

**MATERIAL
SAFETY
DATA
SHEET**

PRODUCT: **DRI-OUT**→ (MICRON SIZED SILICA DESICCANT)
(Contains No Poisonous Chemicals or Pesticides)

Emergency Contact:

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The following information includes safety data required by OSHA. The recipient of this safety data is responsible for passing the safety information on so that it reaches the ultimate user who may come in contact with the material.

TRADE NAME: **DRI-OUT®**
(A registered trademark of Insect Dehydration Unlimited, Inc.)

**MATERIAL NAME
& FAMILY:** Synthetic Amorphous Silica

SYNONYMS: Amorphous Silicon Dioxide, Silica Gel, Silicic Acid

**PRODUCT NOTATION
OR STRUCTURE:** $\text{SiO}_2 \cdot x\text{H}_2\text{O}$

INGREDIENTS: 100% FDA approved food and pharmaceutical grade Amorphous Silica and absorbed moisture. Synthetic amorphous silica, not to be confused with crystalline silica such as quartz, cristobalite or tridymite or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms.

The information contained herein is based upon data considered true and accurate. However, manufacturer makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or the results to be obtained from the use thereof. This information is offered solely for the user's consideration, investigation and verification. Since the use and conditions of use of this information and the material described herein are not within the control of manufacturer, manufacturer assumes no responsibility for injury to the user or third persons. The material described herein is sold only pursuant to manufacturer's Terms and Conditions of Sale, including those limiting warranties and remedies contained therein. It is the responsibility of the user to determine whether any use of this data and information is in accordance with applicable federal, state or local laws and regulations.

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HEALTH INFORMATION

PRECAUTIONS IN USE:

Avoid prolonged breathing of the dust or contact of dust with the skin. The drying action of this material can cause irritation of the mucous membranes of the nose and throat and irritation of the skin. If its use requires manual handling, wear long sleeves and close-weave cotton gloves with tight-fitting wristlets. If dusty conditions prevail, wear a properly fitted NIOSH-approved dust respirator. Wear goggles if dust causes eye discomfort.

When pouring into a container of flammable liquid, ground both containers electrically to prevent a static electric spark.

FIRST AID:

EYES: Immediately wash from eyes with large amounts of water, occasionally lifting upper and lower eye lids. If irritation occurs and persists, seek medical attention.

SKIN: Wash with soap and water.

INGESTION: Material will pass through the body normally.

INHALATION: Remove to fresh air.

TOXICOLOGY

This product and its components are not listed on the IARC, NTP or OSHA Carcinogens Lists.

ANIMAL TOXICOLOGY

TESTS FOR DOT HAZARD CLASSIFICATION:

Tests conducted on finely ground silica gel.

1-hour LC₅₀ (Rat) > 2 mg/l
48-hour oral LD₅₀ (Rat) > est. 31,600 mg/kg
48-hour dermal LD₅₀ (Rabbit) > est. 2,000 mg/kg
Not considered an ocular irritant.

LD₅₀ (Mice) 8,000 mg/kg (limit of test)
LD₅₀ (Rats) 4,500 mg/kg (limit of test)
6 month's feeding tests (rats) at levels up to 10% of diet produced no effects.

HUMAN TOXICOLOGY:

Silica gel is a synthetic amorphous silica not to be confused with crystalline silica. Epidemiological studies indicate low potential for adverse health effects. Silica gel is considered by manufacturer to be a nuisance dust. In the activated form, silica gel acts as a desiccant and cause a drying irritation of the mucous membranes and skin in cases of severe exposure. Manufacturer knows of no medical conditions abnormally aggravated by exposure to this product. The primary route of entry is inhalation.

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ENVIRONMENTAL DATA

Not known to have any adverse effect on the aquatic environment. It is insoluble and non-toxic

TYPICAL CHEMICAL & PHYSICAL INFORMATION

APPEARANCE: Dry White Powder, Average Particle Size 2.5-15.0 microns.

pH IN 5% SLURRY: 3-8

ODOR: None

SPECIFIC GRAVITY: 2.1

BULK DENSITY: Range - 7.0 - 21.0 lbs/ft.³

SOLUBILITY IN WATER: Insoluble

APPROXIMATE ANALYSIS: SiO₂ (Ignited basis) 99.4%
LOI @ 1750 F - 8.5%
Heavy Metals < less than 30 ppm
Lead < less than 10 ppm
Crystalline Silica - not detectable.

STABILITY: Stable

REACTIVITY: Reacts with HF

FIRE & EXPLOSION DATA: Non-flammable

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REGULATORY STATUS

- OSHA-** PEL - 6 mg/M³.
- NIOSH-** Animal tests conducted in 1976-78. 18 month exposure at 15 mg/m³ showed silica deposition in respiratory macrophages and lymph nodes, minimum lung function impairment, and no silicosis.
- EPA-** This product contains no toxic chemicals in excess of the applicable de minimis concentration as specified under § 313 of Title III SARA. (E.P.A. REG. NO. 71788-1 E.P.A. EST. NO.71788-CA-1)
- DOT-** Not classified as a hazardous material.

HANDLING INFORMATION

- STORAGE AND TRANSPORTATION:** Keep tightly sealed to protect quality.
- DISPOSAL:** Dispose in an approved landfill according to federal, state and local regulations. Cover promptly to avoid blowing of dust.
- SPILLAGE AND CLEANUP:** Sweep or vacuum up or flush to sewer.
- CONTAINERS:** Paperbags or plastic containers.

SPECIAL INFORMATION

Hazardous Materials Identification system :

- HEALTH HAZARD** - 0
- FLAMMABILITY** - 0
- REACTIVITY** - 0
- PERSONNEL PROTECTION** - Avoid inhalation of dust. For prolonged exposure, use a dust/mist filtering respirator (MSHA/NIOSH approval number TC-21C); or a NIOSH-approved respirator with any N, P, R, or HE filter.

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