



Health	1
Fire	0
Reactivity	0
Personal Protection	E

Material Safety Data Sheet Celite 545 MSDS

Section 1: Chemical Product and Company Identification

Product Name: Celite 545

Catalog Codes: SLC2440

CAS#: 68855-54-9 (previous 61790-53-2)

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Kieselguhr, soda ash flux-calcined (flux calcined diatomaceous earth); quartz; cristobalite

CI#: Not available.

Synonym: Celite; Aqua-Cel; Silica; Flux Calcined Diatomaceous Earth; Kieselguhr, soda ash flux-calcined.

Chemical Name: Silica

Chemical Formula: SiO₂

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Cristobalite	14464-46-1	<50
Quartz	14808-60-7	<4

Toxicological Data on Ingredients: Cristobalite LD50: Not available. LC50: Not available. Quartz LD50: Not available. LC50: Not available. LCL [Human] - Route - Inhalation; Dose: 300ug/m³/10Y

Section 3: Hazards Identification

Potential Acute Health Effects:

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Hazardous in case of inhalation (lung irritant).

Potential Chronic Health Effects:

Hazardous in case of inhalation. CARCINOGENIC EFFECTS: Classified 1 (Proven for human.) by IARC, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA, + (Proven.) by NIOSH [Cristobalite]. Classified A2 (Suspected for human.) by ACGIH [Cristobalite]. Classified 1 (Proven for human.) by IARC, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA, + (Proven.) by NIOSH [Quartz]. Classified A2 (Suspected for human.) by ACGIH [Quartz]. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:

Containers may explode when heated. Heating a mixture of powdered magnesium and silica causes a violent explosion.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Cristobalite TWA: 0.05 (mg/m³) from ACGIH (TLV) [United States] Inhalation Respirable. TWA: 0.05 (mg/m³) from OSHA (PEL) [United States] Inhalation Respirable. TWA: 0.3 (mg/m³) [United Kingdom (UK)] Inhalation TWA: 0.15 (mg/m³) [Canada] Inhalation Respirable. TWA: 0.05 (mg/m³) [Canada] Inhalation Respirable. Quartz TWA: 0.05 (mg/m³) from ACGIH (TLV) [United States] [1999] Inhalation Respirable. TWA: 0.1 (mg/m³) from OSHA (PEL) [United States] Inhalation Respirable. TWA: 0.3 (mg/m³) [United Kingdom (UK)] Inhalation Respirable. TWA: 0.2 (mg/m³) [Australia] Inhalation TWA: 0.1 (mg/m³) [Canada] Inhalation Respirable. TWA: 4 (mg/m³) [Canada] Inhalation Total3Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Powdered solid.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: Not applicable.

Color: White.

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 2.3 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is insoluble in water and oil.

Ionicity (in Water): Not available.

Dispersion Properties: Is not dispersed in cold water, hot water.

Solubility:

Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone. Soluble in hydrofluoric acid.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatibles, excess dust generation

Incompatibility with various substances:

Reactive with oxidizing agents. Slightly reactive to reactive with alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity:

Incompatibility with powerful oxidizers: fluorine and other fluorine containing compounds, chlorine trifluoride, manganese trioxide, oxygen difluoride, hydrogen peroxide, vinyl acetate, etc. Incompatible with powdered magnesium, acetylene and ammonia. This chemical is attacked by Hydrogen Fluoride. Silica will dissolve in Hydrofluoric Acid and produce the corrosive gas Silicon Tetrafluoride (SiF₄). May be attacked by strong alkalis, especially with hot.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:

LD50: Not available. LC50: Not available.

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified 1 (Proven for human.) by IARC, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA, + (Proven.) by NIOSH [Cristobalite]. Classified A2 (Suspected for human.) by ACGIH [Cristobalite]. Classified 1 (Proven for human.) by IARC, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA, + (Proven.) by NIOSH [Quartz]. Classified A2 (Suspected for human.) by ACGIH [Quartz]. Causes damage to the following organs: lungs, upper respiratory tract.

Other Toxic Effects on Humans:

Slightly hazardous in case of skin contact (irritant), of ingestion. Hazardous in case of inhalation (lung irritant).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose/Conc: LCL [Human] - Route: Inhalation; Dose: 300 ug/m³/10Y intermittent (Quartz)

Special Remarks on Chronic Effects on Humans:

May contain up to 54% crystalline silica which may cause cancer (tumorigenic). Crystalline silica has been identified by IARC as a class 1 carcinogen. May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: No adverse health effects expected. May cause skin irritation by mechanical action. Eyes: May cause eye irritation by mechanical action. Ingestion: No adverse health effects expected. Inhalation: Affects respiration and irritates respiratory tract. Acute silicosis (a form of pneumoconiosis) and lung damage from overwhelming exposure to silica dust has occurred. Coughing, wheezing, sore throat, dryness and irritation of the throat, and dyspnea are symptoms. Inhalation of quartz is classified as a human carcinogen. Risk of cancer depends upon duration and level of exposure. Chronic Potential Health Effects: Inhalation: Chronic exposure to crystalline silica via inhalation can also cause silicosis, the most

important form of pneumoconiosis). In silicosis, fibrotic nodules form in the lung around silica deposits (a form of lung scarring). Symptoms include coughing, wheezing, shortness of breath/dyspnea, decrease chest expansion, a progressive

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Cristobalite & Quartz (listed as silica, crystalline) California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Cristobalite & Quartz (listed as silica, crystalline) Illinois toxic substances disclosure to employee act: Cristobalite; Quartz Pennsylvania RTK: Cristobalite; Quartz Minnesota: Cristobalite; Quartz Massachusetts RTK: Cristobalite; Quartz New Jersey: Cristobalite; Quartz TSCA 8(b) inventory: Kieselguhr, soda ash flux-calcined (flux calcined diatomaceous earth); quartz; cristobalite

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R37- Irritating to respiratory system. R45- May cause cancer. S22- Do not breathe dust. S36- Wear suitable protective clothing.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

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

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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