

MSDS MATERIAL SAFETY DATA SHEET

CHEMTREC: 800-424-9300 (USA)

703-527-3887(Outside USA and Canada)

CANUTEC: 613-996-6666

From: Mallinckrodt Baker, Inc
222 Red School Lane
Phillipsburg, NJ 08865

NOTE: Use CHEMTREC and CANUTEC
phone numbers only in the event
of a chemical emergency.

Emergency Telephone Number: 908-859-2151

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

M A L L I N C K R O D T

J. T. B A K E R

Celite® 503

1. Product Identification

Synonyms: Diatomaceous Earth; Diatomite; Kieselguhr Soda Ash Flux Calcined

CAS No.: 68855-54-9

Molecular Weight: Not applicable.

Chemical Formula: Not applicable.

Product Codes:

J.T. Baker: E406

Mallinckrodt: 4382

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Kieselguhr, Soda Ash Flux-calcined	68855-54-9	100%	Yes
This product may contain up to 75% crystalline silica:			
Cristobalite	14464-46-1	< 70%	Yes
Quartz	14808-60-7	< 5%	Yes

3. Hazards Identification

Emergency Overview

WARNING! HARMFUL IF INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY AFFECT LUNGS. CANCER HAZARD. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE CANCER. Risk of cancer depends upon duration and level of exposure.

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 4 - Extreme (Cancer Causing)

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Blue (Health)

Potential Health Effects

Inhalation:

Causes dryness and irritation to the respiratory tract. Symptoms may include coughing, sore throat, breathing difficulty (dyspnea), and wheezing. Excessive inhalation may cause decreased pulmonary function, lung damage and silicosis. Acute silicosis is manifested by dyspnea, fever, cough and weight loss. Severe respiratory symptoms may lead to death.

Ingestion:

No adverse effects expected.

Skin Contact:

Causes irritation with dryness and abrasion.

Eye Contact:

Causes irritation, redness, and pain.

Chronic Exposure:

Prolonged inhalation exposure may produce silicosis. Chronic symptoms include cough, dyspnea, wheezing, increased susceptibility to tuberculosis, decreased chest expansion, and repeated nonspecific chest illnesses. Progressive respiratory and cardiopulmonary impairment may be fatal. Chronic inhalation of crystalline silica is a lung cancer hazard.

Aggravation of Pre-existing Conditions:

Persons with pre-existing respiratory or cardiopulmonary problems may be more susceptible to the effects of this substance.

4. First Aid Measures

Inhalation:

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

Ingestion:

Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. When pouring into a container of flammable liquid, ground both containers electrically to prevent a static electric spark. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

OSHA PERMISSIBLE LIMITS (PELs):

- For silica, amorphous, including natural diatomaceous earth (112926-00-8):
(80 mg/m³) / (%SiO₂), (TWA).

- For silica, crystalline, quartz (14808-60-7):
(30mg/m³)/(%SiO₂ + 2), (TWA), total dust;
(10 mg/m³)/(%SiO₂ + 2), (TWA), respirable fraction;
where "%SiO₂" is the percentage of crystalline silica
determined by airborne samples, as defined by
29 CFR 1910.1000, Z-3.

- For silica, crystalline, tridymite (15468-32-3) or cristobalite (14464-46-1):
Use one-half of the quartz exposure limits.

ACGIH THRESHOLD LIMIT VALUES:

- For silica, crystalline, quartz (14808-60-7):
0.025 mg/m³ (TWA), respirable fraction, A2 - Suspected Human Carcinogen.

- For silica, crystalline, cristobalite (14464-46-1):
0.025 mg/m³ (TWA), respirable fraction.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a half-face high efficiency particulate respirator (NIOSH type N100 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece high efficiency particulate respirator (NIOSH type N100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. Where respirators are required, you must have a written program covering the basic requirements in the OSHA respirator standard. These include training, fit testing, medical approval, cleaning, maintenance, cartridge change schedules, etc. See 29CFR1910.134 for details.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White to gray Powder.

Odor:

Odorless.

Solubility:

Slight (0.1-1%)

Specific Gravity:

2.30

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

No information found.

Melting Point:

No information found.

Vapor Density (Air=1):

Not applicable.

Vapor Pressure (mm Hg):

Not applicable.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

No information found.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Reacts with hydrogen fluoride, fluorine, oxygen difluoride, chlorine trifluoride, strong acids, strong bases, and oxidizers.

Conditions to Avoid:

Moisture, extreme heat, and incompatibles.

11. Toxicological Information

Toxicological Data:

No LD50/LC50 information found relating to normal routes of occupational exposure.

Silica, Amorphous:

- diatomaceous earth: investigated as a tumorigen.

Silica, Crystalline:

- tripoli: investigated as a tumorigen.

- tridymite: investigated as a tumorigen and mutagen.

- quartz: investigated as a tumorigen and mutagen.
- cristobalite: investigated as a tumorigen.
- fused: investigated as a tumorigen.

Carcinogenicity:

For Silica, Crystalline:

- Cristobalite (14464-46-1), quartz (14808-60-7), and tridymite (15468-32-3) are listed by NTP as known to be a human carcinogen.
- NIOSH considers cristobalite, tridymite, quartz, and tripoli (1317-95-9) to be potential occupational carcinogens.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Kieselguhr, Soda Ash Flux-calcined (68855-54-9)	No	No	None
Cristobalite (14464-46-1)	Yes	No	1
Quartz (14808-60-7)	Yes	No	1

12. Ecological Information

Environmental Fate:

When released into the soil, this material is not expected to biodegrade. When released into water, this material is not expected to biodegrade.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Kieselguhr, Soda Ash Flux-calcined (68855-54-9)	Yes	Yes	No	Yes
Cristobalite (14464-46-1)	Yes	Yes	Yes	Yes
Quartz (14808-60-7)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	--Canada--		Phil.
		DSL	NDSL	
Kieselguhr, Soda Ash Flux-calcined (68855-54-9)	Yes	Yes	No	Yes
Cristobalite (14464-46-1)	Yes	Yes	No	Yes
Quartz (14808-60-7)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----				
Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Kieselguhr, Soda Ash Flux-calcined (68855-54-9)	No	No	No	No
Cristobalite (14464-46-1)	No	No	No	No
Quartz (14808-60-7)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----			
Ingredient	CERCLA	-RCRA-	-TSCA-
		261.33	8(d)
Kieselguhr, Soda Ash Flux-calcined (68855-54-9)	No	No	No
Cristobalite (14464-46-1)	No	No	No
Quartz (14808-60-7)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
 Reactivity: No (Pure / Solid)

WARNING:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 0

Label Hazard Warning:

WARNING! HARMFUL IF INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY AFFECT LUNGS. CANCER HAZARD. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE CANCER. Risk of cancer depends upon duration and level of exposure.

Label Precautions:

- Do not breathe dust.
- Keep container closed.
- Use only with adequate ventilation.
- Do not get in eyes, on skin, or on clothing.
- Wash thoroughly after handling.

Label First Aid:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 8.

Disclaimer:

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