

SAFETY DATA SHEET

GHS
United States

Section 1. Product and company identification

Product name	VANATURAL® CA	<u>In case of emergency</u>
Code	46023	1-203-295-2140
Supplier/Manufacturer	Vanderbilt Minerals, LLC 33 Winfield Street Norwalk, CT 06855	Chemtrec: 1-800-424-9300 Outside US: +1-703-527-3887
Chemical name	Bentonite Clay	
Synonym	Smectite clay, Bentonite, CAS No. 1302-78-9; with citric acid	
Material uses	Personal Care Products, Pharmaceutical preparations.	
Product type	Solid.	

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms



Signal word Warning

Hazard statements Causes serious eye irritation.

Precautionary statements

Prevention Wear eye or face protection: Recommended: safety glasses with side-shields.. Wash thoroughly after handling.

Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage Store locked up. Store in a dry place.

Disposal Not applicable.

Hazards not otherwise classified Material will become slippery when wet.

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Ingredient name	CAS number	% by weight
bentonite clay	1302-78-9	<97.5
citric acid	77-92-9	1 - 5

Non-respirable crystalline silica (quartz, CAS number 14808-60-7) contained as an impurity between 0.1% and 1% in this product is encapsulated within the clay particle. Exposure to free respirable quartz is not expected under normal conditions of use and processing of this product. Respirable quartz may be released by vigorous grinding or abrading of this product.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	Causes serious eye irritation.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical No specific fire or explosion hazard.

Hazardous thermal decomposition products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
bentonite clay	OSHA PEL (United States). TWA: 15 mg/m ³ total dust; 5 mg/m ³ respirable dust (PNOR) ACGIH TLV (United States). TWA: 10 mg/m ³ total dust; 3 mg/m ³ respirable dust (PNOS)

Non-respirable crystalline silica (quartz, CAS number 14808-60-7) contained as an impurity between 0.1% and 1% in this product is encapsulated within the clay particle. Exposure to free respirable quartz is not expected under normal conditions of use and processing of this product. Respirable quartz may be released by vigorous grinding or abrading of this product.

The OSHA PEL for quartz (respirable fraction) is 0.05 mg/m³ as a TWA. The ACGIH TLV for quartz (respirable fraction) is 0.025 mg/m³ as a TWA.

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields.

Skin protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Personal protective equipment (Pictograms)



Section 9. Physical and chemical properties

Appearance

Physical state	Solid. [Granules]
Color	Off-white.
Odor	Odorless.
Odor threshold	Not available.
pH	3.5 to 4.5 [Conc. (% w/w): 5%]
Melting point	Not available.
Boiling point	Not available.
Flash point	Not applicable.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Not applicable.
Vapor pressure	Not available.

Section 9. Physical and chemical properties

Vapor density	Not applicable.
Density	Not available.
Relative density	2.6
Solubility	Not available.
Solubility in water	Not available.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
SADT	Not available.
Viscosity	Not applicable.

Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	No specific data.
Incompatible materials	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
citric acid	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Mouse	5400 mg/kg	-
	LD50 Oral	Rat	3 g/kg	-

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin	citric acid: Causes mild skin irritation. (Rabbit)
Eyes	citric acid: Causes eye irritation. (Rabbit)

Sensitization

Section 11. Toxicological information

Product/ingredient name	Route of exposure	Species	Result
citric acid	skin	Guinea pig	Not sensitizing

Mutagenicity

Product/ingredient name	Test	Experiment	Result
citric acid	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 475	Experiment: In vivo Subject: Mammalian-Animal	Negative

Carcinogenicity

Not available.

Conclusion/Summary

citric acid: Did not show carcinogenic effects in animal experiments.

Potential chronic health effects

General

Non-respirable crystalline silica (quartz, CAS number 14808-60-7) contained as an impurity between 0.1% and 1% in this product is encapsulated within the clay particle. Exposure to free respirable quartz is not expected under normal conditions of use and processing of this product. Respirable quartz may be released by vigorous grinding or abrading of this product.

Overexposure to respirable crystalline silica dust can cause silicosis, a form of progressive pulmonary fibrosis. "Inhalable" crystalline silica (quartz) is listed by IARC as a Group 1 carcinogen (lung) based on "sufficient evidence" in occupationally exposed humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a known human carcinogen. Some studies have not demonstrated a cancer association and controversy exists concerning the IARC and NTP classification.

Excessive exposure to any dust may aggravate pre-existing respiratory conditions.

Reproductive toxicity

Not available.

Conclusion/Summary

citric acid
NOAEL(Female, Rat)=600 mg/kg
NOAEL(Rat)=2500 mg/kg

Teratogenicity

Not available.

Conclusion/Summary

citric acid
NOAEL(Female, Rat) >241 mg/kg

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact

Causes serious eye irritation.

Inhalation

No known significant effects or critical hazards.

Skin contact

No known significant effects or critical hazards.

Ingestion

May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation

No specific data.

Skin contact

No specific data.

Ingestion

No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects

Not available.

Potential delayed effects

Not available.

Long term exposure

Potential immediate effects

Not available.

Potential delayed effects

Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
citric acid	Chronic NOAEL Oral	Rat	1200 mg/kg	2 years
	Chronic NOAEL Oral	Rat	4000 mg/kg	5 days
	Chronic NOAEL Oral	Rat	2000 mg/kg	90 days

General

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Developmental effects

No known significant effects or critical hazards.

Fertility effects

No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
Oral	2500 mg/kg

Other information

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
citric acid	Acute EC50 120 mg/l Acute EC50 >10000 mg/l Acute LC50 440 to 760 mg/l	Daphnia Micro-organism Fish	72 hours 16 hours 96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
citric acid	OECD 301B	100 % - Readily - 19 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
citric acid	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
citric acid	-1.8	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc})

Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 13. Disposal considerations

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

Section 15. Regulatory information

[United States Inventory \(TSCA 8b\)](#) All components are active or exempted.

[U.S. Federal regulations](#)

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

[SARA 302/304](#)

[Composition/information on ingredients](#)

No products were found.

[SARA 304 RQ](#)

Not applicable.

[SARA 311/312](#)

[Classification](#)

EYE IRRITATION - Category 2A

[Composition/information on ingredients](#)

Name	%	Classification
citric acid	1 - 5	EYE IRRITATION - Category 2A

[State regulations](#)

[Massachusetts](#)

None of the components are listed.

[New York](#)

None of the components are listed.

[New Jersey](#)

None of the components are listed.

[Pennsylvania](#)

None of the components are listed.

[California Prop. 65](#)



WARNING: This product can expose you to Silica, crystalline, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Silica, crystalline	-	-

Section 15. Regulatory information

Crystalline silica (quartz, as an impurity) contained in this product is encapsulated within the clay particle. Exposure to free respirable quartz is not expected under normal conditions of use and processing of this product. Respirable quartz may be released by vigorous grinding, or abrading of this product.

International regulations

Australia Inventory (AIIC)	All components are listed or exempted.
Canada Inventory	All components are listed or exempted.
China Inventory (IECSC)	All components are listed or exempted.
Europe inventory	All components are listed or exempted.
Japan Inventory (CSCL)	All components are listed or exempted.
Korea inventory (KECI)	All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	All components are listed or exempted.
Philippines Inventory (PICCS)	All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.

Section 16. Other information

Hazardous Material Identification System (U.S.A.)

Health	2
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material.

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



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History

Date of printing 10/25/2023

Section 16. Other information

Validation date	10/25/2023
Date of previous issue	9/12/2022
Version	4
Key to abbreviations	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	Not available.
Information contact	Vanderbilt Global Services, LLC Corporate Risk Management 1-203-295-2143

Visit www.vanderbiltminerals.com for more information.

Notice to reader

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