

**Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.
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Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 202-483-7616

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

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

NEUTRACIT®-2 Caustic Neutralizer**1. Product Identification**

Synonyms: None
CAS No: Not applicable to mixtures.
Molecular Weight: Not applicable to mixtures.
Chemical Formula: Not applicable to mixtures.
Product Codes: 4441, 4457, 4470

2. Composition/Information on Ingredients

Ingredient	CAS No.	Percent	Hazardous
Citric Acid	77-92-9	65 - 80%	Yes
Flour	N/A	20%	Yes
Bromothymol Blue Sodium Salt	34722-90-2	2%	Yes
Perlite	93763-70-3	9%	Yes
Silica, Amorphous	7631-86-9	2%	Yes
Specific CAS No. for Silica, Amorphous is 112945-52-5 (Amorphous fumed silica)			

3. Hazards Identification**Emergency Overview**

WARNING! CAUSES SEVERE EYE IRRITATION. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.

J.T. Baker SAF-T-DATA(tm) Ratings

(Provided here for your convenience)

Health:	Flammability:	Reactivity:	Contact:
1 - Slight	1 - Slight	1 - Slight	2 - Moderate
Lab Protection Equip:	GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES		
Storage Color Code:	Orange (General Storage)		

Potential Health Effects

Amorphous fumed silica does not contain crystalline silica.

Inhalation:

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion:

Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Extremely large oral dosages may produce gastrointestinal disturbances. Calcium deficiency in blood may result in severe cases of ingestion.

Skin Contact:

Causes irritation to skin. Symptoms include redness, itching, and pain.

Eye Contact:

Highly irritating; may also be abrasive.

Chronic Exposure:

Chronic or heavy acute ingestion may cause tooth enamel erosion.

Aggravation of Pre-existing Conditions:

No information found.

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:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Skin Contact:

Immediately flush skin with plenty of 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:

Autoignition temperature: 1011°C (1852°F)

Autoignition temperature is for citric acid component. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

Explosion:

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

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

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. 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:

Amorphous Fumed Silica:

- OSHA Permissible Exposure Limit (PEL):

15 mg/m³ total dust, 5 mg/m³ respirable fraction for nuisance dusts.

- ACGIH Threshold Limit Value (TLV):

10 mg/m³ total dust containing no asbestos and < 1% crystalline silica for Particulates Not Otherwise Classified (PNOC).

Perlite:

-OSHA Permissible Exposure Limit (PEL):

15 mg/m³ (total dust), 5 mg/m³ (respirable fraction)

-ACGIH Threshold Limit Value (TLV):

10 mg/m³ for particulate matter containing no asbestos and < 1% crystalline silica

A4, Not classifiable as a human carcinogen

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. 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 Respirator (NIOSH Approved)

If the exposure limit is exceeded, a half-face dust/mist respirator 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 dust/mist respirator 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. 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.

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:

Yellow crystals or powder.

Odor:

Odorless.

Solubility:

Slight (0.1-1%)

Specific Gravity:

No information found.

pH:

No information found.

% Volatiles by volume @ 21°C (70°F):

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:

Bromines and oxides of carbon, silicon and sulfur.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

For Citric Acid: Metal nitrates (potentially explosive reaction), alkali carbonates and bicarbonates, potassium tartrate. Will corrode copper, zinc, aluminum and their alloys. For Perlite: hydrogen fluoride. For Bromothymol Blue Sodium Salt: strong oxidizers.

Conditions to Avoid:

Heat, flame, ignition sources, dusting, moisture and incompatibles.

11. Toxicological Information

Toxicological Data:

For Citric Acid: Oral rat LD50: 3 g/kg; irritation skin rabbit: 500 mg/24H mild; eye rabbit: 750 ug/24H severe. For amorphous fumed silica: oral rat LD50: 3160 mg/kg. Investigated as a tumorigen and mutagen. For perlite: oral mouse LD50: 12,960 mg/kg.

Carcinogenicity:

IARC category for silica, amorphous (7631-86-9) applies to silicas that may contain crystalline silica. The silica in this product is synthetic and does not contain crystalline silica.

Cancer Lists

Ingredient	—NTP Carcinogen—		IARC Category
	Known	Anticipated	
Citric Acid (77-92-9)	No	No	None
Flour	No	No	None
Bromothymol Blue Sodium Salt (34722-90-2)	No	No	None
Perlite (93763-70-3)	No	No	None
Silica, Amorphous (7631-86-9)	No	No	3

12. Ecological Information

Environmental Fate:

No information found.

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

Ingredient	---Canada---							
	TSCA	EC	Japan	Australia	Korea	DSL	NDSL	Phil.
Citric Acid (77-92-9)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Flour	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Bromothymol Blue Sodium Salt (34722-90-2)	Yes	Yes	No	Yes	No	Yes	No	Yes
Perlite (93763-70-3)	Yes	No	No	Yes	No	Yes	No	Yes
Silica, Amorphous (7631-86-9)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Federal, State & International Regulations

Ingredient	---SARA 302---		---SARA 313---		CERCLA	-RCRA- 261.33	-TSCA- 8(d)
	RQ	TPQ	List	Chemical Catg.			
Citric Acid (77-92-9)	No	No	No	No	No	No	No
Flour	No	No	No	No	No	No	No
Bromothymol Blue Sodium Salt (34722-90-2)	No	No	No	No	No	No	No
Perlite (93763-70-3)	No	No	No	No	No	No	No
Silica, Amorphous (7631-86-9)	No	No	No	No	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 (Mixture / Solid)

Australian Hazchem Code: No information found. Australian Poison Schedule: No information found.

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: 1 Reactivity: 0

Label Hazard Warning:

WARNING! CAUSES SEVERE EYE IRRITATION. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.

Label Precautions:

Avoid contact with eyes, skin and clothing.
Avoid breathing dust.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.

Label First Aid:

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. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases, get medical attention.

Product Use:

Spill Clean-Up

Revision Information:

MSDS Section(s) changed since last revision of document include: 2, 3, 8, 10, 11, 15, 16.

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