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Class O Armaflex

Product Description

Class O Armaflex is a flexible, closed cell, CFC-free (ozone depletion potential of zero), elastomeric nitrile rubber pipe insulation. It is grey in colour and is manufactured in pre-formed pipe sections and sheets.

As part of the Armstrong product development programme, Class O Armaflex has an improved (lower) thermal conductivity and superior resistance to water vapour transmission. These properties make Class O Armaflex particularly suitable for condensation control on chilled water and refrigeration systems.

When evaluated using standard fire tests the material achieves a Class O rating as defined by the Building Regulations Approved Document B Appendix A12. These tests indicate that in the critical early stages of a sustained fire the use of Class O Armaflex will make only a minimal contribution to the overall heat release and spread of flame.

Being flexible the material is easy to install, it is not fibrous and creates no dust during installation or use.

The manufacturing process conforms to the quality standards required by BS EN ISO 9002: 1994.

Field of Application

Class O Armaflex is particularly suitable for buildings with high occupancy levels where a very high standard of fire performance is required, e.g. hospitals, schools, hotels, supermarkets.

Class O Armaflex may be used for pipes, valves, ducts or vessels since it is flexible and easily fabricated. It is particularly suitable for the thermal insulation of complex shapes.

Class O Armaflex is used for condensation control, energy conservation and frost protection, in the temperature range -40 °C to +105 °C

When used to insulate flat surfaces where the Class O Armaflex insulation is adhered directly on to the surface, the operating temperature should not exceed 85 °C.

The material can be supplied in a limited range of sizes in coil form in lengths up to 50 metres for special applications. Sheet with a self adhesive backing is also available.

When Class O Armaflex is used outdoors or exposed to UV radiation and ozone attack it should be protected using Armafinish FR paint. Where Armafinish FR paint is used the overall fire rating of Class O is maintained. For internal use Class O Armaflex does not require any additional protection.

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Technical Data

Temperature Range	Minimum line temperature	-40 °C *
	Maximum line temperature	+105 °C
	Flat surfaces and tape	+85 °C
Thermal Conductivity BS 874 Part 2 1986	Mean temperature	0 +20 +40 °C
	Thermal conductivity	0.035 0.037 0.039 W/(m.K)
Water Vapour Permeability BS 4370 Part 2 1973	Moisture resistance factor	$\mu > 5,000$
	(BS EN ISO 9346:1996)	$3.6 \times 10^{-14} \text{ kg / (m.s.Pa)}$
		0.13 $\mu\text{gm / Nh}$
Water Absorption	By volume after 28 days total	0.9 % average
	immersion	1.5 % maximum
Fire Performance BS 476 Part 7 :1987	Surface spread of flame	Class 1
Fire Propagation BS 476 Part 6 :1989	Total index of performance I	Less than 12
	Sub index i_1	Less than 6
Behaviour in fire	Physical performance	Does not generate flaming droplets
	Wall penetrations (12.7 – 38 mm diameter pipe with 19 mm thick Armaflex through 250 mm wall)	Up to 180 minutes.
	Standardised fire test similar to BS 476 part 20	
Noise reduction		See Section C1 pages 11 – 14
Resistance	Building materials	Very good
	Chemicals	Consult product test list see section C1 page 17 – 18
Dimensions	Standard tube	2 m lengths
	Flat sheet	2 x 0.5 m
	Continuous sheet	1 m wide
Outdoor applications	Class O Armaflex should be protected with Armafinish FR paint to the recommended thickness. Two or more coats will be required.	

* If lower temperatures are involved please consult our Customer Services Department
Tel 0161 287 7100 Fax 0161 633 2685.