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SAFETY DATA SHEET

Section 1. Identification

Product Name: Scandium oxide
Product Type: Solid
CAS Number: 12060-08-1
Product Number: SC0081
Recommended Use: Laboratory chemicals, synthesis of substances.
Product Manufacturer: Ereztech LLC
11555 Medlock Bridge Road, Suite 100
Johns Creek, GA 30097
Product Information: (888) 658-1221
In Case of an Emergency: CHEMTREC: 1-800-424-9300 (USA);
+1 703-527-3887 (International); CCN836180
*** Contact manufacturer for all non-emergency calls.

Section 2. Hazards Identification

Appearance/Odor: White powder, odorless.
Classification: This chemical is not considered hazardous under the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Label Elements
Hazard Pictograms: None required.
Signal Word: None required.
OSHA/HCS status: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Hazards Not Otherwise Classified (HNOC): None identified.

Section 3. Composition/Information on Ingredients

Substance Type: Mono-constituent.
Synonyms: Scandia; Scandium sesquioxide.
Formula: Sc_2O_3
Molecular Weight: 137.91 g/mol.
EC-No. : 235-042-0

Section 3. Composition/Information on Ingredients

Component Name	%	CAS Number
Scandium oxide	≥ 99.99	12060-08-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First Aid Measures

Description of Necessary First Aid Measures

General Advice: Move out of dangerous area. If unconscious, place in recovery position and get medical help immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical help if symptoms develop or if you feel unwell. Show this safety data sheet to the doctor in attendance.

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses if easy to do. Continue rinsing. Get medical help if eye irritation develops and persists.

Skin Contact: Take off contaminated clothing and shoes immediately. Wash off contaminated skin with plenty of water. Get medical help if irritation develops and persists.

Inhalation: Remove person to fresh air and keep comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical help if symptoms develop or if you feel unwell.

Ingestion: Rinse mouth, and then give water to drink (two glasses at most). Do NOT induce vomiting. Remove dentures if any. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Get medical help if symptoms develop or if you feel unwell.

Most Important Symptoms/Effects, Acute and Delayed Potential Acute Health Effects

Eye Contact: The acute symptoms of exposure of eye tissues to this product have not been determined.

Inhalation: The acute symptoms associated with the inhalation of this product have not been determined.

Skin Contact: The acute symptoms associated with dermal contact to this product have not been determined.

Ingestion: The acute symptoms associated with the ingestion of this product have not been determined.

Section 4. First Aid Measures

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Notes to Physician: Treat symptomatically.

Specific Treatments: No specific treatment.

Protection of First Responders: No action taken shall be taken involving any personal risk without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See Toxicological Information (Section 11)

Section 5. Fire Fighting Measures

General Hazards: None identified.

Suitable Extinguishing Media: Use extinguishing measures and media that are appropriate to the local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: For this substance/mixture no limitations of extinguishing agents are given.

Unusual Fire and Explosion Hazards: None identified; product is not flammable.

Product of Combustion: Decomposition products include scandium oxides.

Protection of Firefighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Avoid contact with skin or eyes. Avoid the formation and inhalation of dusts, aerosols, vapors and gases.

Use a water spray/fog to reduce/control vapors and gases and to cool unopened containers.

Fire-fighters should wear appropriate protection equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.

Additional Information: Prevent fire extinguishing water from contaminating surface waters or ground water systems.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid the formation and inhalation of dusts, aerosols, vapors and gases. Provide adequate ventilation or wear respiratory protection.

Section 6. Accidental Release Measures

For Emergency Responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel".

Environmental Precautions: Prevent spilled material and firefighting runoff from entering the surrounding environment (soil contact, entry into drains, sewers and waterways). Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for Containment

General: Stop leak/spillage and move containers from spill area if safe to do so. Avoid the formation and inhalation of dusts, aerosols, vapors and gases. Dispose of collected spillage in accordance with federal, state and local regulations (see Section 13). Contaminated binding material may pose the same hazard as the spilled product.

Small Spill: Collect spillage with a dry binding material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal.

Large Spill: Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with a dry binding material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal.

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and Storage

Precautions: Keep container tightly sealed. Avoid the formation and inhalation of dusts, aerosols, vapors and gases. Avoid contact with skin, eyes and clothing. Do not ingest. Ensure adequate ventilation.

Protective Measures: Put on appropriate personal protective equipment (see Section 8). Keep in the original container kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and Storage

Safe Storage Conditions: Store in original container in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use.

Section 8. Exposure Controls/Personal Protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and conduct regular repairs. Waste from these procedures should be handled in accordance with Section 13.

Occupational Exposure Limits: Product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Engineering Controls: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Provide an eyewash/shower station.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Remove all soiled and contaminated clothing immediately. Do not inhale dusts or aerosols. Avoid contact with eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to dusts or aerosols. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles, faceshield (8-inch minimum). Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

Section 8. Exposure Controls/Personal Protection

Skin Protection

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical-resistant gloves. For full contact, wear Neoprene or nitrile rubber 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.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

Physical State: Solid.

Color: White powder.

Odor: Odorless.

Odor Threshold: No data available.

pH: No data available.

Melting Point: 2430 °C (4406 °F).

Boiling Point: No data available.

Flash Point: No data available.

Flammability: Product is not flammable.

Section 9. Physical and Chemical Properties

Density: 8.35 g/cm^3.
Vapor Pressure: No data available.
Vapor Density: No data available.
Water Solubility: Insoluble.
Evaporation Rate: Not applicable.
Viscosity: Not applicable.

Section 10. Stability and Reactivity

Reactivity: Based on available information, no reactivity hazards have been identified for this product.
Chemical Stability: Product is stable under recommended storage conditions.
Conditions to Avoid: Exposure to incompatible products and excess heat.
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions: scandium oxides. In the event of a fire: see Section 5.
Possibility of Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur. Hazardous reactions or instability may occur under certain conditions of storage or use.

Section 11. Toxicological Information

Information on Toxicological Effects

Acute Toxicity: No specific data available.
Irritation/Corrosion: No specific data available.
Sensitization: No specific data available.
Germ Cell Mutagenicity: No specific data available.
Carcinogenicity

Component	CAS No	ACGIH	IARC	NTP	OSHA
Scandium oxide	12060-08-1	Not listed	Not listed	Not listed	Not listed

Reproductive Toxicity: No specific data available.
Teratogenicity: No specific data available.
Specific Target Organ Toxicity (Single Exposure): No specific data available.
Specific Target Organ Toxicity (Repeated Exposure): No specific data available.

Section 11. Toxicological Information

Aspiration Hazard: No specific data available.

Information on the Likely Routes of Exposure: Common routes of exposure: inhalation (failure to prevent dust formation), dermal (failure to use skin protection), eye (failure to use safety eyewear). Less common: ingestion (failure to employ recommended hygiene measures (e.g. smoking after handling product without washing hands or using hand protection).

Additional Information: To the best of our knowledge, the chemical, physical and toxicological properties of this product have not been thoroughly investigated.

Section 12. Ecological Information

Ecotoxicity: Product contains no substances that have been identified as being harmful to the environment.

Numerical Measures of Toxicity: No specific data available.

Persistence and Degradability

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

Bioaccumulative Potential: No specific data available.

Mobility in Soil: No specific data available.

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Endocrine Disrupting Properties: No specific data available.

Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13. Disposal Considerations

Waste Treatment Methods

Product: Dispose of in accordance with local, state, and federal regulations. Refer to 40 CFR 260-299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals.

Contaminated Packaging: Empty containers retain product residue (dusts, aerosols). Dispose of as unused product. Do not reuse container.

Section 14. Transport Information

	DOT	IMDG	IATA
UN Number	Not regulated	Not regulated	Not regulated
UN Proper Shipping Name	-	-	-
Transport Hazard Classes	-	-	-
Packing Group	-	-	-
Environmental Hazards	-	-	-
Additional Information	-	-	-

Special Precautions for User: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

Toxic Substance Control Act (TSCA)
This product as supplied is listed as "Active" on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory).

This product as supplied is not subject to the TSCA Significant New Use Rule.

This product as supplied is not subject to TSCA 12(b) export notification requirements.

SARA 302 Components
This product does not contain any components which are subject to the reporting requirements of SARA Title III, Section 302 EHS TPQ.

SARA 304 Components
This product does not contain any components which are subject to the reporting requirements of SARA Title III, Section 304 RQ.

SARA 311/312 Hazards
None identified.

SARA 313 Components
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.

Clean Water Act
Not applicable.

Clean Air Act
Not applicable.

CERCLA Reportable Quantity
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Section 15. Regulatory Information

CERCLA Reportable Quantity (cont.)

There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US Department of Homeland Security (DHS)

This product does not contain any DHS chemicals.

US Department of Transportation (DOT)

Component	Reportable Quantity	DOT Marine Pollutant	DOT Severe Marine Pollutant
Scandium oxide	No	No	No

US State Right-to-Know Listings

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Scandium oxide	-	-	-	-	-

"X" – Listed.

US State Chemicals of High Concern Listings

Component	Maine	Vermont	Washington
Scandium oxide	-	-	-

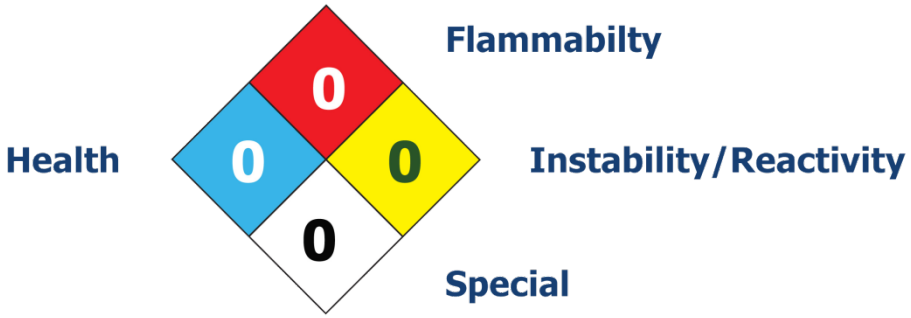
"X" – Listed.

California Proposition 65 Components

This product does not contain any Proposition 65 chemicals.

Section 16. Other Information

National Fire Protection Association (U.S.A.)



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Section 16. Other Information

HMIS Rating

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

History

Date of Issue/Date of Revision: 10/6/2025.

Date of Previous Issue: None.

References: None available.

Abbreviations and Acronyms

ACGIH	:	American Conference of Governmental Industrial Hygienists.
AIHA	:	American Industrial Hygiene Association.
ATE	:	Acute Toxicity Estimate (per Chapter 3.1 of GHS 10 standard).
BEI	:	Biological Exposure Indices (ACGIH).
CAS	:	Chemical Abstracts Service (division of the American Chemical Society).
CHRIS	:	Chemical Hazards Response Information System (US DOT).
CLP	:	Classification, Labeling and Packaging (European Union (EU)).
DOT	:	US Department of Transportation.
EC-No.	:	The EC Inventory (EINECS, ELINCS and the NLP-list is the source of the seven digit EC number, an identifier of substances commercially available with the EU (European Union).
EINECS	:	European Inventory of Existing Commercial Chemical Substances.
EHS	:	Extremely Hazardous Substance.
ELINCS	:	European List of Notified Chemical Substances.
GHS	:	Globally Harmonized System of Classification and Labeling of Chemicals.
HAP	:	Hazardous Air Pollutants (Clean Air Act).
HMIS	:	Hazardous Materials Identification System.
HNOC	:	Hazards Not Otherwise Classified.
IARC	:	International Agency for Research on Cancer.
IATA	:	International Air Transport Association.
IATA-DGR	:	Dangerous Goods Regulations by the "International Air Transport Association" (IATA).
IDLH	:	Immediately Dangerous to Life or Health (US National Institute for Occupation Health and Safety (NIOSH)).
IMDG	:	International Maritime Code for Dangerous Goods.
IP	:	Intraperitoneal.
IV	:	Intravenous.

Section 16. Other Information

Abbreviations and Acronyms (cont.)

NFPA	:	National Fire Protection Association.
NIOSH	:	National Institute of Occupational Safety and Health.
NSRL	:	No Significant Risk Levels.
NTP	:	National Toxicology Program.
ODS	:	Ozone Depleting Substances (US Clean Air Act).
OECD	:	Organization for Economic Co-Operation and Development.
OEL	:	Occupational Exposure Limit.
OSHA	:	Occupational Safety and Health Administration.
PBT	:	Persistent Bioaccumulative and Toxic.
PEL	:	Permissible Exposure Limits.
REL	:	Recommended Exposure Limits.
RQ	:	Reportable Quantity.
SARA	:	Superfund Amendments and Reauthorization Act.
STEL (ST)	:	Short Term Exposure Limit (ACGIH/NIOSH)
STOT	:	Specific Target Organ Toxicity.
TLV	:	Threshold Limit Values (ACGIH).
TPQ	:	Threshold Planning Quantity.
TWA	:	Time Weighted Average.
VOC	:	Volatile Organic Compound.
vPvB	:	Very Persistent and Very Bioaccumulative.
WEEL	:	Workplace Environmental Exposure Level (AIHA).

Disclaimer

The information herein is believed to be accurate and is presented in good faith; however, no warranties or representations are made by Ereztech LLC regarding the accuracy or completeness of the information. Ereztech LLC shall not be liable for any damages resulting from the handling, or from the contact with the above product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.