



FEATHERLITE

FEATHERLITE BUILDING PRODUCTS CORPORATION

P.O. BOX 1029 • AUSTIN, TEXAS 78767

MATERIAL SAFETY DATA SHEET

EMERGENCY PHONE (512) 441-2424

I - IDENTIFICATION		
CHEMICAL NAME Shale Rock	CHEMICAL FORMULA Not Applicable	MOLECULAR WEIGHT Not Applicable
TRADE NAME Expanded Shale		
SYNONYMS Aggregate	DOT IDENTIFICATION NO. None	

II - PRODUCT AND COMPONENT DATA			
COMPONENT(S) CHEMICAL NAME Shale*	CAS REGISTRY NO. None	% APPROX. 100	ACGIH TLV-TWA See Section VI
*Silica content is primarily amorphous type, however quartz (crystalline silica) may be present in excess of 1%.			
Quartz (crystalline silica)	14808-60-7		
Amorphous Silica	60676-86-0		

III - PHYSICAL DATA			
APPEARANCE AND ODOR Brn angular/no odor	SPECIFIC GRAVITY Appx 1.36 (SSD)	BOILING POINT N/A	VAPOR DENSITY IN AIR (AIR = 1) N/A
VAPOR PRESSURE -0-	% VOLATILE BY VOLUME 0%	EVAPORATION RATE -0-	SOLUBILITY IN WATER Negligible

IV - REACTIVITY DATA		
STABILITY Stable	CONDITIONS TO AVOID None Known	INCOMPATIBILITY (MATERIALS TO AVOID) None Known
HAZARDOUS DECOMPOSITION PRODUCTS None Known	HAZARDOUS POLYMERIZATION Will not occur	

V - FIRE AND EXPLOSION HAZARD DATA	
FLASH POINT (METHOD USED) Not Flammable	FLAMMABLE LIMITS IN AIR Not Flammable
EXTINGUISHING AGENTS None Required	UNUSUAL FIRE AND EXPLOSION HAZARDS None Known

VI - TOXICITY AND FIRST AID	
EXPOSURE LIMITS (WHEN EXPOSURE TO THIS PRODUCT AND OTHER CHEMICALS IS CONCURRENT, THE TLV MUST BE DEFINED IN THE WORK PLACE.) Exposure limits vary with the % Quartz in dust. All limits are for 8-hr. TWA ₃ exposures. Total Dust (AOGIH & MSHA) = 30mg/M ³ ÷ (% Quartz ₃ + 3); Total Dust (OSHA) = 30mg/M ³ ÷ (% Quartz + 2) Respirable Dust (AOGIH, MSHA & OSHA) = 10mg/M ³ ÷ (% Quartz + 2)	
EFFECTS DESCRIBED IN THIS SECTION ARE BELIEVED NOT OCCUR IF EXPOSURES ARE MAINTAINED AT OR BELOW APPROPRIATE TLVS BECAUSE OF THE WIDE VARIATION IN INDIVIDUAL SUSCEPTIBILITY. TLVS MAY NOT BE APPLICABLE TO ALL PERSONS AND THOSE WITH MEDICAL CONDITIONS LISTED BELOW.	
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Inhaling respirable dust may aggravate existing respiratory system disease(s) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions.	
ACUTE TOXICITY	PRIMARY ROUTE(S) OF EXPOSURE <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> SKIN ASSORPTION <input type="checkbox"/> INGESTION

Exposure to dust may irritate respiratory system, eyes, and skin.

FEATHERLITE BUILDING PRODUCTS CORPORATION
P.O. BOX 1029
AUSTIN, TEXAS 78767
PHONE (512) 441-2424

April 15, 1986

Product Name: Pyrofrac 2024

Date: 3/4/98

SECTION VI. HEALTH HAZARD/TOXICOLOGICAL DATA

Route of Entry: Skin Contact: No Skin Absorption: No Eye Contact: Yes
 Inhalation: Yes Ingestion: Yes

Effects of Acute Exposure to Product:

Skin: None Known.
Eye: May irritate and/or abrade eyes.
Inhalation: Congestion of the throat, nasal passages, and upper respiratory system.
Ingestion: Unknown.

Effects of Chronic Exposure to Product:

Skin: None Known
Eye: None Known
Inhalation: According to the International Agency for Research on Cancer (IARC), there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources.
Ingestion: Unknown.

Exposure Limits: See Section II
Irritancy of Product: Moderate irritation may occur.
Sensitization to the Product: None Known
Teratogenicity: None Known
Carcinogenicity: Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1 IARC).
California Proposition 65: This product contains crystalline silica, a chemical known to the state of California to cause cancer.

Reproductive Toxicity: None Known
Mutagenicity: None Known
Synergistic Materials: None Known

SECTION VII. PREVENTIVE MEASURES, AND SPILL OR LEAK PROCEDURES**Personal Protective Equipment:**

Gloves: Protective Gloves **Clothing:** Long Sleeved and Legged
Footwear: Safety Shoes **Eye:** Goggles or Safety Glasses with Side Shields
Respirator: NIOSH Approved Respirator **Other:** None Known

Engineering Controls: General mechanical ventilation is normally adequate.
Leak and Spill Procedure: Dry clean-up maintaining minimum dust levels.
Waste Disposal: Dispose in accordance with Federal, State and Local regulations.
Handling Procedures: Follow good housekeeping and hygienic practices.
Storage Requirements: None.
Special Shipping Information: Not regulated by USA DOT, Canadian TDB Class, and PIN.

SECTION VIII. FIRST AID MEASURES

Skin: Not applicable.
Eyes: Flush with clean water for 15 minutes. Seek medical attention.
Inhalation: Remove to dust free area and fresh air. If continuing respiratory distress, seek medical attention.
Ingestion: Seek medical attention immediately. Unless instructed by physician, do not induce vomiting. Product is non-toxic as supplied, but its abrasive nature may damage internal organs.

SECTION IX. OTHER INFORMATION

This information and recommendations set forth herein are taken from sources believed to be accurate as of the date herein, however, Resco Products, Inc. makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.



Grains and Raw Materials

Product Data

PYROFRAC[®] SERIES (2)

Markets	Structural Clay Coatings, Refractory Formulations, Art Pottery
Benefits	Increases Refractoriness, Reduces Shrinkage, Widens Firing Range
Preparation Method	Crushing & Screening of Selectively Mined Andalusite/Pyrophyllite/Sericite Ores with Heavy Media Separation. (Magnetic Separation ⊗) (Dry Milling ⊕) (Co-Products ⊘)
Location	Piedmont Minerals Division Post Office Box 566; 231 Piedmont Drive Hillsborough, NC 27278 Phone: 919-732-3981 Fax: 919-732-9414

Product	2023⊘	2024⊘	2034⊘	4203⊘	4204⊘	4205⊘	7203⊘
Chemical Analysis (%)							
Al ₂ O ₃	23.3	19.6	24.0	24.0	10.0	10.0	24.0
SiO ₂	70.1	73.8	71.2	71.2	84.8	84.8	71.2
Fe ₂ O ₃	1.0	1.0	1.0	1.0	1.0	1.0	1.0
TiO ₂	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Alkalies	0.4	0.4	0.4	0.4	0.4	0.4	0.4
LOI	4.8	4.8	3.0	3.0	3.4	3.4	3.0
Size Analysis (% Ret.)							
4 Mesh	-	-	-	2.8	1.1	2.8	0.1
8 Mesh	-	-	-	44.5	42.0	44.5	50.4
20 Mesh	10.1	10.1	5.0	46.4	51.4	46.4	46.0
50 Mesh	59.3	59.3	90.0	6.3	5.5	6.3	3.5
70 Mesh	13.5	13.5	5.0	-	-	-	-
100 Mesh	8.2	8.2	-	-	-	-	-
200 Mesh	7.0	7.0	-	-	-	-	-
325 Mesh	1.0	1.0	-	-	-	-	-
Pan	0.9	0.9	-	-	-	-	-
Custom Sizing And Blending Is Available							
Specific Gravity (g/cc)	2.70	2.70	2.70	2.70	2.60	2.60	2.60
Bulk Density (lb/ft³)	70	70	75	108	105	105	100
P.C.E.	29	27	29	29	23	23	29

Packaging 60-50 lb bags/pallet
Super Sacks (Various Weights)
Bulk Trucks and Rail Cars

Date 6/98
Supersedes

Data shown are average results of standard tests used by Resco Products, Inc. Results may vary subject to normal variations in manufacturing and testing procedures in the field.