SAFETY DATA SHEET

Distributed by:
Laguna Clay Company
14400 Lomitas Ave
City of Industry, CA 91746
1-800-4Laguna
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1. Identification

Product identifier **VOLCLAY® 325**

Other means of identification Not available.

Synonym(s) Smectite * Bentonite * Bentonite, Sodian * Bentonite, Calcian * Sodium-activated Bentonite * Montmorillonite

Recommended use Bentonite has a variety of uses. It can be used as a rheology modifier, binding agent, adsorbent, hydraulic-barrier, and filler.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name American Colloid Company

Address 2870 Forbs Avenue
Hoffman Estates, IL 60192
United States

Telephone General Information 800 426-5564

Website http://www.colloid.com/ISG/

E-mail safetydata@amcol.com

Emergency phone number Not available.

Americas 1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962

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2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word Not available.

Hazard statement Not available.

Prevention Not available.

Response Not available.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Bentonite	Smectite Bentonite Bentonite, Sodian Bentonite, Calcian Sodium-activated Bentonite Montmorillonite	1302-78-9	100

Bentonite is a UVCB substance sub-type 4. The purity of the product is 100 % w/w. Bentonite is composed mainly of smectite group minerals but the composition is varied, as expected for a UVCB substance, and other mineral constituents will be present in small and varying amounts. These minor constituents are not relevant for classification and labelling.

Composition comments	Bentonite is composed mainly of smectite group minerals but the composition is varied, as expected for a UVCB substance, and other mineral constituents will be present in small and varying amounts. These minor constituents are not relevant for classification and labelling. The purity of the product is 100% w/w. Impurities are not applicable for a UVCB substance. This product contains 10% total crystalline silica. The respirable crystalline silica as determined by the SWeRF method is <1% w/w. Details about the SWeRF method are available at www.crystallinesilica.eu.

4. First-aid measures

Inhalation	No specific first aid measures noted. Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	No specific first aid measures noted. Wash skin with soap and water. Get medical attention if irritation develops and persists.
Eye contact	No specific first aid measures noted. Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	No specific first aid measures noted. Rinse mouth thoroughly. Get medical attention if any discomfort occurs.
Most important symptoms/effects, acute and delayed	Dust in the eyes will cause irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	No hazards which require special first aid measures. Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Use any media suitable for the surrounding fires.
Unsuitable extinguishing media	Not applicable, non-combustible.
Specific hazards arising from the chemical	None known. The product itself does not burn.
Special protective equipment and precautions for firefighters	None known.
Fire-fighting equipment/instructions	Material can be slippery when wet.
General fire hazards	This material will not burn.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.
Methods and materials for containment and cleaning up	Avoid the generation of dusts during clean-up. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container.
Environmental precautions	No special environmental precautions required. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling	Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.
Conditions for safe storage, including any incompatibilities	Store in a dry area. Keep the container dry. No special restrictions on storage with other products.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (CAS SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (CAS SEQ250)	TWA	5 mg/m3	Respirable fraction.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Constituents	Type	Value	Form
		15 mg/m3	Total dust.
		50 millions of particle	Total dust.
		15 millions of particle	Respirable fraction.

US. ACGIH Threshold Limit Values

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (CAS SEQ250)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Inhalable particles.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear dust-resistant safety goggles where there is danger of eye contact.

Hand protection No protection is ordinarily required under normal conditions of use.

Other No special protective equipment required. Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

Thermal hazards Not applicable.

General hygiene considerations Use good industrial hygiene practices in handling this material.

9. Physical and chemical properties

Appearance Lump, granular or fine powder.

Physical state Solid.

Form Various.

Color Various.

Odor None.

Odor threshold Not applicable.

pH 8.5 - 11

Melting point/freezing point > 842 °F (> 450 °C) / Not applicable.

Initial boiling point and boiling range Not applicable.

Flash point Not applicable.

Evaporation rate Not available.

Flammability (solid, gas) This product is not flammable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not applicable.

Flammability limit - upper (%) Not applicable.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not applicable.

Vapor density Not applicable.

Relative density 2.6 g/cm³

Solubility(ies)

Solubility (water) < 0.9 mg/l

Partition coefficient (n-octanol/water) Not applicable.
Not applicable.

Auto-ignition temperature	Not applicable.
Decomposition temperature	> 932 °F (> 500 °C)
Viscosity	Not applicable.
Viscosity temperature	Not applicable.
Other information	
Bulk density	0.9 - 1.4 g/cm³
Explosive limit	Not applicable.
Explosive properties	Not explosive
Explosivity	Not applicable.
Flame extension	Not applicable.
Flammability	Not applicable.
Flammability (flash back)	Not applicable.
Flammability (Heat of combustion)	Not applicable.
Flammability (Train fire)	Not applicable.
Flammability class	Not applicable.
Flash point class	Not flammable
Molecular formula	UVCB Substance
Molecular weight	Not applicable.
Oxidizing properties	None.
Percent volatile	0 %
pH in aqueous solution	8.5 - 11
Specific gravity	Not applicable.
VOC (Weight %)	0 %

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Moisture.
Incompatible materials	None known.
Hazardous decomposition products	None.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not classified.
Inhalation	Not classified. Inhalation of dusts may cause respiratory irritation.
Skin contact	Not classified.
Eye contact	Not classified. Dust in the eyes will cause irritation.
Symptoms related to the physical, chemical and toxicological characteristics	None known.

Information on toxicological effects

Acute toxicity Not classified.

Product	Species	Test Results
Bentonite (CAS 1302-78-9)		
Acute		
Inhalation		
LC50	Rat	> 5.27 mg/l, 4 hrOECD 436
Oral		
LD50	Rat	> 2000 mg/kgOECD 425

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified. Mild irritant to eyes (according to the modified Kay & Calandra criteria)

Respiratory or skin sensitization

Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	No carcinogenicity data available for this product. Sepiolite was evaluated by IARC as class 3 ("Cannot be classified as to carcinogenicity to humans"). Based on read-across with sepiolite, bentonite was assessed as non-carcinogenic. Therefore classification of bentonite for carcinogenicity is not warranted.
Reproductive toxicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.

12. Ecological information

Ecotoxicity

Product		Species	Test Results
Bentonite (CAS 1302-78-9)			
Crustacea	EC50	Daphnia	> 100 mg/l, 48 hours
Other	EC50	Freshwater algae	> 100 mg/l, 72 hours
	LC50	Freshwater fish	16000 mg/l, 96 hours
		Marine water fish	2800 - 3200 mg/l, 24 hours
Aquatic			
Crustacea	EC50	Coon stripe shrimp (Pandalus danae)	24.8 mg/l, 96 hours
		Dungeness or edible crab (Cancer magister)	81.6 mg/l, 96 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	19000 mg/l, 96 hours

Persistence and degradability	Not relevant for inorganic substances
Bioaccumulative potential	Will not bio-accumulate.
Mobility in soil	Bentonite is almost insoluble and thus presents a low mobility in most soils.
Mobility in general	The product has poor water-solubility.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Store containers and offer for recycling of material when in accordance with the local regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

15. Regulatory information

US federal regulations

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Total food additive Direct food additive GRAS food additive

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

Not Listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	17-October-2013
Revision date	07-March-2014
Version #	26
Further information	This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

NFPA ratings

0

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List of abbreviations	SWERF = Size Weighted Respirable Fraction methodology is a scientific method developed to quantify the content of respirable particles within a bulk product. All details about the SWERF method are available at www.crystallinesilica.eu. UVCB = a substance of Unknown or Variable composition, Complex reaction products or Biological materials
References	For any information on literature references or toxicity/ecotoxicity studies, please contact the supplier.
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision Information	Product and Company Identification: Alternate Trade Names

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