SUPERLON®

Quality NBR Insulation

MADE IN MALAYSIA

SUPERLON® CLASS 1

NEW AND IMPROVED

Control condensation and reduce energy costs

- *Low thermal conductivity*
- *Low water vapour permeability*
- *Easy to install and fabricate*

CFC Free, Dust and Fibre Free

SUPERLON® CLASS 1 product description

Superlon Class 1 insulation is a flexible elastomeric nitrile foamed rubber engineered and designed specifically to control condensation and effectively prevents energy loss. Its main uses are for insulating pipeworks for air conditioning ductings, chilled water lines and refrigerated pipes. Superlon Class 1 can also be used for hot water and heating systems to prevent heat loss.

With more than 20 years of experience in manufacturing nitrile foam rubber, Superlon delivers utmost quality along with prompt reliable services.

Management Systems

Our on-going quality assessments for ISO 9001 quality management systems and ISO 14001 environmental management systems ensure that we meet customer requirements.

Eco Friendly

Superlon's insulation's manufacturing process are produced without CFCs and HCFCs. Furthermore it does not contribute to global warming and has no ozone depleting potential.

CFC FREE

DUST & FIBRE FREE

LOW VOCs

No mould growth

The inherent closed cell structure and high water vapour permeability inhibits mould growth. With no vapour barrier jacketing needed, Superlon's smooth skin does not trap dust.

Health Friendly

Superlon is formaldehyde free and also low VOC ensuring that our products are not hazardous to health and safe for buildings.

Superlon also does not contain and dusts and fibres even when cutting into shapes and fittings. This safe guards any symptoms regarding indoor air quality.

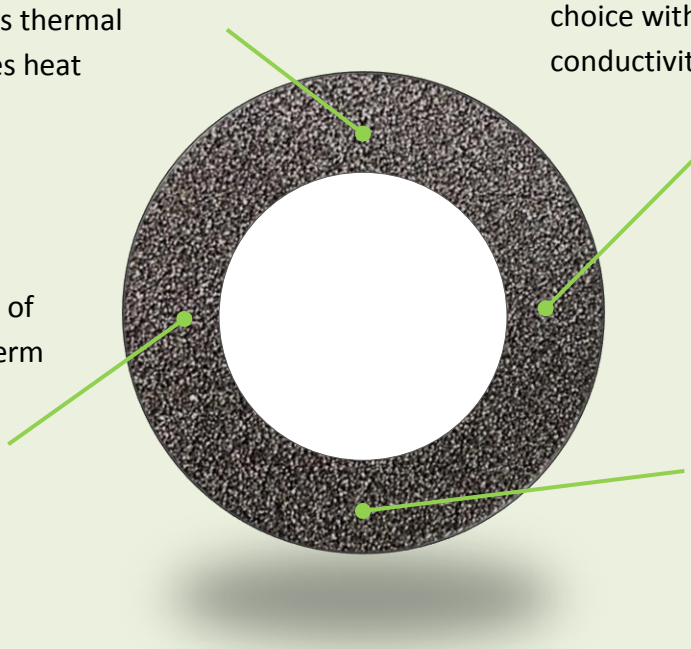
Superlon Insulation Characteristics

Closed Cell Structure

Closed cell structure along with a lower density prevents thermal bridging and minimises heat gains/losses.

Low Thermal Conductivity

Superlon is the best energy saving choice with a low thermal conductivity of $\lambda_{20^\circ C} \leq 0.036$ W/m-K.



Low Water Absorption

Low water absorption of ≤ 0.2% ensures long term thermal conductivity stability so that it can continue to conserve energy and prevent surface condensation.

Low Water Vapour Permeability

Unlike other products in the market, Superlon does not need a vapour barrier such as a silver jacketing as the product itself has very low water permeability and a moisture resistance factor of $\mu \geq 7{,}000$.

Technical Data

	Values				Test Methods
Material	Nitrile Foamed Rubber				
Cell Structure	Closed Cell				
Density	40kg/m³ -70kg/m³				
Service Temperature	-50°C to 105°C (85°C for flat surfaces)				
Surface Spread of Flames	Class 1				BS 476 Part 7
Reaction to Fire	Self-Extinguishing, Does not Drip				
Thermal Conductivity	Mean Temp	0°C	20°C	40°C	ASTM C518
	W/m·K	≤ 0.034	≤ 0.036	≤ 0.038	
	Btu ▪ in/hr ▪ ft²	≤ 0.24	≤ 0.25	≤ 0.27	
Water Vapour Permeability	≤ 2.9 x 10^{-14} kg/Pa.m.s				ASTM E96
	μ ≥ 7000				
Water Absorption by Volume	≤ 0.2%				ASTM C209
Ozone Resistance	Good				
Corrosion and Mould Resistance	No Corrosion				
Health and Environment	Dust & Fibre Free and CFC Free, Zero ODP & GWP				

Insulation Pipe (pieces per Carton)

Internal Diameter		Insulation Wall Thickness							
		1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Inches	mm	6	10	13	19	25	32	38	50
1/4"	6	250	156	110	49	30			
3/8"	10	200	120	90	42	30			
1/2"	13	150	100	72	36	24	12	9	6
5/8"	16	120	90	63	36	20	12	9	6
3/4"	19	100	72	56	30	20	12	9	6
7/8"	22	90	64	48	25	18	9	9	6
1"	25	80	56	42	20	16	9	9	6
1 1/8"	28	72	49	36	20	16	9	9	6
1 1/4"	32	56	42	30	20	15	9	9	4
1 3/8"	35	48	36	30	16	12	9	9	4
1 1/2"	38	42	34	25	16	12	9	8	4
1 5/8"	42		30	25	16	12	9	8	4
1 7/8"	47		28	20	15	10	8	6	4
2"	51		24	20	12	9	8	6	4
2 1/8"	54		21	20	12	9	8	6	4
2 1/4"	57		21	20	12	9	6	6	4
2 3/8"	60		20	18	12	9	6	6	3
2 1/2"	64		18	15	9	8	6	6	3
2 5/8"	67		18	15	9	8	6	6	3
2 7/8"	73		18	13	9	8	4	4	3
3"	76		18	12	8	8	4	4	3
3 1/8"	80		16	12	8	6	4	4	
3 1/2"	89		16	12	8	6	4	4	
4"	102		14	12	6	6			
4 1/8"	105		14	12	6	5			
4 1/4"	108		14	12	6	5			
4 1/2"	114		14	12	6	4			
5"	127		10	9	6	4			
5 1/8"	130		10	9	6	3			
5 1/4"	133		10	9	6	3			
5 1/2"	140		10	8	6	3			

Continuous Rolls

Thickness		Size	
Inches	mm	Feet	Metres
1/8"	3	4' x 30'	1.22 x 9.14
1/4"	6	4' x 30'	1.22 x 9.14
3/8"	10	4' x 30'	1.22 x 9.14
1/2"	13	4' x 30'	1.22 x 9.14
5/8"	16	4' x 30'	1.22 x 9.14
3/4"	19	4' x 30'	1.22 x 9.14
1"	25	4' x 30'	1.22 x 9.14
1 1/4"	32	3.29' x 30'	1 x 9.14
1 1/2"	38	3.29' x 30'	1 x 9.14
2"	50	3.29' x 6.57'	1 x 2

Insulation Pre-cut Sheets

Thickness		Size		Pcs
Inches	mm	Feet	Metres	Carton
1/8"	3	4' x 3'	1.22 x 0.914	80
1/4"	6	4' x 3'	1.22 x 0.914	40
3/8"	10	4' x 3'	1.22 x 0.914	26
1/2"	13	4' x 3'	1.22 x 0.914	20
5/8"	16	4' x 3'	1.22 x 0.914	16
3/4"	19	4' x 3'	1.22 x 0.914	14
1"	25	4' x 3'	1.22 x 0.914	10
1 1/4"	32	4' x 3'	1.22 x 0.914	8
1 1/2"	38	4' x 3'	1.22 x 0.914	7

- Can be customised to single or double skin
- Adhesive and aluminium jacketing available in the same sizes as above
- Sizes can be customised, contact Superlon sales for more information

installation tips

SUPERLON® CLASS 1

Tips

- Superlon glue must be applied to both ends of the joining area and allowed to dry before joining the insulation material together.
- Be gentle to avoid deformation of cells as this could affect the performance of the insulation
- It is always good to seal joining areas with foam tape to avoid temperature loss through contact with air.
- Only use one insulation tube per pipe. Multiple pipes in one tube allow excess air around the pipe and higher chance of losing temperature.

For more tips, installing methods and to determine correct thickness, please contact your Superlon advisor.

Good Installation

Apply Superlon glue to butt joints of tubes and wait for the glue to set

Press the butt joints firmly together ensuring that it is properly sealed

Wrap foam tape around the glued joints but be sure not to stretch the tape

Completed look

Bad Installation

Two copper pipes in one tube and wrapping PVC tape along the joints is a major cause in condensation issues.

Recommended Thickness (mm) Guide for Condensation Control

Ambient Temperature	26˚C				30˚C				35˚C			
Relative Humidity	**75%**	**80%**	**85%**	**90%**	**75%**	**80%**	**85%**	**90%**	**75%**	**80%**	**85%**	**90%**
Cool water +18˚C												
Pipe Up to 38mm OD	6	10	10	19	10	10	13	25	10	13	19	32
Pipe 42 - 89mm OD	6	10	10	19	10	13	19	25	10	19	25	38
Pipe above 102mm OD	10	10	13	25	10	13	19	32	13	19	25	38
Chilled Water +5˚C												
Pipe Up to 38mm OD	13	19	25	38	19	19	32	51	19	25	32	51
Pipe 42 - 89mm OD	19	19	32	51	19	25	32	51	19	25	38	64
Pipe above 102mm OD	19	25	32	51	19	25	32	51	25	32	38	64
Refrigeration 0˚C												
Pipe Up to 38mm OD	19	25	32	51	19	25	32	51	25	25	38	64
Pipe 42 - 89mm OD	19	25	32	51	25	32	38	64	25	32	38	64
Pipe above 102mm OD	25	25	38	64	25	32	38	64	25	32	50	76
Refrigeration -15˚C												
Pipe Up to 38mm OD	25	32	51	64	25	32	51	76	32	38	51	76
Pipe 42 - 89mm OD	32	38	51	76	32	38	51	89	32	51	64	89
Pipe above 102mm OD	32	38	51	89	32	51	64	89	38	51	64	102

At Superlon condensation prevention is our utmost priority. As a safety to prevent condensation, calculated figures are based on dew point temperature adding +0.5˚C with an external surface coefficient of 9 W/M2-K. Thicknesses should be recalculated if there is use of jacketing such as aluminium as the external coefficient will be changed.

Note: Recommended thicknesses are to be used as a guide. Results are obtained under typical conditions. Superlon does not guarantee it will be prevent condensation. Other factors such as proper installation is crucial in condensation prevention. Please consult with our technical staff for more precise calculations.

ISO 9001
Cert. No. 402887
ISO 14001
Cert. No. KLR0197083

SUPERLON®
Made in Malaysia by:
Superlon Worldwide Sdn. Bhd.
Lot 2736 Jalan Raja Nong 41200 Klang, Selangor Darul Ehsan, Malaysia
Web: www.superlon.com.my | Email: inquiry@superlon.com.my
Tel: +603 5161-7778 | Fax: +603 5162-7778

Distributor: