

General Product Information:

ROXUL® products are mineral wool fibre insulations made from basalt rock and slag. This combination results in a non-combustible product with a melting point of approximately 2150°F (1177°C), which gives it excellent fire resistance properties. ROXUL mineral wool is a water repellent yet vapour permeable material.

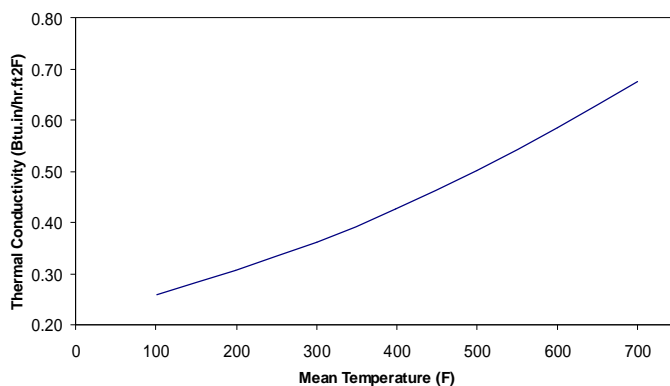
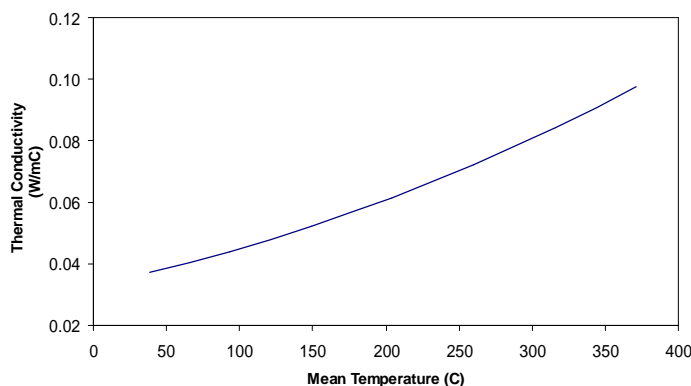
Description & Common Applications:

These rigid mandrel wound pipe sections are strong, preformed mineral wool insulation with excellent thermal performance. Tecton 1200 is ideal for steam and process pipe systems operating at temperatures up to 1200°F (650°C), where energy conservation, personnel protection and fire control are concerns. Tecton 1200 provides high water-repellent characteristics, making it suitable for application in conditions where moisture can penetrate the insulation system.

Compliance and Performance:

CAN/CGSB 51.9-92	Mineral Fibre Thermal Insulation for Piping and Round Ducting	Type 1, Class 1, 2, & 3
ASTM C 547	Standard Specification for Mineral Fibre Preformed Pipe Insulation	Type I, II, IV, Complies
CAN4 S114	Test For Non-Combustibility	Non-Combustible
ASTM E136	Behaviour Of Materials at 750 C (1382 F)	Non-Combustible
CAN/ULC S102	Surface Burning Characteristics	Flame Spread = Passed
ASTM E 84(UL 723)	Surface Burning Characteristics	Smoke Developed = Passed
ASTM C 411	Hot Surface Performance	Flame Spread = Passed
ASTM C 447	Maximum Surface Performance	Smoke Developed = Passed
ASTM C 795 *	Stainless Steel Stress Corrosion Specification as per Test Methods C871 and C692: U.S. Nuclear Regulatory Commission, Reg. Guide #1.36: U.S. Military Specifications MIL-I-24244 (all versions including B and C)	In Compliance with ASTM C547 @ 1200°F (650°C)
ASTM C 356	Linear Shrinkage	In Compliance with ASTM C547 @ 1200°F (650°C)
ASTM C 1104	Moisture Sorption	Conforms
ASTM C 585	Inner & Outer Diameters for Nominal Pipe Sizes	≤ 1.30% @ 1200°F (650°C)
ASTM C800	Wicking	< 0.1%
		Complies
		Zero

Thermal Conductivity (k):



Thermal Performance

Roxul can perform an individual computer analysis for your specific needs in accordance with the NAIMA 3E Plus software program. The following data sheet is an example. All data was derived from given input information shown below while the thermal performance equations are based on laboratory conditions and may not represent all actual conditions of use.

Ambient Temperature:	75°F	NT:	Nominal Thickness
Windspeed:	1 mph	HL:	Heat Loss (Btu/ft/hr)
Emittance of outer jacketing:	0.1	ST:	Surface Temperature (°F)
		NPS:	Nominal Pipe Size

Horizontal Pipes

Process Temperature Table For Nominal Pipe Sizes vs. Nominal Thickness(NT), Outer Surface Temperature(ST), and Heat Loss(HL)

NPS	200°F			400°F			600°F			800°F			1000°F			1200°F		
	NT	HL	ST	NT	HL	ST	NT	HL	ST	NT	HL	ST	NT	HL	ST	NT	HL	ST
0.5	1.0	13.0	86.0	1.5	32.0	98.0	2.5	48.0	100.0	3.0	74.0	110.0	3.0	113.0	127.0	4.0	149.0	134.0
0.8	1.0	16.0	88.0	1.5	38.0	101.0	2.5	54.0	103.0	3.0	82.0	113.0	3.0	125.0	132.0	4.0	163.0	139.0
1.0	1.0	17.0	87.0	1.5	41.0	101.0	3.0	56.0	102.0	3.0	92.0	118.0	3.5	132.0	131.0	4.5	172.0	138.0
1.3	1.0	21.0	91.0	1.5	45.0	102.0	3.0	64.0	105.0	3.0	106.0	124.0	4.0	141.0	131.0	5.0	184.0	139.0
1.5	1.0	21.0	90.0	2.0	41.0	96.0	3.0	65.0	103.0	3.0	107.0	121.0	3.5	153.0	135.0	5.0	189.0	137.0
2.0	1.0	25.0	91.0	2.5	44.0	96.0	3.0	76.0	108.0	3.0	126.0	129.0	4.0	164.0	135.0	6.0	205.0	138.0
2.5	1.5	20.0	85.0	2.5	45.0	95.0	3.0	81.0	108.0	4.0	116.0	116.0	4.0	176.0	136.0	6.0	211.0	135.0
3.0	1.5	25.0	88.0	2.5	56.0	100.0	3.0	96.0	114.0	4.0	134.0	122.0	4.5	192.0	138.0			
3.5	1.0	31.0	91.0	2.5	57.0	99.0	3.0	98.0	112.0	4.0	140.0	122.0	5.0	198.0	136.0			
4.0	1.5	30.0	90.0	3.0	58.0	97.0	4.0	94.0	107.0	4.0	155.0	127.0	5.0	206.0	136.0			
5.0	1.5	36.0	91.0	3.0	68.0	100.0	4.0	107.0	109.0	4.0	176.0	130.0	5.5	223.0	136.0			
6.0	1.5	42.0	93.0	3.0	77.0	102.0	4.0	120.0	112.0	4.0	198.0	134.0	5.5	249.0	140.0			
8.0	1.5	51.0	94.0	3.0	91.0	103.0	4.0	144.0	115.0	4.0	236.0	139.0						
10.0	1.5	59.0	94.0	3.0	109.0	106.0	4.0	170.0	119.0	4.5	258.0	138.0						
12.0	1.5	68.0	95.0	4.0	101.0	100.0	4.0	194.0	122.0	5.0	272.0	135.0						
14.0	2.0	62.0	92.0	4.0	108.0	101.0	4.0	207.0	123.0	5.0	297.0	139.0						
16.0	2.0	69.0	93.0	4.0	120.0	102.0	4.0	230.0	125.0	5.5	308.0	136.0						
18.0	2.0	77.0	94.0	4.0	132.0	103.0	4.0	253.0	127.0	5.5	334.0	139.0						
20.0	2.0	84.0	95.0	4.0	144.0	104.0	4.0	276.0	129.0	5.0	397.0	131.0						
22.0	2.0	90.0	95.0	4.0	158.0	106.0	4.0	300.0	132.0	4.5	463.0	137.0						
24.0	2.0	96.0	95.0	4.0	168.0	106.0	4.0	326.0	120.0	4.5	503.0	139.0						

Installation:

- Pipe sections are water repellent, but cartons are not designed for outside storage. Tecton 1200 can be used outdoors but will require the use of a suitable weatherproofing system.
- Cuts easily with a serrated knife.
- Stagger half-sections and/or butt the one piece sections firmly together.
- Tecton 1200 is designed for operating temperatures from below ambient to 1200°F (650°C). During initial start-up, controlled binder decomposition will occur at the inside surface of the insulation when the internal temperature of the insulation exceeds 450°F (232°C). Provide adequate ventilation to prevent odour and smoke.
- For satisfactory performance, properly installed protective vapor retarders or barriers should be used on sub-ambient temperature applications to reduce movement of moisture through or around the insulation to the colder surface.
- Wire insulation to pipe and fix the metal jacketing with metal bands or sheet metal screws. Position metal bands at butt joint overlaps and in between joints to secure jacket.

Effective: October 1, 2002 Supercedes: January 1, 2002

Packaging:

The Packaging Standards Charts below identify the number of linear feet per carton.

All Tecton 1200 sections are cut in 3.28 foot lengths, and the letters represent the carton size.

Sizes ABOVE the bold line on each chart are normally one piece hinged.

Sizes BELOW the bold line on each chart are normally two piece.

Carton size	Loading Factors per 53ft Trailer
T1 = 15 5/8"x15 5/8"x39 1/2" = 5.58 cu ft.	T1 Carton = 558
T2 = 23 5/8"x15 5/8"x39 1/2" = 8.44 cu ft.	T2 Carton = 402
T3 = 31 5/8"x18 5/8"x39 1/2" = 13.46 cu ft.	T3 Carton = 243
T4 = 23 5/8"x20 5/8"x39 5/8" = 11.14 cu ft.	T4 Carton = 300
T5 = 27 5/8"x23 5/8"x39 5/8" = 14.97 cu ft.	T5 Carton = 236
P = 48" x 48" Pallet	Pallets = 48

Nominal Pipe Size	Nominal Wall Thickness (Inches)								
	1"	1.5"	2"	2.5"	3"	3.5"	4"	4.5"	5"
	T1200	T1200	T1200	T1200	T1200	T1200	T1200	T1200	T1200
0.50	82/T1	39.4/T1	26.2/T1	-	-	-	-	-	-
0.75	88.6/T1	65.6/T2	42.6/T2	23/T2	-	-	-	-	-
1.00	65.6/T1	49.2/T2	36.1/T2	23/T2	13.1/T1	13.1/T2	-	-	-
1.25	59/T1	29.5/T1	36.1/T2	19.7/T2	19.7/T2	13.1/T2	9.8/T2	6.6/T2	-
1.50	72.2/T2	45.9/T2	23/T2	13.1/T1	13.1/T2	13.1/T4	9.8/T4	9.8/T4	-
2.00	59/T2	36.1/T2	23/T2	19.7/T2	13.1/T2	9.8/T2	13.1/T4	9.8/T4	-
2.50	45.9/T2	23/T2	19.7/T2	16.4/T4	9.8/T2	13.1/T4	9.8/T4	6.6/T4	-
3.00	36.1/T2	32.8/T4	19.7/T2	16.4/T4	9.8/T2	13.1/T4	9.8/T4	6.6/T4	-
3.50	32.8/T4	13.1/T1	19.7/T4	9.8/T2	9.8/T4	9.8/T4	9.8/T5	6.6/T4	-
4.00	29.5/T4	19.7/T2	23/T3	9.8/T2	13.1/T4	6.6/T2	9.8/T5	6.6/T4	-
4.50	26.2/T4	16.4/T4	19.7/T3	13.1/T3	6.6/T2	3.3/T1	3.3/T1	3.3/T1	-
5.00	26.2/T4	19.7/T4	13.1/T4	9.8/T4	9.8/T4	9.8/T5	6.6/T4	-	-
6.00	23/T3	19.7/T3	9.8/T4	13.1/T5	6.6/T4	3.3/T1	3.3/T1	4.9/T2	4.9/T4
7.00	13.1/T4	16.4/T5	13.1/T5	9.8/T5	3.3/T1	3.3/T1	6.6/T3	6.6/T3	3.3/T2
8.00	16.4/T5	13.1/T5	6.6/T2	6.6/T3	6.6/T3	6.6/T4	6.6/T3	4.9/T5	3.3/T2
9.00	6.6/T2	9.8/T5	3.3/T1	3.3/T1	6.6/T4	6.6/T3	4.9/T4	3.3/T2	3.3/T4
10.00	6.6/T4	3.3/T1	3.3/T1	6.6/T4	6.6/T4	4.9/T4	3.3/T2	3.3/T4	3.3/T4
11.00	9.8/T4	9.8/T3	6.6/T4	6.6/T4	6.6/T3	3.3/T2	3.3/T2	3.3/T4	3.3/T4
12.00	13.1/T5	6.6/T2	6.6/T4	6.6/T4	4.9/T4	4.9/T4	3.3/T4	3.3/T4	3.3/T3
14.00	-	6.6/T4	6.6/T4	6.6/T5	6.6/T5	4.9/T5	3.3/T4	3.3/T4	3.3/T5
15.00	-	6.6/T4	6.6/T5	3.3/T2	3.3/T2	4.9/T5	3.3/T3	3.3/T3	3.3/T3
16.00	-	6.6/T5	4.9/T4	4.9/T4	3.3/T4	3.3/T4	3.3/T3	3.3/T3	3.3/T3
17.00	-	6.6/T5	3.3/T2	3.3/T2	3.3/T4	3.3/T3	3.3/T3	3.3/T3	1.6/T3
18.00	-	6.6/T5	3.3/T2	3.3/T4	3.3/T3	3.3/T3	3.3/T3	3.3/T3	1.6/T3
19.00	-	6.6/T5	3.3/T4	3.3/T4	3.3/T3	3.3/T3	3.3/T3	1.6/T3	1.6/T3
20.00	-	3.3/T4	3.3/T4	3.3/T3	3.3/T3	3.3/T3	1.6/T3	1.6/T3	1.6/T3
21.00	-	3.3/T4	3.3/T3	3.3/T3	3.3/T3	1.6/T3	1.6/T3	1.6/T3	1.6/T3
22.00	-	3.3/T3	3.3/T3	3.3/T3	3.3/T3	1.6/T3	1.6/T3	1.6/T3	1.6/T3
23.00	-	3.3/T3	3.3/T3	3.3/T3	1.6/T3	1.6/T3	1.6/T3	1.6/T3	1.6/P
24.00	-	3.3/T3	3.3/T3	3.3/T3	1.6/T3	1.6/T3	1.6/T3	1.6/T3	6.6/P
25.00	-	-	1.6/T3	1.6/T3	1.6/T3	1.6/T3	6.6/P	6.6/P	6.6/P
26.00	-	-	1.6/T3	1.6/T3	1.6/T3	6.6/P	6.6/P	6.6/P	6.6/P
27.00	-	-	1.6/T3	1.6/T3	1.6/T3	6.6/P	6.6/P	6.6/P	6.6/P
28.00	-	-	1.6/T3	1.6/T3	6.6/P	6.6/P	6.6/P	6.6/P	6.6/P
29.00	-	-	-	-	-	-	-	-	-
30.00	-	-	6.6/P	6.6/P	6.6/P	6.6/P	6.6/P	6.6/P	-
31.00	-	-	-	-	-	-	-	-	-
32.00	-	-	6.6/P	6.6/P	6.6/P	6.6/P	-	-	-
33.00	-	-	6.6/P	6.6/P	6.6/P	-	-	-	-
34.00	-	-	6.6/P	6.6/P	-	-	-	-	-

Note:
As ROXUL Inc. has no control over installation design and workmanship, accessory materials or application conditions, ROXUL Inc. does not warranty the performance or results of any installation containing ROXUL Inc's. products. ROXUL Inc's. overall liability and the remedies available are limited by the general terms and conditions of sale. This warranty is in lieu of all other warranties and conditions expressed or implied, including the warranties of merchantability and fitness for a particular purpose.

* "Provisions for lot testing may be required, consult manufacturer."

ROXUL INC. 551 Harrop Drive, Milton, Ontario L9T 3H3 Tel: 905 878-8474
www.roxul.com Sales Office - Tel: 1-800-265-6878, Fax: 1-800-991-0110

Fax: 905 878-8077

Revised: December 21, 2004
Supercedes: December 14, 2005