

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lanthanum Oxide Nanowires

Catalog Number: NovaWire-LaO-20

Formula: La_2O_3

Diameter: ~ 20 nm

Length: ~ 15 μm

Supplier: Novarials Corporation
800 W Cummings Park, Suite 4600
Woburn, MA 01801

Telephone: +1 617-276-5642

Fax: +1 781-995-0388

2. HAZARDS IDENTIFICATION

Emergency Overview

GHS Classification

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements, including precautionary statements



Pictogram

Signal word Warning

Hazard statement(s)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ eye protection/ face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

P312	contact lenses, if present and easy to do. Continue rinsing.
P321	Call a POISON CENTER or doctor/ physician if you feel unwell.
P332 + P313	Specific treatment (see supplemental first aid instructions on this label).
P337 + P313	If skin irritation occurs: Get medical advice/ attention.
P362	If eye irritation persists: Get medical advice/ attention.
P403 + P233	Take off contaminated clothing and wash before reuse.
P405	Store in a well-ventilated place. Keep container tightly closed.
P501	Store locked up.
	Dispose of contents/ container to an approved waste disposal plant.

NFPA Ratings

Health Hazard: 0
Fire Hazard: 0
Reactivity Hazard: 0

HMIS Ratings

Health Hazard: 0
Chronic Health Hazard: 0
Flammability: 0
Physical Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Lanthanum oxide
 Formula: La₂O₃
 Molecular Weight: 325.81 g/mol

Component	Concentration
Lanthanum oxide	
CAS-No.	1312-81-8
EC-No.	215-200-5

4. FIRST AID MEASURES

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions – Lanthanum oxides

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust. Evacuate personnel to safe areas.

Environmental precautions

No special environmental precautions required.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a cool, dry and well-ventilated place.

Store under inert gas. Air sensitive. Hygroscopic. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment****Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands before breaks and immediately after handling the product.

Eye/Face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with general industrial hygiene practice. Wash hands before breaks and at the end of workday.

Control of environmental exposure

No special environmental precautions required.

9. PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE**

Form powder
Color white

Safety data

pH no data available
Melting point/freezing point no data available
Boiling point no data available
Flash point no data available
Ignition temperature no data available
Auto ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure no data available
Density no data available
Water solubility no data available
Partition coefficient:
n-octanol/water no data available
Relative vapour density no data available
Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Avoid moisture

Materials to avoid

Strong acids, Strong oxidizing agents, Carbon dioxide (CO₂)

Hazardous decomposition products

Other decomposition products -no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - male and female - >= 10,000 mg/kg

(OECD Test Guideline 401)

LC0 Inhalation - rat - male and female - 4 h - \geq 5.3 mg/l
(OECD Test Guideline 403)

Dermal: no data available

no data available

Skin corrosion/irritation

Skin - rabbit

Result: No skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - rabbit

Result: Mild eye irritation
(Draize Test)

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

no data available

Specific target organ toxicity -single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity -repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Additional Information

RTECS: OE5330000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to daphnia and other aquatic invertebrates

Immobilization NOEC - Daphnia magna (Water flea) - \geq 100 mg/l - 48 h
(OECD Test Guideline 202)

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

PBT/vPvB assessment no available as chemical safety assessment not required/not conducted.

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION**SARA 302 Components**

Not required

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

Not required

Pennsylvania Right To Know Components

Lanthanum oxide

CAS-No. 1312-81-8

New Jersey Right To Know Components

Lanthanum oxide

CAS-No. 1312-81-8

California Prop. 65 Components

This product does not contain any chemical known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. DISCLAIMER

Novarials Corporation believes that the information in this Safety Data Sheet is accurate and represents the best and most current information available to us. Novarials Corporation makes no representations or warranties either express or implied, regarding the suitability of the materials for any purpose or the accuracy if the information contained within this document. Accordingly, Novarials Corporation and its affiliates shall not be held liable for any damage resulting from shipping, handling, storage, use of the above product.