

Cerafelt® & Cerachrome® Felt



Features

- Lightweight and flexible
- Low thermal conductivity and heat storage

Applications

- Expansion joints
- Gaskets
- Molten metal resistant insulation

Product Description

Cerafelt products are lightweight, flexible refractory fiber insulators formed from exceptionally pure refractory oxides and bonded with an organic binder.

These products are recommended for a wide range of high temperature industrial applications such as expansion joints in kilns, furnaces, and boiler walls, and high-temperature gaskets. When used as a gasket, Cerafelt exhibits excellent resistance to penetration from molten metals, both ferrous and nonferrous. This unique property, coupled with its ease of fabrication, makes it ideal for ingot stool seals, stopper rod gaskets, and gaskets for aluminum billet casting.

The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information.

New England Refractory Co.

Cerafelt® & Cerachrome® Felt

Physical Properties

	Cerafelt	Cerachrome Felt
Color	cream/tan	blue/green
Density, compressed, pcf (kg/m ³)	4, 6, 8, 10, 12, 18, 24 (64, 96, 128, 160, 192, 288, 385)	6, 8, 12, 24 (96, 128, 160, 385)
Thickness, in. (mm)	½ - 1 (3.125 - 25)	¼ - 1 (6.25 - 25)
Max. Temperature Rating, °F (°C)	2300 (1260)	2600 (1427)

Chemical Analysis, %, weight basis after firing

	Cerafelt	Cerachrome Felt
Alumina, Al ₂ O ₃	46	43
Silica, SiO ₂	54	54
Chromium oxide, Cr ₂ O ₃	—	3
Loss on ignition, L.O.I.	3 - 9	3 - 9
Other	trace	trace

Thermal Conductivity, BTUin./hr•ft²•F (W/m•K)

Mean temperature	8 pcf	8 pcf
500°F (260°C)	0.46 (0.07)	0.43 (0.06)
1000°F (538°C)	0.94 (0.14)	0.87 (0.13)
1500°F (816°C)	1.58 (0.23)	1.49 (0.21)
2000°F (1093°C)	2.29 (0.33)	2.18 (0.31)

Airflow Resistance, (cfm/in. w.c./ft²/in.)

Temperature, °F (°C)	Density, pcf (kg/m ³)							
	4 (64)	6 (96)	8 (128)	10 (160)	12 (192)	14 (224)	18 (288)	24 (385)
75 (24)	64.4	31.1	18.9	12.8	8.9	6.7	4.3	2.6
1000 (538)	32.2	15.6	9.4	6.4	4.4	3.3	2.2	1.6
2000 (1093)	23.6	11.2	6.8	4.3	3.2	2.4	1.3	0.9

Sound Absorption Coefficients, No. 4 Mounting, 8 pcf (128 kg/m³)

Thickness, in. (mm)	Cycles Per Second						
	125	250	500	1000	2000	4000	NRC*
½ (12.5)	07	12	45	72	77	85	50
1	21	69	86	84	86	99	80
2	92	78	81	83	81	79	80
3	65	80	83	88	85	83	85

* Noise Reduction Coefficient – The average of the sound absorption coefficients at frequencies of 250, 500, 1000 and 2000 cycles per second.

Standard Sizes

Thickness, in (mm)	Density					
	4 (64)	6 (96)	8 (128)	10 (160)	12 (192)	24 (385)
¼ (3.125)	—	—	—	—	Cerafelt	Cerafelt
¼ (6.25)	—	Cerafelt	Cerafelt	Cerachrome Felt	Cerafelt	Cerafelt Cerachrome Felt
½ (12.5)	Cerafelt	Cerafelt Cerachrome Felt	Cerafelt Cerachrome Felt	Cerafelt	Cerafelt Cerachrome Felt	Cerafelt Cerachrome Felt
¾ (18.75)	—	—	—	Cerafelt	Cerafelt	—
1 (25)	Cerafelt	Cerafelt Cerachrome Felt	Cerafelt Cerachrome Felt	Cerafelt	Cerafelt	—
1½ (37.5)	Cerafelt	—	—	—	—	—
2 (50)	Cerafelt	—	—	—	—	—

Standard Dimensions: 96 in. x 48 in. sheets