vPvB assessment

PBT:
N/A
vPvB:
N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS
Substances
CAS No. / Substance Name:
12031-49-1 Lanthanum(III) sulfide
Identification number(s):
EC number:
234-752-8

SECTION 4. FIRST AID MEASURES

Description of first aid measures
If inhaled:
Supply patient with fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

In case of skin contact:
Immediately wash with soap and water; rinse thoroughly. Seek immediate medical advice.

In case of eye contact:
Rinse opened eye for several minutes under running water. Consult a physician. If swallowed:
Seek medical treatment.

Information for doctor
Most important symptoms and effects, both acute and delayed
No data available
Indication of any immediate medical attention and special treatment needed
No data available

**SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media
Suitable extinguishing agents
Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Sulfur oxides (SOx)
Hydrogen sulfide
Lanthanum oxide

Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Use personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

Environmental precautions:
Do not allow product to enter drains, sewage systems, or other water courses.

Methods and materials for containment and cleanup:
Ensure adequate ventilation.
Prevention of secondary hazards:
No special measures required.

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

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:
The product is not flammable
Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility:
Do not store together with acids.
Store away from water/moisture.
Store away from oxidizing agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.
Specific end use(s)
No data available

SECTION 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:
None.
Additional information:
No data
Exposure controls
Personal protective equipment
Follow typical protective and hygienic practices for handling chemicals.
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 P100 (USA) or P3 (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
Inspect gloves prior to use.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.
Eye protection:
Safety glasses
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:
Form:
Powder
Color:
Orange
Odor:
Like rotten eggs
Odor threshold:
No data available.

pH:
N/A

Melting point/Melting range:
2100 °C (3812 °F) (vac)

Boiling point/Boiling range:
No data available

Sublimation temperature / start:
No data available

Flammability (solid, gas)
No data available.

Ignition temperature:
No data available

Decomposition temperature:
No data available

Autoignition:
No data available.

Danger of explosion:
No data available.

Explosion limits:
Lower:
No data available
Upper:
No data available

Vapor pressure:
N/A

Density at 20 °C (68 °F):
4.911 g/cm³ (40.982 lbs/gal)
Relative density
No data available.
Vapor density
N/A

Evaporation rate
N/A

Solubility in Water (H₂O):
No data available

Partition coefficient (n-octanol/water):
No data available.
Viscosity:
SECTION 10. STABILITY AND REACTIVITY

Reactivity
Contact with acids liberates toxic gas.

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 strong oxidizing agents
Contact with acids liberates toxic gas.

Conditions to avoid
No data available

Incompatible materials:
Oxidizing agents
Acids
Water/moisture

Hazardous decomposition products:
Sulfur oxides (SOx)
Hydrogen sulfide
Lanthanum oxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
No effects known.

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 classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

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.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity:
No data available
Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available

Additional ecological information:
Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT:
N/A
vPvB:
N/A
Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation
Consult official regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA
UN3134
UN proper shipping name
DOT
Water-reactive solid, toxic, n.o.s. (Lanthanum(III) sulfide)
IMDG, IATA
WATER-REACTIVE SOLID, TOXIC, N.O.S. (Lanthanum(III) sulfide)
Transport hazard class(es)
DOT
Class
4.3 Substances which, in contact with water, emit flammable gases.
Label
4.3+6.1
Class
4.3 (WT2) Substances which, in contact with water, emit flammable gases
Label
4.3+6.1
IMDG, IATA
Class
4.3 Substances which, in contact with water, emit flammable gases.
Label
4.3+6.1
Packing group
DOT, IMDG, IATA
III
Environmental hazards:
N/A
Special precautions for user
Warning: Substances which, in contact with water, emit flammable gases
EMS Number:
F-G,S-N
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No
UN "Model Regulation":
UN3134, Water-reactive solid, toxic, n.o.s.
(Lanthanum(III) sulfide), 4.3 (6.1), III

SECTION 15. REGULATORY INFORMATION
Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS GHS label elements, including precautionary statements
Hazard pictograms
GHS02
GHS07
Signal word
Warning
Hazard statements
H261 In contact with water releases flammable gas.
H315 Causes skin irritation.
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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 Non-Domestic Substances List (NDSL).
SARA Section 313 (specific toxic chemical listings)
Substance is not listed.
California Proposition 65
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

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2019 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.