



SAFETY DATA SHEET

Superpax, Superpax Plus, Superpax Plus(K), Zircopax Plus

1. IDENTIFICATION

<u>Product Name</u>	Superpax, Superpax Plus, Superpax Plus(K), Zircopax Plus
<u>Product No.</u>	51415, 51451, 51451(K), 51453
<u>Identified uses</u>	Ceramic
<u>Supplier:</u>	
ENDEKA Ceramics Inc.	
11400 New Berlin Road	
Jacksonville	
Florida	
32226	
USA	
Tel. ++1 904 751 2828	
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2. HAZARD(S) IDENTIFICATION

<u>Appearance</u>	Powder, dust
<u>Color</u>	White / off-white.
<u>Odor</u>	Odorless.

Human Health

Dust may irritate the eyes and the respiratory system.

General Information

Zirconium Silicate contains small quantities of radioactive isotopes of Uranium and Thorium. The average concentrations in Endeka Ceramics' Zirconium Silicate are 300 ppm of Uranium and 180 ppm of Thorium. The radioactivity of Zirconium Silicate is due to its natural radionuclides which are not processed, and which have not been processed, in view of their radioactive, fissile or fertile properties.

Work activities involving Zirconium Silicates are regulated under a specific regulation (Council Directive 96/29/EURATOM of 13 May 1996), which is different to that concerning radioactive substances. This Directive, establishes the need to assess the radiation exposure to which workers are or may be exposed. The radiation level established by the International Commission on Radiological Protection (ICRP) sets an annual radiation dose of 1 mSv over which physical surveillance of workers becomes required. This value has been adopted by the Commission of the European Communities.

Studies commissioned by Endeka Ceramics have concluded that when workers exposure to Zirconium Silicate is continuous (2000 hours per year), the radiation dose may reach 1 mSv over the year.

Inhalation

Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. IARC Classification Group 1: human carcinogenic.

Skin Contact

Skin irritation is not anticipated when used normally.

Eye Contact

Particles in the eyes may cause irritation and smarting.

Specific Effects

Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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Zirconium silicate	95-100%
CAS No.: 14940-68-2	EC No.: 239-019-6
GHS Classification Not classified.	
Free crystalline silica (respirable fraction)	1-2.5%
CAS No.: 14808-60-7	EC No.: 238-878-4
GHS Classification STOT RE 1 - H372	

4. FIRST-AID MEASURES**Description of first aid measures****Inhalation**

Move the exposed person to fresh air at once.

Ingestion

Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions.

Skin Contact

Remove contaminated clothes and rinse skin thoroughly with water.

Eye Contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring these instructions.

Most important symptoms and effects, both acute and delayed**General Information**

Not available.

Indication of any immediate medical attention and special treatment needed**Notes To The Physician**

No specific first aid measures noted.

5. FIRE-FIGHTING MEASURES**Flash point (°C)**

Not applicable.

Extinguishing Media

The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

None.

Hazardous combustion products

No hazardous decomposition products.

Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted.

Specific Hazards

None.

Special Fire Fighting Procedures

No specific fire fighting procedure given.

Protective Equipment For Fire-Fighters

Use protective equipment appropriate for surrounding materials.

6. ACCIDENTAL RELEASE MEASURES

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Personal Precautions

Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. For personal protection, see section 8.

Environmental Precautions

Do not discharge into drains, water courses or onto the ground.

Spill Clean Up Methods

Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container. Wash thoroughly after dealing with a spillage.

Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Observe good chemical hygiene practices. Use mechanical ventilation in case of handling which causes formation of dust. Avoid eating, drinking and smoking when using the product.

Storage

Store in closed original container in a dry place.

Specific end use(s)

Not known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	STD	TWA (8-hrs)		STEL (15 min)		Notes
Free crystalline silica (respirable fraction)	ACGIH		0.025 mg/m ³			A2
Zirconium silicate	ACGIH		5 mg/m ³			
Zirconium silicate	OSHA		5 mg/m ³			
COMPONENT	IDLH					
Free crystalline silica (respirable fraction)	25 mg/m ³					

ACGIH=American Conference of Governmental Industrial Hygienists.

A2: Suspected Human Carcinogen.

Engineering Measures

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

Respiratory Equipment

At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.

Hand Protection

For prolonged or repeated skin contact use suitable protective gloves.

Eye Protection

Use tight fitting goggles if dust is generated.

Skin Protection

No specific recommendations.

Thermal hazards

Not relevant

9. PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance</u>	Powder, dust
<u>Color</u>	White / off-white.
<u>Odor</u>	Odorless.
<u>Solubility</u>	Insoluble in water
<u>Initial boiling point and boiling range</u>	Not available.
<u>Melting point (°C)</u>	2550
<u>Relative density</u>	4.6 g/ml
<u>Flash point</u>	Not applicable.
	None.

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10. STABILITY AND REACTIVITY

Reactivity

No specific reactivity hazards associated with this product.

Stability

No particular stability concerns.

Not known.

Hazardous Polymerisation

Will not polymerise.

Conditions To Avoid

No specific conditions are likely to result in a hazardous situation.

Materials To Avoid

No specific, or groups of materials are likely to react to produce a hazardous situation.

Hazardous Decomposition Products

No hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

Toxicological Information on Ingredients:

Zirconium silicate (CAS: 14940-68-2)

Carcinogenicity:

IARC Carcinogenicity

Not listed.

OSHA - Carcinogenicity

Not listed.

Free crystalline silica (respirable fraction) (CAS: 14808-60-7)

Carcinogenicity:

IARC Carcinogenicity

IARC Group 1 Carcinogenic to humans.

NTP - Carcinogenicity

Known human carcinogen

OSHA - Carcinogenicity

Not listed.

12. ECOLOGICAL INFORMATION

Ecotoxicity

There are no data on the ecotoxicity of this product. The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Acute Fish Toxicity

Not considered toxic to fish.

Acute Toxicity - Fish

Not available.

Acute Toxicity - Aquatic Invertebrates

Not available.

Acute Toxicity - Aquatic Plants

Not available.

Acute Toxicity - Microorganisms

Not available.

Acute Toxicity - Terrestrial

Not available.

Degradability

The product is not biodegradable.

Bioaccumulative potential

No data available on bioaccumulation.

Mobility:

Not known.

Results of PBT and vPvB assessment

Not applicable.

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Other adverse effects

Not available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste and residues in accordance with local authority requirements.

14. TRANSPORT INFORMATION

General

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

Environmentally Hazardous Substance/Marine Pollutant

No.

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes

Not applicable.

15. REGULATORY INFORMATION

Regulatory Status (US)

Not subject to the provisions of SARA 313 Title III. Not subject to TSCA Export Notification Section 12b.

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed.

California Air Toxics "Hot Spots" (A-I)

None of the ingredients are listed.

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed.

Massachusetts "Right To Know" List

The following ingredients are listed.

Free crystalline silica (respirable fraction)

Rhode Island "Right To Know" List

The following ingredients are listed.

Free crystalline silica (respirable fraction)

Minnesota "Right To Know" List

The following ingredients are listed.

Free crystalline silica (respirable fraction)

New Jersey "Right To Know" List

The following ingredients are listed.

Free crystalline silica (respirable fraction)

Pennsylvania "Right To Know" List

The following ingredients are listed.

Free crystalline silica (respirable fraction)

International Inventories

EU - EINECS/ELINCS

All ingredients are listed or exempt.

Canada - DSL/NDSL

All ingredients are listed or exempt.

US - TSCA

All ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed.

Australia - AICS

All ingredients are listed or exempt.

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Japan – MITI

None of the ingredients are listed.

Korea - KECI

All ingredients are listed or exempt.

China - IECSC

All ingredients are listed or exempt.

Phillippines – PICCS

All ingredients are listed or exempt.

16. OTHER INFORMATION

Revision Date 04/03/2015

Revision 1

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.