

INSULTHIN HT AND THERMO-12® GOLD CALCIUM SILICATE HYBRID PERSONNEL PROTECTION TABLES

The following table indicates the minimum insulation thickness for a **hybrid insulation system with InsulThin HT and Thermo-12 Gold calcium silicate** required to maintain the outside surface at or below the safe-to-touch temperature of 140°F (60°C). These tables were generated using the NAIMA 3E-Plus computer program which follows the heat transfer calculation methodology in ASTM C680.

Operating conditions are:

- Ambient Temperature = 86°F (30°C)
- Surface Emittance of Weathered Aluminum Jacket = 0.15
- Wind Velocity = 2.2 mph
- Pipe Insulation Dimensions per ASTM C585
- Minimum Thickness of Insulation Offered is 1 Inch for Preformed Insulation

InsulThin HT & Thermo-12 Gold - Hybrid Safe-To-Touch Insulation Thickness																							
NPS Pipe Size in (mm)	Operating Temperature °F (°C)																						
	210°F (100°C)		300°F (150°C)		390°F (200°C)		480°F (250°C)		570°F (300°C)		660°F (350°C)		750°F (400°C)		840°F (450°C)		930°F (500°C)		1020°F (550°C)		1110°F (600°C)		
	InsulThin (IT)	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid		
0.5 (15)	5mm	5mm		10mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.0in	30mm	10mm + 1.5in
0.75 (20)	5mm	5mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 2.0in
1 (25)	5mm	5mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 2.0in
1.5 (40)	5mm	5mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	35mm	10mm + 2.0in	35mm	10mm + 2.0in
2 (50)	5mm	10mm		10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	35mm	10mm + 2.5in	35mm	10mm + 2.5in	35mm	10mm + 3.0in
3 (80)	5mm	10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 3.0in	45mm	10mm + 3.5in
4 (100)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 3.5in	45mm	10mm + 3.5in	45mm	10mm + 4.0in
6 (150)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 3.5in	55mm	10mm + 4.0in	55mm	10mm + 4.0in	55mm	10mm + 4.5in
8 (200)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	45mm	10mm + 3.0in	50mm	10mm + 3.5in	60mm	10mm + 4.0in	60mm	10mm + 4.5in	60mm	10mm + 5.5in
10 (250)	5mm	10mm		20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	50mm	10mm + 3.5in	55mm	10mm + 4.5in	65mm	10mm + 5.0in	65mm	10mm + 5.0in	65mm	10mm + 6.0in
12 (300)	5mm	15mm	10mm + 1in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	40mm	10mm + 2.5in	45mm	10mm + 3.0in	50mm	10mm + 4.0in	60mm	10mm + 4.5in	65mm	10mm + 5.5in	65mm	10mm + 5.5in	65mm	10mm + 6.5in
14 (350)	5mm	15mm	10mm + 1in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	40mm	10mm + 3.0in	45mm	10mm + 3.5in	55mm	10mm + 4.0in	60mm	10mm + 5.0in	70mm	10mm + 6.0in	70mm	10mm + 6.0in	70mm	10mm + 6.5in
16 (400)	5mm	15mm	10mm + 1in	20mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 3.0in	50mm	10mm + 3.5in	55mm	10mm + 4.5in	65mm	10mm + 5.5in	70mm	10mm + 6.0in	75mm	10mm + 6.0in	75mm	10mm + 7.0in
18 (450)	5mm	15mm	10mm + 1in	20mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	50mm	10mm + 4.0in	55mm	10mm + 4.5in	65mm	10mm + 5.5in	75mm	10mm + 6.5in	75mm	10mm + 6.5in	75mm	10mm + 7.5in
20 (500)	10mm	15mm	10mm + 1in	20mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.5in	45mm	10mm + 3.0in	50mm	10mm + 4.0in	60mm	10mm + 5.0in	65mm	10mm + 5.5in	80mm	10mm + 6.5in	80mm	10mm + 6.5in	80mm	10mm + 7.5in
24 (600)	10mm	15mm	10mm + 1in	20mm	10mm + 1.0in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	45mm	10mm + 3.5in	55mm	10mm + 4.0in	60mm	10mm + 5.0in	70mm	10mm + 6.0in	80mm	10mm + 7.0in	80mm	10mm + 7.0in	80mm	10mm + 8.0in
30 (750)	10mm	15mm	10mm + 1in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	40mm	10mm + 3.0in	45mm	10mm + 3.5in	55mm	10mm + 4.5in	65mm	10mm + 5.5in	75mm	10mm + 6.5in	85mm	10mm + 7.5in	85mm	10mm + 7.5in	85mm	10mm + 8.5in
36 (900)	10mm	15mm	10mm + 1in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	40mm	10mm + 3.0in	50mm	10mm + 4.0in	55mm	10mm + 4.5in	65mm	10mm + 5.5in	80mm	10mm + 6.5in	85mm	10mm + 8.0in	90mm	10mm + 8.0in	90mm	10mm + 9.0in
48 (1220)	10mm	15mm	10mm + 1in	25mm	10mm + 1.5in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	50mm	10mm + 4.0in	60mm	10mm + 5.0in	70mm	10mm + 6.0in	80mm	10mm + 7.0in	90mm	10mm + 8.5in	90mm	10mm + 8.5in	90mm	10mm + 9.5in

Example: 10mm (InsulThin HT Thickness) + 1.0in (Thermo-12 Gold Thickness)

INSULTHIN HT AND SPROULE WR-1200® EXPANDED PERLITE HYBRID PERSONNEL PROTECTION TABLES

The following table indicates the minimum insulation thickness for a **hybrid insulation system with InsulThin HT and Sproule WR-1200 expanded perlite** required to maintain the outside surface at or below the safe-to-touch temperature of 140°F (60°C). These tables were generated using the NAIMA 3E-Plus computer program which follows the heat transfer calculation methodology in ASTM C680.

Operating conditions are:

- Ambient Temperature = 86°F (30°C)
- Surface Emittance of Weathered Aluminum Jacket = 0.15
- Wind Velocity = 2.2 mph
- Pipe Insulation Dimensions per ASTM C585
- Minimum Thickness of Insulation Offered is 1 Inch for Preformed Insulation

InsulThin HT & Sproule WR-1200 - Hybrid Safe-To-Touch Insulation Thickness

NPS Pipe Size in (mm)	Operating Temperature °F (°C)																						
	210°F (100°C)		300°F (150°C)		390°F (200°C)		480°F (250°C)		570°F (300°C)		660°F (350°C)		750°F (400°C)		840°F (450°C)		930°F (500°C)		1020°F (550°C)		1110°F (600°C)		
	InsulThin(HT)	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid
0.5 (15)	5mm	5mm		10mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 1.5in
0.75 (20)	5mm	5mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 2.0in
1 (25)	5mm	5mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 1.5in	30mm	10mm + 2.0in
1.5 (40)	5mm	5mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.0in	35mm	10mm + 2.0in	35mm	10mm + 2.5in
2 (50)	5mm	10mm		10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	35mm	10mm + 2.0in	35mm	10mm + 2.5in	35mm	10mm + 3.0in
3 (80)	5mm	10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	40mm	10mm + 3.0in	40mm	10mm + 3.5in	45mm	10mm + 4.0in
4 (100)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 3.0in	45mm	10mm + 4.0in	45mm	10mm + 4.5in
6 (150)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 3.5in	55mm	10mm + 4.0in	55mm	10mm + 4.5in	55mm	10mm + 5.5in
8 (200)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 3.5in	50mm	10mm + 4.0in	60mm	10mm + 4.5in	60mm	10mm + 5.0in	60mm	10mm + 6.0in
10 (250)	5mm	10mm		20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.0in	50mm	10mm + 4.0in	55mm	10mm + 4.5in	65mm	10mm + 5.0in	65mm	10mm + 5.5in	65mm	10mm + 6.5in
12 (300)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	40mm	10mm + 3.0in	45mm	10mm + 3.5in	50mm	10mm + 4.0in	60mm	10mm + 4.5in	65mm	10mm + 5.5in	65mm	10mm + 6.0in	65mm	10mm + 7.0in
14 (350)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 4.0in	55mm	10mm + 4.5in	60mm	10mm + 5.0in	70mm	10mm + 5.5in	70mm	10mm + 6.5in	70mm	10mm + 7.5in
16 (400)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.5in	50mm	10mm + 4.0in	55mm	10mm + 5.0in	65mm	10mm + 6.0in	70mm	10mm + 7.0in	75mm	10mm + 7.0in	75mm	10mm + 8.0in
18 (450)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	30mm	10mm + 2.0in	35mm	10mm + 2.5in	40mm	10mm + 3.5in	50mm	10mm + 4.5in	55mm	10mm + 5.0in	65mm	10mm + 6.0in	75mm	10mm + 7.0in	75mm	10mm + 7.0in	75mm	10mm + 8.0in
20 (500)	10mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	30mm	10mm + 2.0in	35mm	10mm + 3.0in	45mm	10mm + 3.5in	50mm	10mm + 4.5in	60mm	10mm + 5.5in	65mm	10mm + 6.5in	80mm	10mm + 7.5in	80mm	10mm + 8.5in	80mm	10mm + 8.5in
24 (600)	10mm	15mm	10mm + 1.0in	20mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 3.0in	45mm	10mm + 4.0in	55mm	10mm + 5.0in	60mm	10mm + 5.5in	70mm	10mm + 6.5in	80mm	10mm + 8.0in	80mm	10mm + 8.0in	80mm	10mm + 8.0in
30 (750)	10mm	15mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.5in	40mm	10mm + 3.0in	45mm	10mm + 4.0in	55mm	10mm + 5.0in	65mm	10mm + 6.0in	75mm	10mm + 7.0in	85mm	10mm + 8.5in	85mm	10mm + 8.5in	85mm	10mm + 9.0in
36 (900)	10mm	15mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.5in	40mm	10mm + 3.5in	50mm	10mm + 4.5in	55mm	10mm + 5.5in	65mm	10mm + 6.5in	80mm	10mm + 7.5in	85mm	10mm + 8.5in	90mm	10mm + 8.5in	90mm	10mm + 9.5in
48 (1220)	10mm	15mm	10mm + 1.0in	25mm	10mm + 1.5in	35mm	10mm + 2.5in	40mm	10mm + 3.5in	50mm	10mm + 4.5in	60mm	10mm + 6.0in	70mm	10mm + 7.0in	80mm	10mm + 8.0in	90mm	10mm + 9.5in	90mm	10mm + 9.5in	90mm	10mm + >10.0in

Example: 10mm (InsulThin HT Thickness) + 1.0in (Sproule WR-1200 Pipe Insulation Thickness)

INSULTHIN HT AND MINWOOL-1200® PIPE INSULATION HYBRID PERSONNEL PROTECTION TABLES

The following table indicates the minimum insulation thickness for a **hybrid insulation system with InsulThin HT and MinWool-1200 pipe insulation** required to maintain the outside surface at or below the safe-to-touch temperature of 140°F (60°C). These tables were generated using the NAIMA 3E-Plus computer program which follows the heat transfer calculation methodology in ASTM C680.

Operating conditions are:

- Ambient Temperature = 86°F (30°C)
- Surface Emittance of Weathered Aluminum Jacket = 0.15
- Wind Velocity = 2.2 mph
- Pipe Insulation Dimensions per ASTM C585
- Minimum Thickness of Insulation Offered is 1 Inch for Preformed Insulation

InsulThin HT & MinWool-1200 Pipe Insulation - Hybrid Safe-To-Touch Insulation Thickness																						
NPS Pipe Size in (mm)	Operating Temperature °F (°C)																					
	210°F (100°C)		300°F (150°C)		390°F (200°C)		480°F (250°C)		570°F (300°C)		660°F (350°C)		750°F (400°C)		840°F (450°C)		930°F (500°C)		1020°F (550°C)		1110°F (600°C)	
	InsulThin(HT)	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	IT	Hybrid	
0.5 (15)	5mm	5mm		10mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	
0.75 (20)	5mm	5mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	30mm	10mm + 1.5in	
1 (25)	5mm	5mm		10mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 2.0in	30mm	10mm + 1.5in	
1.5 (40)	5mm	5mm		10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	25mm	10mm + 1.5in	30mm	10mm + 2.0in	35mm	10mm + 2.0in	35mm	10mm + 2.0in	
2 (50)	5mm	10mm		10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	35mm	10mm + 2.0in	35mm	10mm + 2.5in	
3 (80)	5mm	10mm		15mm	10mm + 1.0in	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.0in	40mm	10mm + 2.5in	45mm	10mm + 3.5in	
4 (100)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	45mm	10mm + 3.0in	45mm	10mm + 4.0in	
6 (150)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	45mm	10mm + 3.0in	55mm	10mm + 4.0in	55mm	10mm + 4.5in	
8 (200)	5mm	10mm		15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	45mm	10mm + 3.0in	50mm	10mm + 3.5in	60mm	10mm + 4.5in	60mm	10mm + 5.0in	
10 (250)	5mm	10mm		20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	50mm	10mm + 3.0in	55mm	10mm + 4.0in	65mm	10mm + 5.0in	65mm	10mm + 6.0in	
12 (300)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	40mm	10mm + 2.0in	45mm	10mm + 2.5in	50mm	10mm + 3.5in	60mm	10mm + 4.5in	65mm	10mm + 5.5in	65mm	10mm + 6.5in	
14 (350)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	40mm	10mm + 2.5in	45mm	10mm + 3.0in	55mm	10mm + 3.5in	60mm	10mm + 4.5in	70mm	10mm + 5.5in	70mm	10mm + 6.5in	
16 (400)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	30mm	10mm + 1.0in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	50mm	10mm + 3.0in	55mm	10mm + 4.0in	65mm	10mm + 5.0in	70mm	10mm + 6.0in	75mm	10mm + 7.0in	
18 (450)	5mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	40mm	10mm + 2.5in	50mm	10mm + 3.5in	55mm	10mm + 4.0in	65mm	10mm + 5.0in	75mm	10mm + 6.0in	75mm	10mm + 7.5in	
20 (500)	10mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	45mm	10mm + 2.5in	50mm	10mm + 3.5in	60mm	10mm + 4.5in	65mm	10mm + 5.5in	80mm	10mm + 6.5in	80mm	10mm + 7.5in	
24 (600)	10mm	15mm	10mm + 1.0in	20mm	10mm + 1.0in	30mm	10mm + 1.5in	35mm	10mm + 2.0in	45mm	10mm + 3.0in	55mm	10mm + 3.5in	60mm	10mm + 4.5in	70mm	10mm + 5.5in	80mm	10mm + 7.0in	80mm	10mm + 8.0in	
30 (750)	10mm	15mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	40mm	10mm + 2.0in	45mm	10mm + 3.0in	55mm	10mm + 4.0in	65mm	10mm + 5.0in	75mm	10mm + 6.0in	85mm	10mm + 7.5in	85mm	10mm + 8.5in	
36 (900)	10mm	15mm	10mm + 1.0in	25mm	10mm + 1.0in	30mm	10mm + 1.5in	40mm	10mm + 2.5in	50mm	10mm + 3.0in	55mm	10mm + 4.0in	65mm	10mm + 5.0in	80mm	10mm + 6.5in	85mm	10mm + 7.5in	90mm	10mm + 9.0in	
48 (1220)	10mm	15mm	10mm + 1.0in	25mm	10mm + 1.0in	35mm	10mm + 1.5in	40mm	10mm + 2.5in	50mm	10mm + 3.5in	60mm	10mm + 4.5in	70mm	10mm + 5.5in	80mm	10mm + 7.0in	90mm	10mm + 8.0in	90mm	10mm + 10in	

Example: 10mm (InsulThin HT Thickness) + 1.0in (MinWool-1200 Pipe Insulation Thickness)

HYBRID PERSONNEL PROTECTION TABLES

For additional information such as Safety Data Sheets (SDS), product data sheets, and other pertinent information, please visit our website at www.jm.com/industrial

Industrial Insulation Group, LLC manufactures MinWool-1200® mineral fiber pipe, block and a variety of other insulations; Thermo-12® Gold Calcium Silicate pipe and block insulation; Microporous Blanket Insulation; Super Firetemp® fireproofing board; SprouleWR-1200® Perlite pipe and block insulation; high-temperature adhesives, and insulating finishing cement. The physical and chemical properties presented herein represent 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. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Customer Service Office to assure current information. All Industrial Insulation Group products are sold subject to the Johns Manville Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy, email info.industrial@jm.com.

CUSTOMER SERVICE
TECHNICAL & GENERAL INFORMATION
(800) 866-3234



Johns Manville
Industrial Insulation Group
2100 LINE STREET • BRUNSWICK, GA 31520