

MATERIAL SAFETY DATA SHEET (MSDS)

The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

Zodiaq® is a registered trademark of DuPont.

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information: 1-800-441-7515
Transport Emergency: 1-800-424-9300 (CHEMTREC)
Medical Emergency: 1-800-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

MATERIAL	CAS NUMBER	%
Quartz Surfaces Products		100
<p>Quartz Surfaces Products are composed of approximately 93% crystalline silica which is bound in polymer.</p> <p>The following exposure limits are applicable when fabrication of Quartz Surfaces Products produces dust:</p>		
Silica, Crystalline (Quartz)	14808-60-7	93

Components (Remarks)

Material is not known to contain toxic chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

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HAZARDS IDENTIFICATION

Potential Health Effects

Quartz Surfaces Products are not hazardous as shipped. However, operations such as sawing, routing, drilling and sanding can generate dust. High concentrations of dust can irritate eyes, nose and respiratory passages and cause coughing and sneezing.

Dust generated during handling of Quartz Surfaces Products can contain particles of crystalline silica. Overexposure to airborne crystalline silica can cause silicosis, a chronic and progressively debilitating disease, characterized by the formation of silica-containing scar tissue in the lungs.

Symptoms of silicosis include coughing, difficulty breathing, wheezing and progressive impairment of lung function. In addition to silicosis, epidemiology studies show limited evidence of an excess of lung cancer in occupations involving exposures to crystalline silica, such as stonecutters and granite industry workers.

Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures.

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

MATERIAL	IARC	NTP	OSHA	ACGIH
Silica, Crystalline (Quartz)	1	X		A2

DuPont controls the following materials as carcinogens:
Silica, Crystalline (Quartz).

FIRST AID MEASURES

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin Contact

The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable.

Eye Contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion

No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary.

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FIRE FIGHTING MEASURES

Flammable Properties

Quartz Surfaces Products can be combusted only with difficulty.

Decomposition products resulting from the polymer and pigments degrading at elevated temperatures include various hydrocarbons, carbon dioxide, carbon monoxide and water.

Fumes of metal oxides and mica particles could also be released.

Extinguishing Media

Water, dry chemical, CO₂, foam

Fire Fighting Instructions

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review "Fire Fighting Measures" and "Handling (Personnel)" sections before proceeding with cleanup. Use appropriate "Personal Protective Equipment" during cleanup.

Spill Cleanup

Recover undamaged and minimally contaminated material for reuse and reclamation.

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing dust.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls[#]

Use engineering controls that are adequate to keep employee exposure to airborne concentrations below recommended limits.

Effective engineering controls include operating in a wet environment and the use of ventilation and filtration systems.

More details on engineering controls can be found in Technical Bulletin: Minimizing Silica Dust During Fabrication and Installation. For a copy of this document, contact your Zodiaq distributor or call 1-877-229-3935.

[#] Indicates updated section.

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Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses during operations such as sawing, sanding, drilling or routing.

RESPIRATORS

During grinding, sanding or sawing operations, a NIOSH-approved air purifying respirator with particulate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Respirators should be selected based on the form and concentration of the contaminant in air and in accordance with OSHA Respiratory Protection Standard CFR 1910.134.

PROTECTIVE CLOTHING

Wear leather or cotton gloves when handling large pieces and during operations such as sawing, routing or drilling.

Exposure Guidelines

Applicable Exposure Limits

Silica, Crystalline (Quartz)

PEL (OSHA): Total dust, (30 mg/m³/% SiO₂ + 2)
Respirable dust, (10 mg/m³/% SiO₂ + 2) as 8 Hr. TWAs

TLV (ACGIH): 0.05 mg/m³, respirable dust, 8 Hr. TWA, A2
or see: Christobalite [14464-46-1], Silica, Fused [60676-86-0],
Tridymite [15468-32-2], Tripoli [1317-95-9]

AEL* (DuPont): 0.1 mg/m³, 8 Hr. TWA, respirable dust

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits lower than the AEL are in effect, such limits shall take precedence.

Exposure Guideline Comments

Example PEL calculation for 93% crystalline silica product:

30 mg/m³/(93+2) = 0.316 mg/m³, total crystalline silica as 8 Hr. TWA

10 mg/m³/(93+2) = 0.105 mg/m³, respirable crystalline silica as 8 Hr. TWA

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

% Volatiles: 0% at room temperature
Solubility in Water: Insoluble
Form: Sheets and shaped articles
Specific Gravity: ~2.2-2.39

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STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

Thermal decomposition can release various hydrocarbons, carbon dioxide, carbon monoxide and water. Fumes of metal oxides and mica particles could also be released.

Polymerization

Polymerization will not occur.

ECOLOGICAL INFORMATION

Ecotoxicological Information

Aquatic Toxicity

No information available.

Toxicity is expected to be low based on insolubility in water.

DISPOSAL CONSIDERATIONS

Waste Disposal

Preferred options for disposal are (1) recycling, (2) incineration with energy recovery and (3) landfill. Treatment, storage, transportation and disposal must be in accordance with applicable federal, state/provincial and local regulations.

TRANSPORTATION INFORMATION

Shipping Information

DOT

Not regulated.

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REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status: In compliance with TSCA inventory requirements for commercial purposes.

State Regulations (U.S.)

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.01% FOR SPECIAL HAZARDOUS SUBSTANCES) — Quartz (SiO₂).

WARNING — SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM — Silica, Crystalline (airborne particles of respirable size).

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS) — Silica, Crystalline — Quartz.

OTHER INFORMATION

Additional Information

MEDICAL USE: CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications see DuPont CAUTION Bulletin No. H-50102.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS: DuPont Surfaces Products

Address: DuPont Yerkes Site
Buffalo, NY

Telephone: 716-876-4420

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.