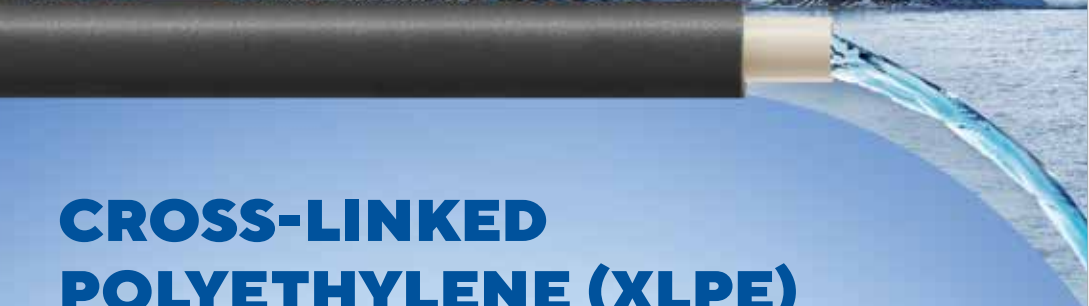


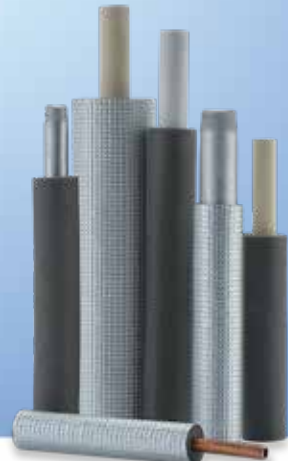


CELEBRATING
25 YEARS
OF TRUST &
INNOVATION

INSUPRO



CROSS-LINKED POLYETHYLENE (XLPE) INSULATION FOR PIPING



INTRODUCTION

Astral InsuPro insulation tubes are specially designed for plastic & metal piping system for applications in building construction and various other industries for plumbing, HVAC, chilling water lines thermal insulation etc.

Astral InsuPro is produced using advanced manufacturing machineries & equipment setup which is capable of manufacturing the product in line with the international norms. Highest quality raw materials, standard manufacturing practices and quality management systems ensure Astral InsuPro to be the best quality end-product.



APPLICATION AREAS

- Pipe Insulation, Limiting Protection from Condensation.

SALIENT FEATURES

- Negligible water/ moisture absorption (>90 % closed cell)
- Wide operating temperature range : -40°C to +115°C
- Excellent thermal insulation
- Resistance to fungi & bacteria
- Chemically unreactive
- Stable K value
- Maintenance free
- Fibre free & dust free
- Flexible & easy to install

CLASS 1 WITH ALUPET FOIL - 2 METRE

Tube ID Ø (cm)	Insulation Thickness						Recommended For Nominal Pipe Size	
	6 mm		9 mm		13 mm			
	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Coper & CPVC (CTS)	CPVC (IPS) / uPVC / MS / GI
1.59	IP-06.16.15.NA	330	IP-09.16.15.NA	200	IP-13.16.15.NA	150	1.5 cm (½")	-
2.23	IP-06.22.20.NA	250	IP-09.22.20.NA	160	IP-13.22.20.NA	115	2.0 cm (¾")	1.5 cm (½")
2.87	IP-06.28.25.NA	190	IP-09.28.25.NA	125	IP-13.28.25.NA	100	2.5 cm (1")	2.0 cm (¾")
3.5	IP-06.35.32.NA	150	IP-09.35.32.NA	100	IP-13.35.32.NA	75	3.2 cm (1¼")	2.5 cm (1")
4.34	IP-06.43.40.NA	100	IP-09.43.40.NA	70	IP-13.43.40.NA	60	4.0 cm (1½")	3.2 cm (1¼")
4.0	IP-06.50.40.NA	90	IP-09.50.40.NA	60	IP-13.50.40.NA	50	-	4.0 cm (1½")
5.41	IP-06.54.50.NA	80	IP-09.54.50.NA	60	IP-13.54.50.NA	40	5.0 cm (2")	-
5.0	IP-06.62.50.NA	70	IP-09.62.50.NA	40	IP-13.62.50.NA	40	-	5.0 cm (2")
6.5	IP-06.75.65.NA	50	IP-09.75.65.NA	36	IP-13.75.65.NA	32	6.5 cm (2½") (IPS)	
8.0	IP-06.91.80.NA	40	IP-09.91.80.NA	22	IP-13.91.80.NA	20	8.0 cm (3") (IPS)	
10.0	IP-06.116.100.NA	35	IP-09.116.100.NA	18	IP-13.116.100.NA	16	10.0 cm (4") (IPS)	

CLASS O WITH ALUPET FOIL - 2 METRE

Tube ID Ø (cm)	Insulation Thickness						Recommended For Nominal Pipe Size	
	6 mm		9 mm		13 mm			
	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Coper & CPVC (CTS)	CPVC (IPS) / uPVC / MS / GI
1.59	IP-06.16.15.OA	330	IP-09.16.15.OA	200	IP-13.16.15.OA	150	1.5 cm (½")	-
2.23	IP-06.22.20.OA	250	IP-09.22.20.OA	160	IP-13.22.20.OA	115	2.0 cm (¾")	1.5 cm (½")
2.87	IP-06.28.25.OA	190	IP-09.28.25.OA	125	IP-13.28.25.OA	100	2.5 cm (1")	2.0 cm (¾")
3.5	IP-06.35.32.OA	150	IP-09.35.32.OA	100	IP-13.35.32.OA	75	3.2 cm (1¼")	2.5 cm (1")
4.34	IP-06.43.40.OA	100	IP-09.43.40.OA	70	IP-13.43.40.OA	60	4.0 cm (1½")	3.2 cm (1¼")
4.0	IP-06.50.40.OA	90	IP-09.50.40.OA	60	IP-13.50.40.OA	50	-	4.0 cm (1½")
5.41	IP-06.54.50.OA	80	IP-09.54.50.OA	60	IP-13.54.50.OA	40	5.0 cm (2")	-
5.0	IP-06.62.50.OA	70	IP-09.62.50.OA	40	IP-13.62.50.OA	40	-	5.0 cm (2")
6.5	IP-06.75.65.OA	50	IP-09.75.65.OA	36	IP-13.75.65.OA	32	6.5 cm (2½") (IPS)	
8.0	IP-06.91.80.OA	40	IP-09.91.80.OA	22	IP-13.91.80.OA	20	8.0 cm (3") (IPS)	
10.0	IP-06.116.100.OA	35	IP-09.116.100.OA	18	IP-13.116.100.OA	16	10.0 cm (4") (IPS)	

Note: Sizes above 4" and with different insulation wall thicknesses are available on request.



AVAILABLE PRODUCT RANGE

CLASS 1 PLAIN - 2 METRE

Tube ID Ø (cm)	Insulation Thickness						Recommended For Nominal Pipe Size	
	6 mm		9 mm		13 mm			
	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Coper & CPVC (CTS)	CPVC (IPS) / uPVC / MS / GI
1.59	IP-06.16.15N	330	IP-09.16.15N	200	IP-13.16.15N	150	1.5 cm (½")	-
2.23	IP-06.22.20N	250	IP-09.22.20N	160	IP-13.22.20N	115	2.0 cm (¾")	1.5 cm (½")
2.87	IP-06.28.25N	190	IP-09.28.25N	125	IP-13.28.25N	100	2.5 cm (1")	2.0 cm (¾")
3.5	IP-06.35.32N	150	IP-09.35.32N	100	IP-13.35.32N	75	3.2 cm (1¼")	2.5 cm (1")
4.34	IP-06.43.40N	100	IP-09.43.40N	70	IP-13.43.40N	60	4.0 cm (1½")	3.2 cm (1¼")
4.0	IP-06.50.40N	90	IP-09.50.40N	60	IP-13.50.40N	50	-	4.0 cm (1½")
5.41	IP-06.54.50N	80	IP-09.54.50N	60	IP-13.54.50N	40	5.0 cm (2")	-
5.0	IP-06.62.50N	70	IP-09.62.50N	40	IP-13.62.50N	40	-	5.0 cm (2")
6.5	IP-06.75.65N	50	IP-09.75.65N	36	IP-13.75.65N	32	6.5 cm (2½") (IPS)	
8.0	IP-06.91.80N	40	IP-09.91.80N	22	IP-13.91.80N	20	8.0 cm (3") (IPS)	
10.0	IP-06.116.100N	35	IP-09.116.100N	18	IP-13.116.100N	16	10.0 cm (4") (IPS)	

CLASS 0 PLAIN - 2 METRE

Tube ID Ø (cm)	Insulation Thickness						Recommended For Nominal Pipe Size	
	6 mm		9 mm		13 mm			
	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Product Code	Std. Pkg.	Coper & CPVC (CTS)	CPVC (IPS) / uPVC / MS / GI
1.59	IP-06.16.15.OP	330	IP-09.16.15.OP	200	IP-13.16.15.OP	150	1.5 cm (½")	-
2.23	IP-06.22.20.OP	250	IP-09.22.20.OP	160	IP-13.22.20.OP	115	2.0 cm (¾")	1.5 cm (½")
2.87	IP-06.28.25.OP	190	IP-09.28.25.OP	125	IP-13.28.25.OP	100	2.5 cm (1")	2.0 cm (¾")
3.5	IP-06.35.32.OP	150	IP-09.35.32.OP	100	IP-13.35.32.OP	75	3.2 cm (1¼")	2.5 cm (1")
4.34	IP-06.43.40.OP	100	IP-09.43.40.OP	70	IP-13.43.40.OP	60	4.0 cm (1½")	3.2 cm (1¼")
4.0	IP-06.50.40.OP	90	IP-09.50.40.OP	60	IP-13.50.40.OP	50	-	4.0 cm (1½")
5.41	IP-06.54.50.OP	80	IP-09.54.50.OP	60	IP-13.54.50.OP	40	5.0 cm (2")	-
5.0	IP-06.62.50.OP	70	IP-09.62.50.OP	40	IP-13.62.50.OP	40	-	5.0 cm (2")
6.5	IP-06.75.65.OP	50	IP-09.75.65.OP	36	IP-13.75.65.OP	32	6.5 cm (2½") (IPS)	
8.0	IP-06.91.80.OP	40	IP-09.91.80.OP	22	IP-13.91.80.OP	20	8.0 cm (3") (IPS)	
10.0	IP-06.116.100.OP	35	IP-09.116.100.OP	18	IP-13.116.100.OP	16	10.0 cm (4") (IPS)	

Note: Sizes above 4" and with different insulation wall thicknesses are available on request.



TECHNICAL INFORMATION

PARAMETER	ASTRAL XLPE SPECIFICATION		
Material (ASTM C1427)	Chemically Cross Linked Closed Cell Polyethylene Foam Insulation		
Temperature Range	(-)40° C to +115°C		
Nominal Density	30 ± 3Kg/m ³		
Thermal Conductivity	Mean Temperature (°C)	W/m °K	Kcal/hr m (°C)
	0	0.0318	0.0273
	23	0.0329	0.0283
	26	0,0382	0.0328
Water Vapour Resistance Factor (μ) (MEW) - (DIN - 52615)	Moisture Resistance Factor (μ) >9000 (for plain foam) >14000 (for AL foil faced foam)		
Fire Characteristics (BS 476 Part 7 and 6) (For class 0)	a) Surface Spread of Flame : Class 1 As per BS 4 76 Part 7 b) Fire Propagation : Class 'O' As per BS 4 76 Part 6		
Reaction to Fire (For class 0)	Self Extinguishing, Non-toxic Ozone: Very Good		
Dimensional Stability: BS 4370 Part 1	Change in dimension at -20° C for 4 hrs: <0.5% and at 110°C for 4 hrs: <0.5%		
Limiting Oxygen Index: ASTM D2863	24%		
Compression Stregth @ 25%: ASTM D3575	0.44 Kg/cm ²		
Resistance to Chemical: ASTM C543	No characteristic change observed		
Tensile Stregth @ 50 mm/min: ASTM D3575	2.51 Kg/cm ²		
Elongation at Break: ASTM D3575	133.2%		
Fungal Resistance: ASTM G21	No growth observed		
Volume %-age of closed cell: ASTM D6226 Part 2	>90%		
Sound Transmission Class for 9 mm foam with 12 mmGypsum board: ASTM E413 / ISO 140	40 dB		
Water Absorption: ASTM C209 / ASTM C1763	<0.2%		
Water Vapour Permeance: ASTM E96	0.15 ng/pas.m		
Health & Safety Aspects	CFC / HCFC Free: Dust and Fibre Free, VOC / SVOC Free		
Emission of Volatile Organic Compound (VOC)	Negligible		
Applications	HVAC, Textile & Building Industry, Chiller lines.		

COMPARISON OF INSUPRO XLPE & NITRILE RUBBER

INSUPRO XLPE

- Thermal conductivity 0.032 W/m degree K
- Permeability resistance >14000
- Zero water absorption < 0.2
- Sturdy and easy to apply
- Inert material antimicrobial by default
- Green building rating system – low VOC emitting CFC /HCFC free
- Low fire propagation index of 5.06
- E-84 –Flame spread index / smoke develop index >15/5 (lower is better)
- Euroclass SBI corner index –no dripping & no toxic fumes
- large pipe sections up to 1200 mm dia.

NITRILE RUBBER

- Thermal conductivity 0.036 W/m degree K
- Permeability resistance >7000 (poor UV resist.)
- Water absorption 5-20% by weight
- Soft material, external treatment must
- Special antimicrobial treatment needed
- GBC system-considerable amount of emission
- Fire propagation index of 7 & above (avgmtl)
- E-84 –Flame spread index / smoke develop index >25/50 (lower is better)
- Euroclass SBI corner index –no dripping but emits toxic fumes
- Pipe sections up to 80 mm dia.



*A consumer validated
Superbrand in piping
category for
consecutive 4 years*



*India's Most Trusted
Pipe Brand based on
TRA's Brand Trust
Report for the 5th time*

Power of Desire



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Report 2022*



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10 AM to 6 PM between Monday to Friday
and the last Saturday of the month.
We will remain closed on Public Holidays.



Astral Limited

CIN: L25200GJ1996PLC029134

Registered & Corporate Office:

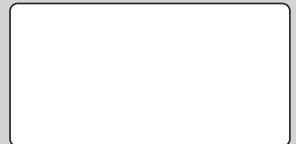
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