MAXFLEX® FR

ฉนวนยางคุณภาพระดับสากล

MAXFLEX FR

MAXFLEX FR is available as tube insulation, pre-cut sheet, standard flat sheet and sheet roll. MAXFLEX FR is made from light weight elastomeric material, EPDM (ETHYLENE PROPYLENE RUBBER) design for thermal insulation usage which is CFCs free, HFCs Free, and O.D.P. Zero.

MAXFLEX FR is an ideal thermal insulation to prevent condensation problems on chilled water pipes, air duct systems, refrigerant lines and also to against frost formation.

MAXFLEX FR is non-fibrous, non-asbestos, non-formaldehyde contents and odorless. It is superior for air duct systems. It has been favored over the fibrous insulation material because of the possible health hazards and dangers caused by the loose particles of fibrous materials into air vents.

In addition to the well-known performance of **MAXFLEX FR**, the result is a product of high quality, energy saving, long lasting protection, condensation control and which helps minimize mold growth.

MAXFLEX FR can be used for both as interior or exterior insulating materials of air duct systems. MAXFLEX FR can be safely used without causing skin irritation and its flexibility makes installation work easy and neat. MAXFLEX FR is merchandized in ready-to-use Pressure Sensitive Adhesive and Aluminum foil surfaces.

Better Temperature Control & Energy Conservation: Molecular structure of MAXFLEX FR is characterized by a large number of fine cross-linked closed cells which provides effective reduction of heat loss from indoor and outdoor air ducting systems. It also reduces waste of energy by higher heat gain into the cooling systems.

Prevent Condensation Problems: Excellent moisture and vapor resistance due to its dense surface and the closed cell structure.

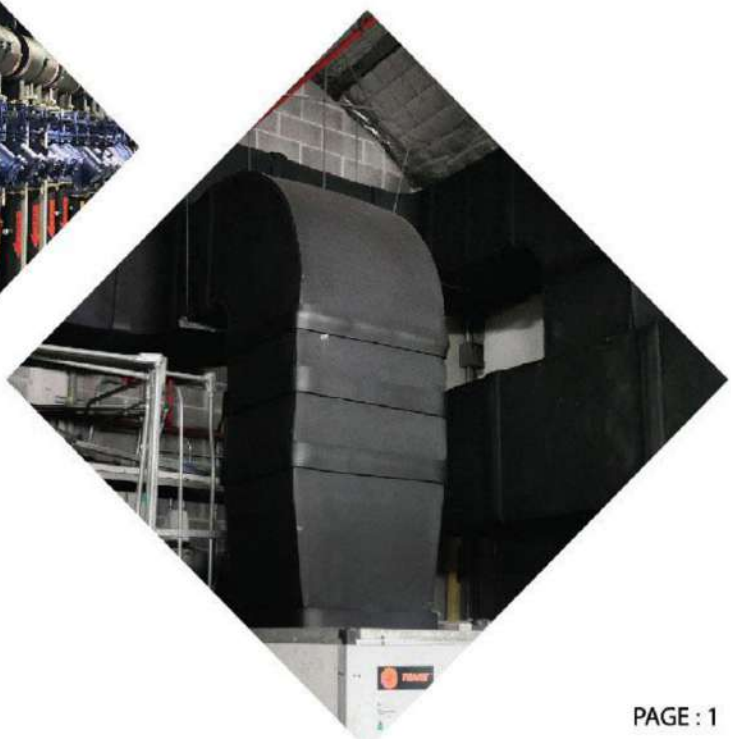
Durable: Outstanding Ozone/UV and Weather resistance attributes provide superior resistance against moisture, fungus growth, vermin and rodent pest.

Excellent Sound Absorption and Noise Reduction: Acting as a vibration damper and serve as outer shield, MAXFLEX FR greatly reduces noise from mechanical equipment, as well as noise from cross-talk and air movement.

Excellent and Safety Fire Performance (Fire retardant): MAXFLEX FR is complied with most international smoke and flammability standards.

Easy to install: Outstanding flexibility for quick and easy installation gives the finished insulation a neat aesthetic appearance. No coating is needed on most indoor usage.

Long year service of stable and low thermal conductivity value (K-Value).



MAXFLEX® FR STANDARD SPECIFICATION

Physical Properties		Maxflex® FR								Test Method (Standard)
Material		EPDM Rubber Blend with additive								TGA / DSC
Cell Structure / Flexibility		Closed Cell / Excellent								-
Density		3-6 lbs/ft³ (48-96 kg/m³)								ASTM D1667
Thermal Conductivity	**Mean Temp.**	-40°F (-40°C)	-22°F (-30°C)	-4°F (-20°C)	32°F (0°C)	75°F (24°C)	90°F (32°C)	104°F (40°C)	122°F (50°C)	ASTM C177 ASTM C518
BTU.In/ft².hr.°F (W/m.K)	**k- Value**	0.20 0.029	0.21 0.030	0.22 0.031	0.23 0.033	0.24 0.035	0.25 0.037	0.26 0.038	0.27 0.039	DIN 52613 EN ISO 8497
Service Temperature *		-57°C to 125°C -70°F to 257°F								Maxflex become hard at -57°C but can be use even at -200°C
- Maximum service Temperature		can withstand temperature as high as 125 °C								ASTM C411
Ozone & UV Resistance		No Crack								ASTM D1171 & ASTM G154
Water Absorption		≤ 1.5% by Weight ≤ 0.05% by Volume								ASTM D1056 ASTM C209
Water Vapor Diffusion Resistance (μValue)		$\mu \geq 12{,}000$								EN 12086, DIN 52615
Water Vapor Permeability ** (g/Pa.s.m)		≤ 0.10 perm-in (≤1.15x10^{-10}g/Pa.s.m)								ASTM E96
Anti Microbial, Fungus Resistance		Compliance with requirement								ASTM E2180, ASTM G21
Heat Stability (% Shrinkage) at 200°F (7 Days)		≤ 3.5 % Respectively								ASTM C534
Fire Performance (Fire Retardant)		Class V0 Self-Extinguishing B2 0,0,0,5 Compliance with requirement								UL 94 ASTM D635 DIN 4102 AS 1530.3 NFPA 90A & NFPA 90B
- Fire Index		Index 5.3								EMPA SWISSI
Flame spread / Smoke Developed		25/50								ASTM E84 (Surface burning characteristics)
Fire Propagation & Surface spread of flame		Class 1								BS 476 Part 7
- Total Index of Performance (I) - Sub Index (i)		Class 0 Less than 12 Less than 6								BS 476 Part 6
Smoke Toxicity - Smoke Density		Satisfies max allowable concerntration for the following combustion gases CO, HCl, HF, HBr, HCN, NO_x, SO_2 $D_m \leq 100$								ISO 5659-2:2017
		Compliance with requirement								International Marine Organization(IMO)
RoHs I&II Test		Compliance with requirement								Certain Hazardous Substances in Electrical and Electronic Equipment,2011/65/EU and its amendment Directive(EU)2015/863
Nitrosamine Content		Not detected								BS EN 12868
Ozone Depleting Substances(ODS) - CFCs, HCFCs		Not detected								USEPA5021A/8260C
Volatile Organic Chemical Emission(VOC)		Not detected								CDPH/EHLB/ STANDARD METHOD V1.2 and VOC Emission Test After 14 Day
Formaldehyde Content		Not detected								ISO 17226-1
Asbestos / Dust & Fiber		Not detected								EPA600/R
Odour Test at 23°C, 40°C		Grade1.5, Grade2.0								FLTM BO 131-03
Corrosion(Copper, Stainless Steel)		Non Corrosive								DIN 1988
Sound Absorption Coefficient ***		0.65 NRC								ASTM C423
Noise Reduction Coefficient		Maximum 36.3 dB(A)								DIN 52219 (19 mm. thickness)

Note: :

* For applications at a temperature lower than -57 °C , MAXFLEX FR becomes hard but it does not affect thermal conductivity nor water vapor permeability. For heating applications, MAXFLEX FR can stand up to +125°C continuously. Outdoor applications should be cladded with metal sheet, aluminium /stainless sheet or painted with 2-3 layers of Maxcoat.

** Water Vapor Permeability test was done under test method ASTM E96 dehydrate test at 37.8°C and average value is 0.94x10^{-10} g/Pa.sm .

*** Sound Absorption Coefficient Table

Sound Absorption Coefficient at Frequency							
Frequency(Hz)	125	250	500	1000	2000	4000	NRC
Absorption Coefficient	0.06	0.14	0.66	0.90	0.91	0.90	0.65

MAXFLEX FR

For Hot Water Piping and Solar Energy Heating Systems

MAXFLEX FR is very effective in reducing heat loss from indoor and outdoor hot water piping systems. Due to it is outstanding ozone/UV and weather resistance property, it proves to be the best insulation for outdoor pipe line of the solar energy heating system. MAXFLEX FR contains no asbestos, no dust and fiber free. So, it is safe when being installed in places where hygiene is vital. This is one among many reasons why this product is widely selected and accepted as a replacement for the fibrous insulation material for hot water piping systems in hotels, hospitals, residential and industrial applications. It is also highly efficient in safe guarding against frost formation inside the water pipes as the information dramatically delays the time water cool down and reach freezing temperature while shut-off the heating systems. MAXFLEX FR is the ideal insulation material for hot water pipes due to the following characteristics.

- It can be use applicable continuously at 125 °C (275 °F for standard) and high temperature to 170 °C (338 °F in Hi-temp)
- Good Ozone, UV and weather resistance when being used outdoor.
- Stable and low thermal conductivity value throughout the service life.
- Very low water absorption and water vapor transmission.
- Flexibility, easy installation. Do not need any jacketing or protection even being used to insulate the piping.

PIPE SIZE		Condition: Ambient 35 °C , Surface Temperature 40 °C, Still Air, Bare Insulation															
		Operating Temperature (°C)															
mm.	inch	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125
		Thickness Recommend (mm)															
6	1/4	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
9	3/8	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
13	1/2	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
16	5/8	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
19	3/4	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
22	7/8	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
25	1	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
28	1-1/8	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
32	1-1/4	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
35	1-3/8	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
38	1-1/2	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
42	1-5/8	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
45	1-3/4	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
48	1-7/8	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
51	2	9	13	19	19	25	25	25	32	32	32	38	38	38	50	50	50
54	2-1/8	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	50
57	2-1/4	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	50
60	2-3/8	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	50
64	2-1/2	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	50
67	2-5/8	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	50
73	2-7/8	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	50
76	3	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	50
80	3-1/8	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	59
83	3-1/4	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	59
90	3-1/2	9	13	19	19	25	25	25	32	32	32	38	38	50	50	50	59
92	3-5/8	9	13	19	19	25	25	32	32	32	32	38	38	50	50	50	59
98	3-7/8	9	13	19	19	25	25	32	32	32	32	38	38	50	50	50	59
102	4	9	13	19	19	25	25	32	32	32	32	38	38	50	50	50	59
105	4-1/8	9	13	19	19	25	25	32	32	32	38	38	50	50	50	50	59
115	4-1/2	9	13	19	19	25	25	32	32	32	38	38	50	50	50	50	59
130	5-1/8	9	13	19	19	25	25	32	32	32	38	38	50	50	50	50	59
140	5-1/2	9	13	19	19	25	25	32	32	32	38	38	50	50	50	50	59
165	6-1/2	9	13	19	19	25	25	32	32	32	38	38	50	50	50	50	59
Storage Tank		13	19	19	25	25	32	32	32	38	38	50	50	50	50	59	63

MAXFLEX FR STANDARD for operating temperature ≤ 100 °C and MAXFLEX FR <FM APPROVED> for operating temperature >100 °C

MAXFLEX FR STANDARD Insulation Tube: 2m. Length (Quantity : Piece/Carton)

MAXFLEX FR Tube (ID)		Pipe Size : mm.(inch)			Product Code & Quantity (Piece/Carton)							
mm.	inch	Copper	Iron/PVC	PPR	6 mm.wall (1/4")	9 mm.wall (3/8")	13 mm.wall (1/2")	19 mm.wall (3/4")	25 mm.wall (1")	32 mm.wall (1-1/4")	38 mm.wall (1-1/2")	50 mm.wall (2")
6	1/4"	6(1/4")			MF06x06FR(248)	MF09x06FR(176)	MF13x06FR(100)	MF19x06FR (56)	MF25x06FR (30)			
9	3/8"	9(3/8")			MF06x09FR(182)	MF09x09FR(133)	MF13x09FR(86)	MF19x09FR (49)	MF25x09FR (30)			
13	1/2"	13(1/2")	1/4"IPS		MF06x13FR(158)	MF09x13FR(117)	MF13x13FR(81)	MF19x13FR (44)	MF25x13FR (27)			
16	5/8"	16(5/8")	3/8"IPS		MF06x16FR(133)	MF09x16FR(96)	MF13x16FR(68)	MF19x16FR (39)	MF25x16FR (26)	MF32x16FR (17)	MF38x16FR (12)	
19	3/4"	19(3/4")			MF06x19FR(110)	MF09x19FR(83)	MF13x19FR(50)	MF19x19FR (36)	MF25x19FR (25)	MF32x19FR (16)	MF38x19FR (11)	MF50x19FR (6)
22	7/8"	22(7/8")	1/2"IPS	20(1/2")	MF06x22FR(90)	MF09x22FR(68)	MF13x22FR (49)	MF19x22FR (32)	MF25x22FR (21)	MF32x22FR (16)	MF38x22FR (10)	MF50x22FR (6)
25	1"		3/4"IPS	25(3/4")	MF06x25FR(86)	MF09x25FR (54)	MF13x25FR (40)	MF19x25FR (25)	MF25x25FR (20)	MF32x25FR (15)	MF38x25FR (9)	MF50x25FR (6)
28	1-1/8"	28(1-1/8")			MF06x28FR(70)	MF09x28FR (49)	MF13x28FR (39)	MF19x28FR (24)	MF25x28FR (20)	MF32x28FR (12)	MF38x28FR (9)	MF50x28FR (6)
32	1-1/4"			32(1")		MF09x32FR (46)	MF13x32FR (32)	MF19x32FR (19)	MF25x32FR (14)	MF32x32FR (12)	MF38x32FR (8)	MF50x32FR (5)
35	1-3/8"	35(1-3/8")	1"IPS			MF09x35FR (42)	MF13x35FR (29)	MF19x35FR (18)	MF25x35FR (12)	MF32x35FR (11)	MF38x35FR (8)	MF50x35FR (5)
38	1-1/2"					MF09x38FR (39)	MF13x38FR (26)	MF19x38FR (17)	MF25x38FR (11)	MF32x38FR (8)	MF38x38FR (7)	MF50x38FR (5)
42	1-5/8"	42(1-5/8")	1-1/4"IPS	40(1-1/4")		MF09x42FR (30)	MF13x42FR (24)	MF19x42FR (16)	MF25x42FR (11)	MF32x42FR (8)	MF38x42FR (6)	MF50x42FR (5)
45	1-3/4"					MF09x45FR (27)	MF13x45FR (22)	MF19x45FR (13)	MF25x45FR (10)	MF32x45FR (7)	MF38x45FR (6)	MF50x45FR (4)
48	1-7/8"		1-1/2"IPS			MF09x48FR (25)	MF13x48FR (20)	MF19x48FR (12)	MF25x48FR (9)	MF32x48FR (7)	MF38x48FR (6)	MF50x48FR (4)
51	2"			50(1-1/2")		MF09x51FR (24)	MF13x51FR (18)	MF19x51FR (12)	MF25x51FR (8)	MF32x51FR (6)	MF38x51FR (5)	MF50x51FR (4)
54	2-1/8"	54(2-1/8")				MF09x54FR (23)	MF13x54FR (17)	MF19x54FR (12)	MF25x54FR (8)	MF32x54FR (6)	MF38x54FR (5)	MF50x54FR (4)
57	2-1/4"					MF09x57FR (23)	MF13x57FR (16)	MF19x57FR (11)	MF25x57FR (7)	MF32x57FR (5)	MF38x57FR (5)	MF50x57FR (4)
60	2-3/8"		2"IPS			MF09x60FR (23)	MF13x60FR (16)	MF19x60FR (11)	MF25x60FR (6)	MF32x60FR (5)	MF38x60FR (5)	MF50x60FR (3)
64	2-1/2"			63(2")			MF13x64FR (15)	MF19x64FR (9)	MF25x64FR (6)	MF32x64FR (5)	MF38x64FR (5)	MF50x64FR (3)
67	2-5/8"	67(2-5/8")					MF13x67FR (13)	MF19x67FR (9)	MF25x67FR (6)	MF32x67FR (4)	MF38x67FR (4)	MF50x67FR (3)
73	2-7/8"		2-1/2"IPS				MF13x73FR (13)	MF19x73FR (9)	MF25x73FR (5)	MF32x73FR (4)	MF38x73FR (4)	MF50x73FR (3)
76	3"	76(3")		75(2-1/2")			MF13x76FR (13)	MF19x76FR (9)	MF25x76FR (5)	MF32x76FR (4)	MF38x76FR (4)	MF50x76FR (3)
80	3-1/8"	80(3-1/8")					MF13x80FR (12)	MF19x80FR (7)	MF25x80FR (4)	MF32x80FR (4)	MF38x80FR (4)	MF50x80FR (3)
83	3-1/4"						MF13x83FR (11)	MF19x83FR (7)	MF25x83FR (4)	MF32x83FR (4)	MF38x83FR (4)	MF50x83FR (3)
90	3-1/2"		3"IPS	90(3")			MF13x90FR (11)	MF19x90FR (7)	MF25x90FR (4)	MF32x90FR (4)	MF38x90FR (3)	MF50x90FR (2)
92	3-5/8"	92(3-5/8")					MF13x92FR (10)	MF19x92FR (7)	MF25x92FR (4)	MF32x92FR (3)	MF38x92FR (3)	MF50x92FR (2)
98	3-7/8"						MF13x98FR (9)	MF19x98FR (7)	MF25x98FR (3)	MF32x98FR (3)	MF38x98FR (3)	MF50x98FR (2)
102	4"		3-1/2"IPS				MF13x102FR (8)	MF19x102FR (7)	MF25x102FR (3)	MF32x102FR (3)	MF38x102FR (2)	MF50x102FR (2)
105	4-1/8"	105(4-1/8")					MF13x105FR (8)	MF19x105FR (6)	MF25x105FR (3)	MF32x105FR (3)	MF38x105FR (2)	MF50x105FR (2)
115	4-1/2"		4"IPS	110(4")			MF13x115FR (8)	MF19x115FR (6)	MF25x115FR (3)	MF32x115FR (3)	MF38x115FR (2)	MF50x115FR (2)
130	5-1/8"	130(5-1/8")		125(5")			MF13x130FR (6)	MF19x130FR (4)	MF25x130FR (2)	MF32x130FR (2)	MF38x130FR (2)	MF50x130FR (2)
140	5-1/2"		5"IPS				MF13x140FR (6)	MF19x140FR (4)	MF25x140FR (2)	MF32x140FR (2)	MF38x140FR (2)	MF50x140FR (2)
165	6-1/2"		6"IPS	160(6")				MF19x165FR (3)	MF25x165FR (2)	MF32x165FR (2)	MF38x165FR (2)	MF50x165FR (1)

Note : Suffix code (A,B,C) are production time.

MAXFLEX FR STANDARD Sheet Insulation and Continuous Sheet Roll

MAXFLEX FR Standard Sheet and Continuous Sheet Roll	Products Code, Size, Length and Quantity per Carton									
	3mm.Thick (1/8")	6mm.Thick (1/4")	9mm.Thick (3/8")	13mm.Thick (1/2")	16mm.Thick (5/8")	19mm.Thick (3/4")	25mm.Thick (1")	32mm.Thick (1-1/4")	38mm.Thick (1-1/2")	50mm.Thick (2")
Standard Flat Sheet Size 1.2m. x 0.9m.	MSF03FR (48pcs./ctn.)	MSF06FR (24pcs./ctn.)	MSF09FR (16pcs./ctn.)	MSF13FR (12pcs./ctn.)	MSF16FR (10pcs./ctn.)	MSF19FR (8pcs./ctn.)	MSF25FR (6pcs./ctn.)	MSF32FR (5pcs./ctn.)	MSF38FR (4pcs./ctn.)	MSF50FR (3pcs./ctn.)
Sheet Roll Width 1.2m. Continuous Length	MSR03FR L=15.0m. L=15.0m.	MSR06FR L=21.9m. L=15.0m.	MSR09FR L=15.2m. L=15.0m.	MSR13FR L=11.0m. L=15.0m.	MSR16FR L=9.7m. L=15.0m.	MSR19FR L=7.0m. L=15.0m.	MSR25FR L=5.5m. L=15.0m.	MSR32FR L=4.0m. L=6.0m.	MSR38FR L=3.0m. L=4.0m.	MSR50FR L=2.4m. L=4.0m.

Note: Insulation thickness 3mm. and 6mm. shall be supplied with one side skin. Additional product specifiction as an above, please consult with manufacturer.

MAXFLEX FR STANDARD Pre-Cut Sheet Insulation (1.2 meter Length/Sheet)

Chilled Water Pipe	Sheet Size : Length x Width		13 mm. wall (1/2")		19 mm. wall (3/4")		25 mm. wall (1")	
ID (inch)	(m.)	(inch)	Product Code	Pcs./ctn.	Product Code	Pcs./ctn.	Product Code	Pcs./ctn.
6" IPS	1.2 x 0.61	48" x 24"	MCS1312061FR	12	MCS1912061FR	8	MCS2512061FR	6
8" IPS	1.2 x 0.76	48" x 30"	MCS1312076FR	12	MCS1912076FR	8	MCS2512076FR	6
10" IPS	1.2 x 0.91	48" x 36"	MCS1312091FR	12	MCS1912091FR	8	MCS2512091FR	6
12" IPS	1.2 x 1.12	48" x 44"	MCS1312112FR	12	MCS1912112FR	8	MCS2512112FR	6
14" IPS	1.2 x 1.22	48" x 48"	MCS1312122FR	12	MCS1912122FR	8	MCS2512122FR	6
16" IPS	1.2 x 1.37	48" x 54"	MCS1312137FR		MCS1912137FR		MCS2512137FR	
18" IPS	1.2 x 1.52	48" x 60"	MCS1312152FR		MCS1912152FR		MCS2512152FR	
Chilled Water Pipe	**Sheet Size : Length x Width**		**32 mm. wall (1-1/4")**		**38 mm. wall (1-1/2")**		**50 mm. wall (2")**	
ID (inch)	**(m.)**	**(inch)**	**Product Code**	**Pcs./ctn.**	**Product Code**	**Pcs./ctn.**	**Product Code**	**Pcs./ctn.**
6" IPS	1.2 x 0.61	48" x 24"	MCS3212061FR	5	MCS3812061FR	4	MCS5012061FR	3
8" IPS	1.2 x 0.76	48" x 30"	MCS3212076FR	5	MCS3812076FR	4	MCS5012076FR	3
10" IPS	1.2 x 0.91	48" x 36"	MCS3212091FR	5	MCS3812091FR	4	MCS5012091FR	3
12" IPS	1.2 x 1.12	48" x 44"	MCS3212112FR	5	MCS3812112FR	4	MCS5012112FR	3
14" IPS	1.2 x 1.22	48" x 48"	MCS3212122FR	5	MCS3812122FR	4	MCS5012122FR	3
16" IPS	1.2 x 1.37	48" x 54"	MCS3212137FR		MCS3812137FR		MCS5012137FR	
18" IPS	1.2 x 1.52	48" x 60"	MCS3212152FR		MCS3812152FR		MCS5012152FR	

Note: The above sheet size is for 1" wall thickness. For other thickness pre cut sheet size will vary to cover circumference.

MAXFLEX FR
For Air Duct Systems

Being dust and fiber free, MAXFELX FR is an ideal thermal insulation for air ducting system. It has been favored over the fibrous insulating material because of the possible health hazards and dangers caused by the loose particles of fibrous materials in to air vents. MAXFLEX FR can be safely handled without causing skin irritation. The products also have superior resistance against moisture, fungus growth, vermin and rodent attack. The dense surface skin laminate with aluminum foil eliminates the need for another layer of vapor barrier or further coating. Physical Strengths of the specially modified elastomeric material ensures long year service life with stable and low thermal conductivity value. MAXFLEX FR has been widely used in Air Ducting Systems due to the following superior characteristics.

- Strength contracture of elastomer and close cell that can be use long year service life of duct (Low K- value)
- Excellent moisture and vapor resistance due to its dense surface skin and closed cell structure.
- Outstanding ozone/UV and weather resistance.
- Flexible, makes instruction work easy and neat.
- Protecting Moisture resistance without fungi ants termites and mice
- MAXFLEX FR type of roll and sheet able to use insulation inside and outside supply of ductwork

Thickness Recommendation for Air Ducing System.

Condition: Surface temperature is above dew point ~1°C to avoid condensation without cladding (Bare insulation).

Ambient Condition	Dew Point	Operating Temperature (Cool Air Temperature)					
		+17°C (+62.6°F)	+15°C (+59°F)	+13°C (+55.4°F)	+10°C (+50.0°F)	+7°C (+44.6°F)	+5°C (+41°F)
27°C (80.6°F), 50% RH	16°C	6 mm.	6 mm.	6 mm.	9 mm.	9 mm.	9 mm.
27°C (80.6°F), 70% RH	21°C	6 mm.	6 mm.	9 mm.	9 mm.	13 mm.	13 mm.
30°C (86.0°F), 70% RH	24°C	9 mm.	9 mm.	9 mm.	9 mm.	13 mm.	16 mm.
30°C (86.0°F), 75% RH	25°C	9 mm.	9 mm.	13 mm.	13 mm.	19 mm.	19 mm.
32°C (89.6°F), 80% RH	28°C	16 mm.	16 mm.	25 mm.	25 mm.	25 mm.	32 mm.
34°C (93.2°F), 85% RH	31°C	19 mm.	25 mm.	25 mm.	32 mm.	32 mm.	38 mm.
35°C (95°F), 85% RH	32°C	25 mm.	25 mm.	32 mm.	38 mm.	50 mm.	50 mm.
35°C (95°F), 90% RH	33°C	32 mm.	32 mm.	38 mm.	50 mm.	56 mm.	56 mm.

Note : In areas of low relative humidity, insulation thickness 6mm. will be sufficient for condensation control purpose.
However, we would recommend a minimum thickness of 9mm. In order to significantly reduce the heat gain from outer sources.

MAXFLEX ACCESSORIES

MAXTAPE

MAXGLUE


MAXFIX, MAXFIX STAND


MAXCOAT

DIMENSION OF PACKAGING

Model	Width(cm.)	Length(cm.)	Height(cm.)
TUBE 2 meter	39	207	33
STANDARD FLAT SHEET	102	130	19
0.9m. X 1.2m.	Carton box or Rolled in Plastic Wrap		
SHEET ROLL	46	130	46
	Carton box or Rolled in Plastic Wrap		
PRE-CUT SHEET	Width(cm.)	Length(cm.)	Height(cm.)
6" IPS - 8" IPS	86	130	19
10" IPS	102	130	19
12" IPS	130	130	19
>12" IPS	Carton box or Rolled in Plastic Wrap		

MAXFLEX FR

For Chilled Water Piping & Refrigerating Systems

MAXFLEX FR is applied onto the chilled water pipes and refrigerating systems not simply to control condensation problems, but also to reduce waste of energy by higher heat gain into the cooling systems. MAXFLEX FR has been widely used in refrigerating and central cooling systems due to the following superior characteristics.

- Low and stable thermal conductivity value.
- Very low water absorption and high moisture resistance.
- Complies with most international Smoke and Flammability Standards.
- Having UV and Ozone resistance due to Non-polar Close Cell Polymer Base.
- Outstanding flexibility for quick and easy installation. Gives the finished insulation a neat aesthetic appearance.

Thickness Recommendation for Chilled Water Piping and Refrigeration.

Condition : Surface temperature is above dew point ~1°C to avoid condensation without cladding(Bare Insulation).

Outside Diameter (OD.) of Steel Pipe	Pipe Line Temperature				
	+15°C (59°F)	+7°C (44.6°F)	+2°C (35.6°F)	-10°C (14°F)	-18°C (-0.4°F)
	Maximun Ambient Temperature 28°C (82.4°F), 75%RH, Dew Point 23.26°C				
Pipe up to 1" IPS (35mm.)	9	13	19	25	32
1 1/4"IPS- 2 1/2"IPS (42-76mm.)	9	19	19	32	38
3"IPS-6"IPS (89-168mm.)	9	19	25	32	38
Pipe 8"IPS-12"IPS (219-323mm.)	13	19	25	32	38
	Maximum Ambient Temperature 32°C (86°F), 75%RH, Dew Point 27.16°C				
Pipe up to 1" IPS (35mm.)	13	19	19	25	32
1 1/4"IPS- 2 1/2"IPS (42-76mm.)	13	19	25	32	38
3"IPS-6"IPS (89-168mm.)	13	19	25	32	38
Pipe 8"IPS-12"IPS (219-323mm.)	13	25	25	38	50
	Maximum Ambient Temperature 35°C (95°F), 80%RH, Dew Point 31.2°C				
Pipe up to 1" IPS (35mm.)	19	25	32	38	50
1 1/4"IPS- 2 1/2"IPS (42-76mm.)	19	32	32	38	50
3"IPS-6"IPS (89-168mm.)	25	32	38	50	56
Pipe 8"IPS-12"IPS (219-323mm.)	25	38	38	50	59
	Maximum Ambient Temperature 35°C (95°F), 85%RH, Dew Point 31.7°C				
Pipe up to 1" IPS (35mm.)	25	25	32	38	50
1 1/4"IPS- 2 1/2"IPS (42-76mm.)	25	32	38	50	53
3"IPS-6"IPS (89-168mm.)	25	38	50	56	63
Pipe 8"IPS-12"IPS (219-323mm.)	32	50	50	63	75
	Maximum Ambient Temperature 35°C (95°F), 90%RH, Dew Point 32.2°C				
Pipe up to 1" IPS (35mm.)	25	38	38	56	59
1 1/4"IPS- 2 1/2"IPS (42-76mm.)	32	50	50	63	69
3"IPS-6"IPS (89-168mm.)	38	53	53	75	84
Pipe 8"IPS-12"IPS (219-323mm.)	38	56	59	88	100
	Maximum Ambient Temperature 38°C (100.4°F), 90%RH, Dew Point 35.8°C				
Pipe up to 1" IPS (35mm.)	50	50	59	75	94
1 1/4"IPS- 2 1/2"IPS (42-76mm.)	50	59	69	88	100
3"IPS-6"IPS (89-168mm.)	56	69	84	100	125
Pipe 8"IPS-12"IPS (219-323mm.)	63	84	100	125	138
	Maximum Ambient Temperature 45°C (114°F), 90%RH, Dew Point 43.0°C				
Pipe up to 1" IPS (35mm.)	50	56	63	75	100
1 1/4"IPS- 2 1/2"IPS (42-76mm.)	56	63	69	88	125
3"IPS-6"IPS (89-168mm.)	63	75	84	100	138
Pipe 8"IPS-12"IPS (219-323mm.)	69	84	100	125	150

Remark: Thickness calculating for Chiller water pipe size over than 12" please consult with manufacturer.

MAXFLEX
By MAXLINER

Established in 1988, Vandapac began Its journey in the manufacturing of packaging products.
In 1991, we expanded our product line to Include Automotive accessories, starting with bedliners.
In 2003, we further diversified our business by venturing into thermal insulation.

Maxflex is Vandapac's flagship brand of insulation solutions. The quality is backed by certifications are also committed to Environmental responsibility, implementing TGO Guidance for Carbon Footprint reduction.

Innovation and Sustainability

EUROPEAN STANDARDS

BUREAU VERITAS

FM APPROVED

NFPA

ASTM INTERNATIONAL

Green Industry

RoHS

UL

BSI British Standards

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