

SAFETY DATA SHEET

Date Printed: 05/05/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Halloysite Nanoclay

Product Code: AL-SIAT-05-NCLAY

CAS Number: 1332-58-7

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements 10884 Weyburn Ave. Los Angeles, CA 90024 Tel: +1 310-208-0551 Fax: +1 310-208-0351 Emergency telephone number: +1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture Not a hazardous substance or mixture. GHS Label elements, including precautionary statements Not a hazardous substance or mixture. Hazards not otherwise classified (HNOC) or not covered by GHS This product contains less than 1% respirable crystalline silica (RCS).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances Formula: Al2Si2O5(OH)4 CAS-No.: 1332-58-7 / 12068-50-7

SECTION 4. FIRST AID MEASURES

Description of first aid measures General advice Move out of dangerous area. If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of skin contact Wash off with soap and plenty of water. In case of eye contact Flush eyes with water as a precaution. If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2 and/or in section 11 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special hazards arising from the substance or mixture No data available Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary. Further information No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8. Environmental precautions No special environmental precautions required. Methods and materials for containment and cleaning up Sweep up and shovel. Keep in suitable, closed containers for disposal. Reference to other sections For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2. Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

Storage class (TRGS 510): Non Combustible Solids

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters Components with workplace control parameters Component CAS-No. Value **Control parameters** Basis Kaolin 1332-58-7 TWA 2.000000 mg/m3 USA. ACGIH Threshold Limit Values (TLV) Remarks Pneumoconiosis The value is for particulate matter containing no asbestos and < 1% crystalline silica Not classifiable as a human carcinogen TWA 5.000000 mg/m3 **USA. NIOSH Recommended Exposure Limits** Main constituent of Kaolin is Kaolinite (Al2Si2O5(OH)4). TWA 10.000000 mg/m3 **USA. NIOSH Recommended Exposure Limits** Main constituent of Kaolin is Kaolinite (Al2Si2O5(OH)4). TWA 15.000000 mg/m3 **USA.** Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants TWA 5.000000 mg/m3 **USA.** Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants PEL 2 mg/m3 California permissible exposure limits for chemical contaminants (Title 8, Article 107) Exposure controls Appropriate engineering controls General industrial hygiene practice. Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique

(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

No special environmental precautions required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance Form: Powder Odor No data available Odor Threshold No data available pН No data available Melting point/freezing point No data available Initial boiling point and boiling range No data available Flash point No data available Evaporation rate No data available Flammability (solid, gas) No data available Upper/lower flammability or explosive limits No data available Vapour pressure No data available Vapour density No data available Relative density 2.53 g/cm3 Water solubility No data available Partition coefficient: n-octanol/water No data available Auto-ignition temperature No data available Decomposition temperature No data available Viscosity No data available

Explosive properties No data available Oxidizing properties No data available Other safety information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available Chemical stability Stable under recommended storage conditions. Possibility of hazardous reactions No data available Conditions to avoid No data available Incompatible materials Strong oxidizing agents Hazardous decomposition products Hazardous decomposition products formed under fire conditions.-Aluminum oxide, silicon oxides Other decomposition products-No data available In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity No data available Inhalation: No data available Dermal: No data available No data available Skin corrosion/irritation No data available Serious eye damage/eye irritation No data available Respiratory or skin sensitisation No data available Germ cell mutagenicity No data available Carcinogenicity Reproductive toxicity No data available No data available Specific target organ toxicity -single exposure No data available Specific target organ toxicity -repeated exposure No data available Aspiration hazard No data available Additional Information

RTECS: GF1670500 Stomach-Irregularities-Based on Human Evidence Stomach-Irregularities-Based on Human Evidence

SECTION 12. ECOLOGICAL INFORMATION

Toxicity No data available Persistence and degradability No data available Bioaccumulative potential No data available Mobility in soil No data available Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods

SECTION 15. REGULATORY INFORMATION

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. SARA 311/312 Hazards Chronic Health Hazard Massachusetts Right To Know Components Kaolin CAS-No. 1332-58-7 Revision Date 2007-03-01 Pennsylvania Right To Know Components Kaolin CAS-No. 1332-58-7 Revision Date 2007-03-01 New Jersey Right To Know Components Kaolin CAS-No. 1332-58-7 Revision Date 2007-03-01

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.