SAFETY DATA SHEET

Current Revision: 5, 3/23/2023	

I.IDENTIFICATION

EMERGENCY PHONE:

CHEMTEL- (800) 255-3924

MIS0006930

His Glassworks Inc
2000 Riverside Drive Ste 19
Asheville NC 28804 USA
828-254-2559

PRODUCT NAME: AX

SYNONYMS: Cerium Oxide, Rare Earth Oxide/Fluoride

Recommended Use:

Industrial polishing of glass, ceramic, and electronic/optical products.

Restrictions:

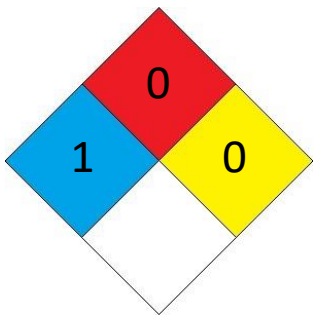
N/A

II.HAZARD IDENTIFICATION

Classification (§1910.1200):

Not a hazardous substance according to GHS regulations.

Signal Word/Symbols:



PPE

C

N/A

Hazard Statement:

N/A

Precautionary Statement:

N/A

Miscellaneous Hazards:

Slightly irritating to eyes.

Unknown Acute Toxicity Statement:

N/A

III.COMPOSITION

CHEMICAL NAME:	COMMON NAMES:	CAS:	% BY WEIGHT:
Cerium Dioxide	Cerium, Ceria	1306-38-3	>50
Lanthanum Oxide		1312-81-8	<50
Lanthanum Fluoride		13709-38-1	<20

Classified Impurities and Additives:

N/A

IV.FIRST AID MEASURES

Inhalation:

If breathed in, move person into fresh air. If symptoms persist, call a physician.

Skin Contact:

Wash off with soap and water. If skin irritation persists, call a physician.

Eye Contact:

Rinse with running water whilst keeping the eyes wide open (at least 15 minutes). If eye irritation persists, consult a physician

Ingestion:

If conscious, drink plenty of water. Never give anything by mouth to an unconscious person. Seek medical advice. Do not leave the victim unattended.

Symptoms/Effects:

No data available.

Level Of Medical Attention Needed:

Contact physician if symptoms persist.

V.FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water and foam. Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Unsuitable Extinguishing Media:

None known.

Specific Hazards:

Not combustible.

Special Protective Equipment:

Gloves, in the case of dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

VI.ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Personal protective equipment.

Protective Equipment:

Wear suitable gloves, safety glasses, and protective clothing. If dust is present wear respirator with particle filter matching EN143. See section 8 for more information.

Emergency Procedures:

Wear protective equipment and wash with water if necessary.

Methods for Cleanup/Removal:

Dam up and use non sparking tools. Sweep up and shovel to prevent buildup. And use suitable containers for disposal. Label all containers storing materials. Wash off with plenty of water.

VII.HANDLING AND STORAGE

Handling Precautions:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Avoid contact with skin and eyes. Do not breathe vapors/dust. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Avoid contact with skin and eyes.

Safe Storage Conditions:

Provide sufficient air exchange and/or exhaust in work rooms. Dust must be extracted

directly at the point of origin. Keep in properly labelled containers. Store in original container. Plastic materials (polyethylene). Keep container tightly closed and dry.

Incompatibilities:

Strong acids and oxidizers.

VIII.EXPOSURE CONTROLS AND PROTECTIVE EQUIPMENT

OSHA PEL:	ACGIH TLV:	OTHER EXPOSURE LIMITS:
None known	Lanthanum Fluorides: 2.5mg/m^3 TLV 2 mg/l Urine, prior shift (16 h after expos.) BEI 3 mg/l Urine, end shift (Exposure ceases) BEI	Lanthanum Fluorides: Taiwan. Standards on the Concentration Levels of Hazardous Substances in the Air at Workplace 2.5 mg/m3 TWA 5 mg/m3 STEL

Appropriate Engineering Controls:

Apply technical measures to comply with the occupational exposure limits. Local exhaust. Dust must be extracted directly at the point of origin.

Personal Protective Measures:

Wear suitable gloves, safety glasses, and protective clothing.
If dust is present wear respirator.
Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.
The protective equipment must be selected in accordance with current CEN standards and in cooperation with the supplier of the protective equipment. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use.

IX.PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

White powder

Odor:	Odor Threshold:	Ph:
None	No data available.	N/A, insoluble.

Melting/Freezing Point: 4712 °F (2600 °C)	**Boiling Point:** No data available.	**Boiling Range:** No data available.
Flash Point: N/A, mineral product.	**Evaporation Rate:** N/A solid.	**Flammability (Solid, Gas):** No
Upper/Lower Flammability/Explosive Limit: None	**Vapor Pressure:** None/solid	**Vapor Density:** None/solid
Relative Density: 6.8	**Solubility (ies):** None known	**Partition Coefficient: N-Octanol/Water:** N/A
Auto Ignition Temperature: N/A	**Decomposition Temperature:** N/A	**Viscosity:** Not applicable, solid

X.STABILITY AND REACTIVITY

Reactivity:

N/A

Chemical Stability:

Stable

Possibility of Hazardous Reactions:

None known

Conditions to Avoid: Static Discharge, Shock, Vibrations, Etc.

Dust generation, incompatible materials

Incompatible Materials:

Oxidizing agents and strong acids

Hazardous Decomposition Products:

None known.

XI.TOXICOLOGICAL INFORMATION

Possible Exposure Routes (Inhalation Etc.):

Inhalation, skin contact, ingestion, and eye contact

Symptoms Related To Toxicological Characteristics:

Irritation

Delayed, Immediate, and Chronic Effects:

Irritation may persist

Numerical Toxicity Measurements:

ACUTE TOXICITY
Acute oral toxicity: Not classified as harmful if swallowed
According to the data on the components
According to the classification criteria for mixtures.
Bibliography
Unpublished internal reports

Acute inhalation toxicity: LC50 - 4 h: 5.05 mg/l - rat
According to the data on the components
Asphyxiation Hazard

Acute dermal toxicity: LD50: > 2,000 mg/kg - rabbit
According to the data on the components

Acute toxicity (other routes of administration)
lanthanum oxide: LD50: 1,000 mg/kg - rat, female
Intraperitoneal route

NTP/LARC/OSHA Known Carcinogen:

No genotoxicity, carcinogenic, mutagenic, or teratogenic effects known.

XII.ECOLOGICAL INFORMATION

Ecotoxicity:

AQUATIC
Acute toxicity to fish:
Cerium dioxide: LC50 - 96 h: > 100 mg/l - Danio rerio (zebra fish)
Method: OECD Test Guideline 203

Lanthanum oxide: LC50 - 96 h: > 100 mg/l - Danio rerio (zebra fish)

Acute toxicity to daphnia and other aquatic invertebrates:
Cerium dioxide: EC50 - 48 h: > 100 mg/l - Daphnia magna (Water flea)
Method: OECD Test Guideline 202

Lanthanum oxide: EC50 - 48 h: > 100 mg/l - Daphnia magna (Water flea)

Toxicity to aquatic plants:
Cerium dioxide: EC50 - 72 h: > 100 mg/l - Scenedesmus subspicatus
Method: OECD Test Guideline 201

NOEC: 50 mg/l - Scenedesmus subspicatus
Method: OECD Test Guideline 201

EC10: 91 mg/l - Scenedesmus subspicatus
Method: OECD Test Guideline 201

Lanthanum oxide: By analogy
EC50 - 72 h: > 100 mg/l - Scenedesmus subspicatus

Toxicity to microorganisms:
Cerium dioxide: EC50 - 3 h: > 1,003.8 mg/l - activated sludge
Method: OECD Test Guideline 209

Lanthanum oxide: By analogy
EC50 - 3 h: > 1,003.8 mg/l - activated sludge
Respiration inhibition.

Chronic toxicity to daphnia and other aquatic invertebrates:
Cerium dioxide: NOEC: > 100 mg/l - 22 Days - Daphnia magna (Water flea)

Reproduction Test Method: OECD Test Guideline 211

Lanthanum oxide: NOEC: >= 100 mg/l - 21 d - Daphnia magna (Water flea)

Chronic Toxicity to aquatic plants:
Lanthanum oxide: The product does not have any known adverse effects on the aquatic organisms tested.

TERRESTRIAL
Toxicity to soil dwelling organisms:
Cerium dioxide : NOEC: > 1,000 mg/kg - 14 Days - Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
This product does not have any known adverse effect on the soil organisms tested.

NOEC: > 1,000 mg/kg - 28 Days - soil micro-organisms
Method: OECD Test Guideline 207
This product does not have any known adverse effect on the soil organisms tested.

lanthanum oxide : By analogy
NOEC: >= 1,000 mg/kg - 14 d - Eisenia fetida (earthworms)

NOEC: >= 1,000 mg/kg - 28 d - soil micro-organisms

Terrestrial plants:
Cerium dioxide: NOEC: > 1,000 mg/l - 17 Days - Avena sativa (oats)
Method: OECD Test Guideline 208
This product does not have any known adverse effects on the flora tested.

NOEC: > 1,000 mg/l - 17 Days - Lactuca sativa (lettuce)
Method: OECD Test Guideline 208
This product does not have any known adverse effects on the flora tested.

NOEC: > 1,000 mg/l - 18 Days - Brassica rapa
Method: OECD Test Guideline 208
This product does not have any known adverse effects on the flora tested.

Lanthanum oxide: By analogy
NOEC: >= 1,000 mg/kg - Lactuca sativa (lettuce)
Test period: 17 d

NOEC: >= 1,000 mg/kg - Avena sativa (oats)
Test period: 17 d

NOEC: >= 1,000 mg/kg - Brassica rapa
Test period: 18 d

Persistence and Degradability:

Mineral product, low degradation.

Bioaccumulative Potential:

Not bioaccumulable.

Soil Mobility:

Adsorbs into soil, will stay in soil and sedimentary regions.

Other Adverse Effects:

Not classified as dangerous to the environment.

XIII.DISPOSAL CONSIDERATIONS

Waste Residue and Disposal:

Clean with cold water. Dispose in accordance with local, federal, and state regulations.

XIV.TRANSPORT INFORMATION

UN Number: N/A	**UN Proper Shipping Name:** Not hazardous.	**Transport Hazard Class (es):** Not regulated as hazardous
Packing Group: N/A	**Environmental Hazards:** None	**Transport in Bulk (Annex LI MARPOL 73/78 and IBC Code)** N/A

Special Precautions:

None

XV.REGULATORY INFORMATION

Environmental/ Health/ Safety:

United States TSCA Inventory: y (positive listing)
On TSCA Inventory.

Canadian Domestic Substances List (DSL): y (positive listing)
All components of this product are on the Canadian DSL.

Australia Inventory of Chemical Substances (AICS): y (positive listing)
On the inventory, or in compliance with the inventory.

Japan. CSCL - Inventory of Existing and New Chemical Substances: y (positive listing)
On the inventory, or in compliance with the inventory.

Korea. Korean Existing Chemicals Inventory (KECI): y (positive listing)
On the inventory, or in compliance with the inventory.

China. Inventory of Existing Chemical Substances in China (IECSC): y (positive listing)
On the inventory, or in compliance with the inventory.

XVI.OTHER INFORMATION

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