



MATERIAL SAFETY DATA SHEET

Name		Address	
TXI OPERATIONS, L.P.		1341 W. MOCKINGBIRD LANE, DALLAS, TEXAS 75247	
Emergency Telephone Number	Person Responsible for Preparation	Date	
(972) 647-6700	NANCY GARNETT	OCTOBER 2003	
Common Name (used on label)		Chemical Family	
EXPANDED SHALE OR CLAY		VITRIFIED SHALE OR CLAY	
Chemical Name		Formula	
DOES NOT APPLY		DOES NOT APPLY	
Trade Name & Synonyms			
EXPANDED SHALE OR CLAY, LIGHTWEIGHT AGGREGATE			

<u>Hazardous Component</u>	<u>CAS #</u>	<u>% Typical</u>	<u>TLV (Units)</u>	<u>PEL (Units)</u>
EXPANDED SHALE AND CLAY	68334-37-2	100	3 mg/m ³ **	5 mg/m ³ **
CRYSTALLINE QUARTZ*	14808-60-7	20 - 50	10 mg/m ³ / %SiO ₂ +2	0.05 mg/m ³
CRYSTALLINE QUARTZ - TOTAL DUST				30 mg/m ³ / %SiO ₂ + 2
CRISTOBALITE	14464-46-1	0 - 3	5 mg/m ³ */ %SiO ₂ +2	0.05 mg/m ³ *

* Respirable fraction only. ** Nuisance dust levels, with no quartz - respirable fraction only.

PEL: Permissible Exposure Limit established by the Occupational Safety and Health Administration (OSHA).
TLV: Threshold Limit Value established by the American Conference of Governmental Industrial Hygienists (ACGIH).

SECTION 3 - PHYSICAL DATA

Boiling Point	Specific Gravity (H ₂ O = 1)	Gravity of Water Saturated Product
DOES NOT APPLY	0.9 - 1.3	SURFACE=1.8 UNDER PRESSURE=2.4
Percent Volatile by Volume	Vapor Density (Air = 1)	Vapor Pressure (mm = Hg)
0%	DOES NOT APPLY	DOES NOT APPLY
Percent Soluble in Water	Reactivity in Water	Evaporation Rate (n=Butyl Acetate)
NEGLIGIBLE (<0.1%)	WILL NOT EVOLVE FLAMMABLE OR TOXIC GASES	DOES NOT APPLY
Appearance and Odor	FINE TO COARSE GRANULAR SOLID. DARK RED TO PURPLE TO BROWN IN COLOR. NO ODOR.	
<u>Hazardous Material Information System Identifier (HMIS)</u>		
HEALTH = 2*	FLAMMABILITY = 0	REACTIVITY = 0 PERSONAL PROTECTION = X

Flash Point	Flammable Limits in Air (% by Volume)
WILL NOT IGNITE	Lower: DOES NOT APPLY Upper: DOES NOT APPLY
Extinguishing Media	Auto Ignition Temperature
DOES NOT APPLY	DOES NOT APPLY
Unusual Fire and Explosion Hazards	
NONE	
Special Fire Fighting Procedures	
NONE	

TXI010

SECTION 5 - HEALTH INFORMATION

Signs and Symptoms of Exposure - (1) Acute Overexposure - CONGESTION OF NASAL PASSAGES AND RESPIRATORY SYSTEMS. EXCESSIVE DUST MAY CAUSE ABRASION OF CORNEA.

Signs and Symptoms of Exposure - (2) Chronic Overexposure - EXCESSIVE EXPOSURE, BY INHALATION, TO DUSTS OF THIS MATERIAL, OVER AN EXTENDED PERIOD OF TIME MAY RESULT IN THE DEVELOPMENT OF PULMONARY DISEASES INCLUDING PNEUMOCONIOSIS, SILICOSIS, OR LUNG CANCER. DUST CAN CAUSE INFLAMMATION OF THE LINING TISSUE OF THE INTERIOR OF THE NOSE AND INFLAMMATION OF THE CORNEA.

Medical Conditions Generally Aggravated by Exposure
RESPIRATORY DISORDERS OF DISEASES MAY BE AGGRAVATED BY EXPOSURE TO DUST OF THIS MATERIAL.

Chemical/Component Listed as Carcinogen	<u>NTP</u>	<u>IARC</u>	<u>OSHA</u>
QUARTZ AND CRISTOBALITE	YES	YES	NO

Other Exposure Limits
NONE

Emergency & First Aide Procedures for Indicated Routes of Entry
INHALATION: REMOVE FROM EXPOSURE. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONSULT A PHYSICIAN. EYES: WASH EYES WITH RUNNING WATER. DO NOT RUB EYES! IF IRRITATION PERSISTS, OBTAIN MEDICAL MEDICAL ASSISTANCE.

SECTION 6 - REACTIVITY DATA

Stability
STABLE

Conditions to Avoid
DOES NOT APPLY

Incompatibility (Materials to Avoid)
NONE

Hazardous Decomposition or Combustion Products
NONE

Hazardous Polymerization
WILL NOT OCCUR

Steps to be Taken in Case Material is Leaked or Spilled
CLEAN-UP OF SPILLS MAY REQUIRE PERSONAL PROTECTIVE EQUIPMENT TO PREVENT DUST EXPOSURES. SEE SECTION 8.

Waste Disposal Method
IF THIS MATERIAL, AS PROVIDED BY THE MANUFACTURER, BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A HAZARDOUS WASTE AS DEFINED BY THE ENVIRONMENTAL PROTECTION AGENCY UNDER THE AUTHORITY OF THE RESOURCE CONSERVATION AND RECOVERY ACT (40 CFR 261). DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 8 - PERSONAL PROTECTION INFORMATION

Respiratory Protection
NIOSH/MSHA APPROVED FOR PROTECTION AGAINST SILICA AND NUISANCE DUSTS.

Ventilation
GENERAL OR LOCAL EXHAUST TO MAINTAIN EXPOSURE BELOW TLV/PEL.

Protective Gloves
TO PROTECT FROM ABRASION

Other Protective Clothing or Equipment
NONE

Eye Protection
SAFETY GLASSES, GOGGLES, OR FACE SHIELD,
WHEN NECESSARY TO PREVENT EYE CONTACT.

SECTION 9 - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing
SHOULD BE STORED IN A MANNER TO PREVENT ACCUMULATIONS OF AIRBORNE DUST.

Other Precautions
NONE DETERMINED