



MATERIAL SAFETY DATA SHEET



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



<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 <sup>3</sup> **	5 mg/m <sup>3</sup> **
CRYSTALLINE QUARTZ*	14808-60-7	20 - 50	10 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2	0.05 mg/m <sup>3</sup>
CRYSTALLINE QUARTZ - TOTAL DUST				30 mg/m <sup>3</sup> / %SiO <sub>2</sub> + 2
CRISTOBALITE	14464-46-1	0 - 3	5 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2	0.05 mg/m <sup>3</sup> *

\* 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 DOES NOT APPLY	Specific Gravity (H <sub>2</sub> O = 1) 0.9 - 1.3	Gravity of Water Saturated Product SURFACE=1.8 UNDER PRESSURE=2.4
Percent Volatile by Volume 0%	Vapor Density (Air = 1) DOES NOT APPLY	Vapor Pressure (mm = Hg) DOES NOT APPLY
Percent Soluble in Water NEGLIGIBLE (<0.1%)	Reactivity in Water WILL NOT EVOLVE FLAMMABLE OR TOXIC GASES	Evaporation Rate (n=Butyl Acetate) 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 WILL NOT IGNITE	Flammable Limits in Air (% by Volume) Lower: DOES NOT APPLY      Upper: DOES NOT APPLY
Extinguishing Media DOES NOT APPLY	Auto Ignition Temperature DOES NOT APPLY
Unusual Fire and Explosion Hazards NONE	
Special Fire Fighting Procedures NONE	

## 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

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

Other Protective Clothing or Equipment  
NONE

## 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