



Ryolex Technical Data

TYPICAL PHYSICAL PROPERTIES

Softening point	1600°F-2000°F
Fusion point	2300°F-2450°F
pH	6.6 to 8.0
Specific Heat	0.20 CAL/G°C
Specific Gravity	2.2 to 2.4
Retractive Index	1.5
% Free Moisture, Max.	< 0.5

TYPICAL CHEMICAL ANALYSIS*

Silicon	33.8
Aluminum	7.2
Potassium	3.5
Sodium	3.4
Iron	0.6
Calcium	0.6
Magnesium	0.2
Traces	0.2
Oxygen (by difference)	<u>47.5</u>
Net Total	97.0
Bound Water	<u>3.0</u>
Total	100.0

Trace Elements	(in percent %)
Arsenic	<0.001**
Barium	<0.1
Boron	<0.01
Chlorine	<0.0005
Chromium	<0.0075
Copper	<0.0015
Gallium	<0.05
Lead	<0.001**
Manganese	<0.3
Molybdenum	<0.002
Nickel	<0.002
Sulfur	<0.2
Titanium	<0.1
Zirconium	<0.003
**By Food Chemicals Codex Method	

* All analyses are shown in elemental form even though the actual forms present are mixed glassy silicates. Free Silica may be present in small amounts, characteristic of the particular ore body.

TYPICAL SCREEN ANALYSIS (Packaged in 4 cu. ft. bags)
This listing is for standard grades. Other grades available upon request.

	<u>Mesh</u>	<u>% Volume</u>	<u>% Weight</u>	
GRADE No. 1 Bag Wt. 31 to 34 Lbs.	+8	11	8	<u>Packing</u> <u>Density</u> 8 Lbs. per cu. ft.
	-8 +10	14	11	
	-10 +20	49	51	
	-20 +30	7	7	
	-30 +50	8	9	
	-50 +100	5	6	
	-100	6	8	

GRADE No. 2-A Bag Wt. 28 to 32 Lbs.	<u>Mesh</u>	<u>% Volume</u>	<u>% Weight</u>	<u>Packing Density</u> 7.5 Lbs. per cu. ft.
	+8	Trace	Trace	
	-8 +10	1	1	
	-10 +20	38	41	
	-20 +30	22	18	
	-30 +50	18	20	
	-50 +100	10	10	
-100	11	10		

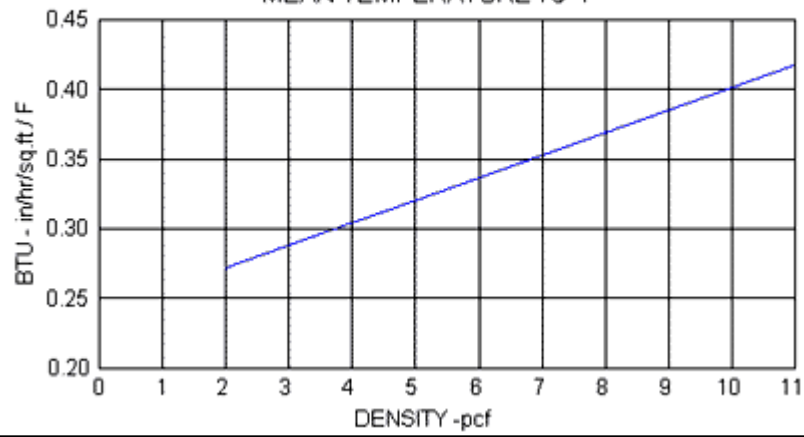
GRADE No. 39 Bag Wt. 27 to 32 Lbs.	<u>Mesh</u>	<u>% Volume</u>	<u>% Weight</u>	<u>Packing Density</u> 7 Lbs. per cu. ft.
	+30	12	5	
	-30 +50	52	44	
	-50 +100	24	38	
	-100 +200	8	9	
-200	4	4		

GRADE No. 3-S Bag Wt. 10 to 14 Lbs.	<u>Mesh</u>	<u>% Volume</u>	<u>% Weight</u>	<u>Packing Density</u> 3 Lbs. per cu. ft.
	+10	0	0	
	-10 +20	5	4	
	-20 +30	20	14	
	-30 +50	44	41	
	-50 +100	19	24	
-100	12	17		

GRADE No. 5 Bag Wt. 24 to 30 Lbs.	<u>Mesh</u>	<u>% Volume</u>	<u>% Weight</u>	<u>Packing Density</u> 6.5 Lbs. per cu. ft.
	+6	23	< br /> 21	
	-6 +8	29	30	
	-8 +16	33	31	
	-16	15	18	

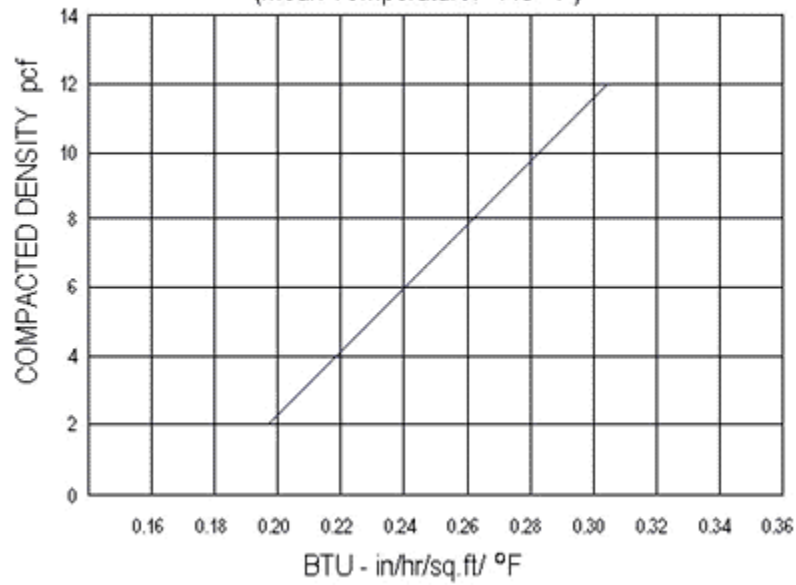
THERMAL CONDUCTIVITY

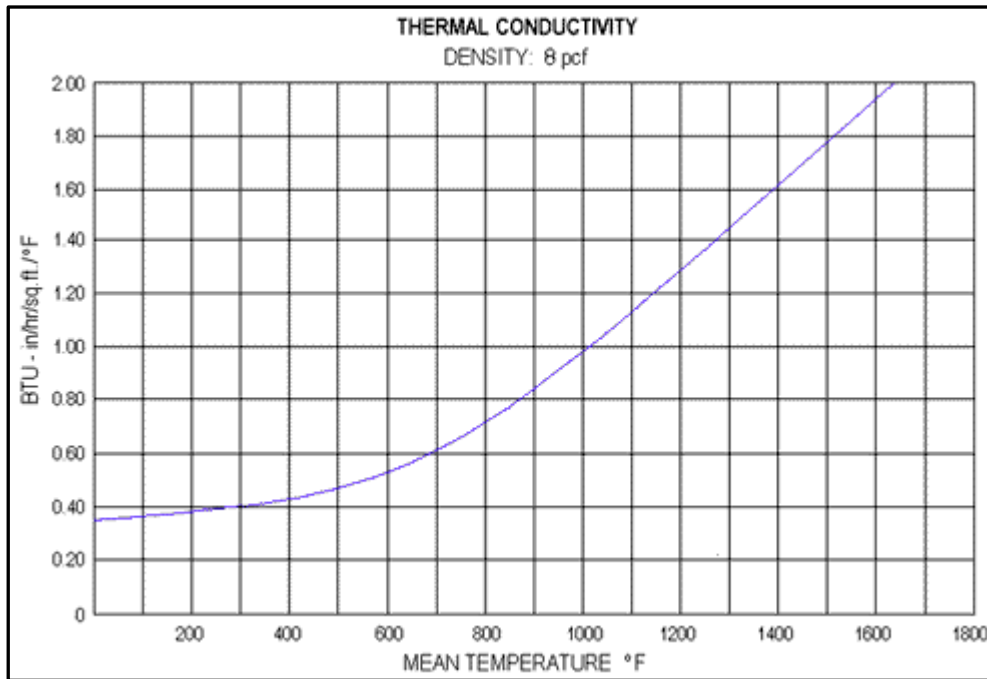
MEAN TEMPERATURE 75°F



THERMAL CONDUCTIVITY VS. COMPACTED DENSITY

(Mean Temperature: 115 °F)





REFERENCES:

- J.L.F. Research, Inc., Reports dated December 24, 1962, January 2, 1964 and July 1, 1965.
- "Thermal Conductivity of Expanded Perlite Cryogenic Fill Insulation," G.R. Kinzer, Jr., ASHRAE Journal, February, 1963 and 1967.
- Perlite Institute - TDS 2-4 1983