

MATERIAL SAFETY DATA SHEET

MANUFACTURER'S NAME:	Martin Limestone, Inc.
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IDENTITY:	Narvon Tan Clay Narvon Minerals Clay	INFORMATION PHONE #	(877) 463-4353
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HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>Material</u>	<u>(CAS #)</u>	<u>%</u>	<u>ACGIH (TLV)</u>	<u>OSHA (PEL)</u>
Amorphous Silica (SiO₂)	61790-53-2	0-40	10 mg/m ³ (total) 3 mg/m ³ (respirable)	80 mg/m ³ ÷ %Silica
Crystalline Silica (SiO₂)	14808-60-7	30-44	0.05 mg/m ³ (respirable quartz)	10 mg/m ³ ÷ (%Silica +2) (respirable quartz)
Aluminum Oxide (Al₂O₃)	1344-28-1	10-28	10 mg/m ³	15 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
Potassium Oxide (K₂O)	12136-45-7	2-5	None Established	None Established
Iron Oxide (Fe₂O₃)	1309-37-1	1-5	5 mg/m ³ (total)	10 mg/m ³
Titanium Dioxide (TiO₂)	13463-67-7	1-2	10 mg/m ³	15 mg/m ³

PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Off-white to brown finely divided powder; odorless
Vapor Pressure (mm Hg): None
Vapor Density (air=1): None
Dry Density – Loose: 50 lbs/ft³

Specific Gravity (H₂O=1): 2.6
Evaporation Rate (Butyl Acetate=1): None
Solubility in water (%): Not soluble
pH: 4.3 - 6.3

FIRE AND EXPLOSION HAZARD INFORMATION

Flash point (method used): N/A
Extinguishing media: N/A
Unusual fire or explosion hazards: Non-flammable, non-combustible. Product will not burn.
Hazardous Decomposition Products: Thermal decomposition may produce silicon dioxide and various metal oxides.
Firefighting Instructions: Firefighters shall wear a full facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear.

Flammable Limits: LEL - N/A UEL - N/A
Special fire fighting procedures: None

REACTIVITY INFORMATION

Stability: Stable
Reactivity/Incompatibility: Silica is incompatible with strong oxidizers.
Hazardous decomposition or byproducts: Thermal decomposition products will produce primarily silicon dioxide and aluminum oxide.

Hazardous Polymerization: Will not occur

SAFE HANDLING AND USE (SPECIAL PROTECTION INFORMATION)

Air monitoring should be conducted in all areas where dust from this product is observed in the employee work zone.

Engineering Controls: Local exhaust, general dilution ventilation, or dust collection equipment are the preferred engineering control methods if dust from the use of this product generates exposures above established limits in the employee work zone. In addition, administrative controls should also be implemented as necessary to reduce employee exposure below permissible limits. Wetting the material down is another method of controlling dust exposures

Respiratory Protection: The appropriate particulate respirator shall be selected based on the results of the workplace exposure monitoring and if engineering controls, administrative controls, or a combination of both do not reduce dust below regulatory limits.

Protective Gloves: N/A

Eye Protection: Safety glasses with side shields or goggles shall be worn to prevent dust and particles from entering the eye.

Other Protection Needed: Warning signs shall be visibly posted at the entrances to work areas that contain or have the potential to contain an overexposure to crystalline silica. Good housekeeping shall be maintained. Maintenance of handling equipment is an important step in reducing dust from this product. If this product is being bagged, use bags with minimal or no leakage and be sure bagging equipment is properly maintained. All employees handling this material must be trained in handling methods to minimize, reduce, and avoid dust and to maintain proper controls to keep employee exposures below permissible regulatory health and safety limits. Employers should determine the latest guidance from governmental agencies such as NIOSH, OSHA, MSHA, etc., to assure proper control of dust from products containing crystalline silica.

HEALTH HAZARD INFORMATION

Acute and Chronic Health Effects by Route of Exposure:

Inhalation: Dust from this product may cause irritation to the respiratory system and/or shortness of breath.

Long-term overexposure can cause irreversible fibrosis of the lung tissue called silicosis.

Skin: None anticipated.

Ingestion: Normally not a route of entry, but dust may enter mouth.

Eyes: Dust from this product may cause irritation to eyes.

Medical Conditions Aggravated By Exposure: Existing respiratory problems such as emphysema or asthma could be aggravated by prolonged exposure to dust that is formed from the use of this product.

Emergency First Aid:

Inhalation: Move to well-ventilated area containing fresh air. Seek medical attention as needed.

Skin: Wash thoroughly with soap and water.

Ingestion: If excessive amount ingested, seek medical attention.

Eyes: Flush eyes generously with water for 15 minutes. If redness, irritation, pain or tearing persists, seek medical attention.

Toxicity: None

Carcinogenicity: Clay is not listed by the National Toxicology Program (NTP) or the International Agency for Research on Cancer (IARC) as a carcinogen. However, crystalline silica, an ingredient in this product, is listed as a Group I carcinogen (carcinogenic to humans) by the IARC and by the NTP.

ENVIRONMENTAL PROTECTION INFORMATION

Steps to be taken if material is released or spilled: For small spills, clean with a vacuum with a filtration system sufficient to remove and prevent recirculation of dust. For large spills, use a fine spray or mist to control dust creation and carefully scoop or shovel into a clean dry container for later use or disposal. Do not use compressed air to clean spills.

Waste Disposal Method: Dispose of as common waste in accordance with any federal, state, or local ordinances or use as a fill material.

Environmental Hazards: None

This material safety data sheet is offered to you in good faith as accurate. Some of the information is from sources outside our company. We reviewed the information and believe it to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No warranty is made, either expressed or implied.