



# MATERIAL SAFETY DATA SHEET

## IONEX TYPE Zn-100

Doc.: 401  
Rev.: A 8/24/10

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** IONEX TYPE Zn-100  
**Use/Size** Extrudate  
**Manufacturer/Supplier** Molecular Products, Inc., a subsidiary of Molecular Products Group  
**Address** 6837 Winchester Circle Suite A  
Boulder, Co.80301  
**Phone Number** (303) 666-4400 (Monday – Friday 7:00 am to 5:00 pm MT)  
**Revision Date:** August 24, 2010  
**MSDS Date:** August 24, 2010

*This MSDS has been compiled in accordance with - EC Directive 91/155/EC - OSHA's Hazcom Standard (29 CFR 1910.1200)*

### 2. COMPOSITION/INFORMATION ON THE COMPONENTS

Component Name	CAS#/Codes	Concentration	R Phrases	Classification
Zinc Oxide	1314-13-2	< 10%	R-None	None
Zeolite	1318-02-1	> 80%	R-None	None
Quartz	14808-60-7 238-878-4	< 3%	R49	T

R49: May cause cancer by inhalation.

### 3. HAZARD IDENTIFICATION

#### EU Main Hazards

May cause cancer by inhalation.

#### Routes of Entry

- Eye contact - Skin contact - Inhalation

#### Carcinogenic Status

Considered carcinogenic by NTP, IARC, and OSHA.

#### Target Organs

- Eye - Skin - Respiratory Tract - Liver

#### Health Effects - Eyes

Contact may cause conjunctival irritation.

#### Health Effects - Skin

Material may cause irritation.

#### Health Effects - Ingestion

May cause irritation to gastrointestinal tract. A large dose may cause liver damage.

### 3. HAZARD IDENTIFICATION

#### Health Effects - Inhalation

Exposure to dusts at high concentrations may cause irritation of nose throat and respiratory tract and may cause liver damage.



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### 4. FIRST AID MEASURES

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**Eyes**

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

**Skin**

Wash skin thoroughly with soap and water. Continue washing for at least 15 minutes. Seek medical attention if symptoms occur or redness persists.

**Ingestion**

Have victim drink 1-3 glasses of water to dilute stomach contents. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing. Obtain medical attention immediately.

**Inhalation**

If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.

**Advice to Physicians**

Treat Symptomatically.

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### 5. FIRE FIGHTING MEASURES

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**Extinguishing Media**

Use foam, dry chemical or carbon dioxide.

**Unusual Fire and Explosion Hazards**

This product may give rise to hazardous fumes in a fire. When exposed to water, zeolites can become hot and heat to the boiling point of water. Flooding with water will reduce the temperature to safe limits

**Protective Equipment for Fire-Fighting**

Wear full protective clothing and self-contained breathing apparatus.

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### 6. ACCIDENTAL RELEASE MEASURES

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This product may be collected by carefully scooping into a pan, paper towel or other absorbent material. Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Transfer into suitable containers for recovery or disposal. Wear appropriate protective clothing.

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### 7. HANDLING AND STORAGE

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Keep container tightly closed when not in use. Avoid buildup of static charge in handling equipment. Do not get in eyes, on skin or on clothing. Avoid breathing dust. Storage area should be: - cool - dry - well ventilated - away from incompatible materials (see section 10 for materials to avoid)



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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Occupational Exposure Standards

Exposure limits are listed below, if they exist.

#### Zinc Oxide

**ACGIH TLV:** 2 mg/m<sup>3</sup>. **OSHA Permissible Exposure Limits (PELs):** 5 mg/m<sup>3</sup> **UK TWA:** 2 mg/m<sup>3</sup>

#### Zeolite (comprising the following)

#### Silicon Oxide (as particles not otherwise specified)

**ACGIH TLV:** 3 mg/m<sup>3</sup> (respirable), 10 mg/m<sup>3</sup> (inhalable) **OSHA Permissible Exposure Limits (PELs)** 5 mg/m<sup>3</sup> (respirable), 15 mg/m<sup>3</sup> (total) **UK TWA:** 2.4 mg/m<sup>3</sup> (respirable), 6 mg/m<sup>3</sup> (inhalable).

#### Aluminum Oxide

**ACGIH TLV:** 10 mg/m<sup>3</sup> **OSHA Permissible Exposure Limits (PELs)** 5 mg/m<sup>3</sup> (respirable), 15 mg/m<sup>3</sup> (total) **UK TWA:** 4 mg/m<sup>3</sup>

#### Quartz (silica-crystalline)

**ACGIH TLV:** 0.05 mg/m<sup>3</sup> (respirable): **OSHA Permissible Exposure Limits (PEL):** 30 mg/m<sup>3</sup> / %SiO<sub>2</sub> + 5 (total) **UK TWA:** 0.3 mg/m<sup>3</sup>

#### Engineering Control Measures

Good general room ventilation is expected to be adequate to control airborne levels. If conditions are dusty, use local exhaust ventilation.

#### Respiratory Protection

NIOSH Approved dust respirator if conditions are dusty.

#### Hand Protection

Rubber gloves

#### Eye Protection

Chemical goggles or safety glasses with side shields

#### Body Protection

Normal work wear.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Extrudate
<b>Color</b>	White to Gray
<b>Odor</b>	Odorless
<b>pH</b>	No data
<b>Specific Gravity</b>	0.85-1.00
<b>Boiling Range/Point (°C)</b>	No data
<b>Flash Point (PMCC) (°C)</b>	Not Flammable
<b>Explosion Limits (%)</b>	Not flammable
<b>Vapor Pressure</b>	Not Applicable
<b>Density</b>	1.0 g/ml
<b>Solubility in Water</b>	Insoluble



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### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Vapor Density (Air = 1)</b>	Not Applicable
<b>Melting Point (deg C)</b>	Not Applicable

### 10. STABILITY AND REACTIVITY

**Stability**

Stable under normal conditions.

**Conditions to Avoid**

- Heat - High temperatures - contact with water or moisture as heat can be generated

**Materials to Avoid**

- Water and Moisture - Strong Reducing Agents

**Hazardous Polymerization**

Will not occur.

**Hazardous Decomposition Products**

- acrid smoke and irritating fumes - oxides of aluminum - oxides of silicon - oxides of sodium - oxides of silver

### 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity**

Low order of acute toxicity predicted.

**Chronic Toxicity/Carcinogenicity**

There is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources.

**Genotoxicity**

This product is not expected to cause any mutagenic effects. Silicon was not mutagenic to Salmonella typhimurium or Escherichia Coli.

**Reproductive/Developmental Toxicity**

This product is not expected to cause reproductive or developmental health effects.

### 12. ECOLOGICAL INFORMATION

**Mobility**

No relevant studies identified.

**Persistence/Degradability**

No relevant studies identified.

**Bio-accumulation**

No relevant studies identified.

**Ecotoxicity**

No relevant studies identified.

### 13. DISPOSAL

Dispose of in accordance with all applicable local and national regulations.



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### 13. DISPOSAL

### 14. TRANSPORT INFORMATION

<b>DOT CFR 172.101 Data</b>	Not Regulated
<b>UN Proper Shipping Name</b>	Not Regulated
<b>UN Class</b>	N/A
<b>UN Number</b>	N/A
<b>UN Packaging Group</b>	N/A
<b>Classification for AIR Transportation (IATA)</b>	Not Restricted per UN Provision 223.

### 15. REGULATORY INFORMATION

#### EU Label Information

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments.

#### EU Hazard Symbol and Indication of Danger

T: Toxic.

#### R phrases

R49: May cause cancer by inhalation.

#### S phrases

S22: Do not breathe dust.

#### US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

##### TSCA Listing

All ingredients have been verified for inclusion on the EPA Toxic Substance Control Act Chemical Substance Inventory.

##### EINECS Listing

All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are exempt from listing.

##### DSL/NDSL (Canadian) Listing

All ingredients have been verified for inclusion on either the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

##### WHMIS Classification

D.2.A

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

##### California Proposition 65

This product contains materials which the State of California has found to cause cancer, birth defects or other reproductive harm. – Quartz (14808-60-7)

##### SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

##### SARA Title III Sect. 304

This product does not contain any chemicals subject to SARA Title III Section 304.



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### 15. REGULATORY INFORMATION

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**SARA Title III Sect. 311/312 Categorization**

This product meets the following SARA Title III Section 311/312 categorizations: Acute Hazard, Chronic Hazard

**SARA Title III Sect. 313**

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations.– Aluminum Oxide (1344-28-1)

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### 16. OTHER INFORMATION

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**NFPA Ratings**

NFPA Code for Flammability - 0

NFPA Code for Health - 1

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - 0

**HMIS Ratings**

HMIS Code for Flammability - 0

HMIS Code for Health - 1

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

**Abbreviations**

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk

S: Safety

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

BOD: Biological Oxygen Demand

KoC: Soil Organic Carbon Partition Coefficient

The information in this safety data sheet is based on the best knowledge available at the time and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular application. As the specific conditions of use are outside the control of the supplier, the user is responsible for ensuring that the product is used in a safe way and in compliance with the relevant requirements of legislation.