



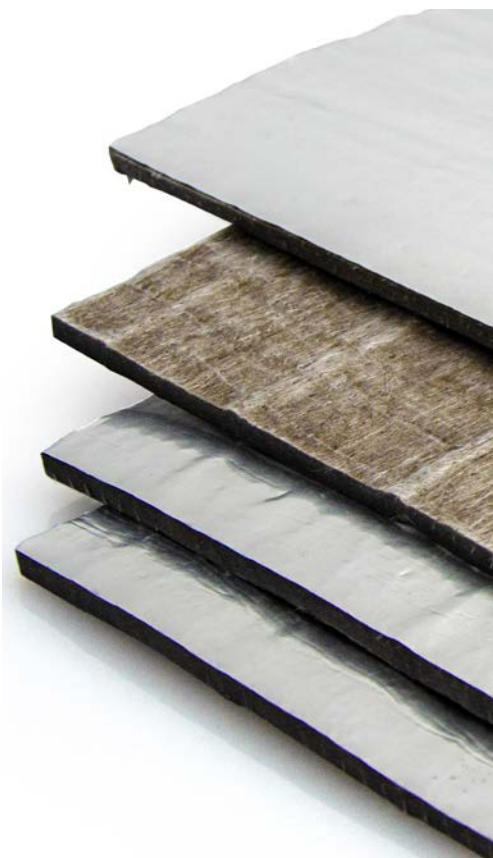
INSULATION
JUST GOT EVEN COOLER

ArmaGel® XGC

Flexible aerogel insulation blanket for
cryogenic and dual-temperature applications

- // ASTM C1728 Compliant
- // 5 and 10 mm thicknesses
- // Integrated zero-perm vapour barrier
- // Flexible at cryogenic temperatures

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TECHNICAL DATA – ARMAGEL XGC

Brief description	ArmaGel XGC is a flexible aerogel insulation blanket suitable for cryogenic and dual-temperature insulation applications. ArmaGel XGC is compliant with ASTM C1728 Type I, Grade 1B & Type IV, Grade 1A.		
Material type	Aerogel insulation blanket with integrated zero-perm vapour barrier		
Colour	Grey		
Special features	ArmaGel XGC is intended for use in cryogenic and cyclic operating conditions. The product is suitable for use in multi-layer applications with other insulation products including ArmaSound® Industrial Systems.		
Product range	Sheets in rolls, 5, 10 mm (0.2, 0.4 in.) thickness and width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.		
Applications	Cold and cryogenic insulation/protection of pipes, vessels, equipment and fittings in offshore, industrial (typically oil and gas) and process facilities.		
Installation	For industrial applications, it is recommended to consult the relevant Armacell application manual(s). Please consult our Technical Services for further information and support.		

Property	Value/Assessment										Standard/Test method
Temperature range ¹											
Service temperature	Max. service temperature		+250 °C		+482 °F		Tested according to ASTM C411				
	Min. service temperature ¹		-180 °C		-292 °F						
Thermal conductivity											
Thermal conductivity ² (metric units)	Θn	-129	-73.3	-17.8	+23.9	+37.8	+93.3	+149	+204	[°C]	Tested according to ASTM C177
	Θl ≤	0.014	0.015	0.016	0.017	0.017	0.019	0.025	0.029	[W/(m·K)]	
Thermal conductivity ² (imperial units)	Θn	-200	-100	0	+75	+100	+200	+300	+400	[°F]	
	Θl ≤	0.096	0.10	0.11	0.12	0.12	0.13	0.17	0.20	[Btu-in/(h·ft²·°F)]	
Temperature resistance											
Linear shrinkage under soaking heat	< 2% in width and length										Tested according to ASTM C356
Water absorption	Pass										Tested according to ASTM C1763
Fire performance & approvals											
Surface burning characteristics	≤ 25 flame spread index ≤ 50 smoke development										Tested according to ASTM E84
Density											
Nominal density	170 kg/m³ (10.6 lb/ft³)										Tested according to ASTM C303
Mechanical properties											
Compressive strength ³	≥ 5 psi/ 34.5 kPa		at 10% compression								Tested according to ASTM C165
Classifying the flexibility of mineral fibre blankets	Flexible										Tested according to ASTM C1101
Corrosion mitigation											
Stress corrosion cracking	Pass, no cracks										Tested according to ASTM C692, ASTM C795
Corrosiveness of steel	Pass										Tested according to ASTM C1617, procedure A
Water vapour transmission of integrated vapour barrier	0.00 perm										Tested according to ASTM E96



Other technical features

Weather resistance	In all industrial applications the outer layer of the material must be protected with an adequate covering like metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. Please contact Technical Services for guidance on the temperature limitations and specific construction considerations which need to be made for each jacketing system.	
Health aspects	Neutral	
Hydrophobic	Yes	
Water vapour sorption	≤ 5% by weight	Tested according to ASTM C1104
Fungal resistance	No growth	Tested according to ASTM C1338
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	
Shelf (storage) life ⁴	Max. 3 years	

- ArmaGel XGC is compliant with ASTM C1728 Type I Grade 1B and Type IV Grade 1A with minumum use temperature of -196°C. For operating temperatures below -180 °C, special attention must be given to the system design and craftsmanship during installation to ensure that the material does not come in contact with liquid oxygen. For further information and support, please contact Technical Services.
- Thermal conductivity measured under a load of 1.5 kPa (0.22 psi).
- Test performed with a preload of 13.8 kPa (2 psi).
- Shelf life (maximum storage time) is limited in order to make sure that only currently manufactured products are applied on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.



Sheets

		Metric sizes				Imperial sizes			
		Nominal thickness	Width	Length	Content per roll	Nominal thickness	Width	Length	Content per roll
		[mm]	[m]	[m]	[sqm]	[in]	[in]	[ft]	[sq ft]
Jumbo Rolls	AXC-05-00/150P	5	1.5	54	81	0.2	59	177.2	871.9
	AXC-10-00/150P	10	1.5	30	45	0.4	59	98.4	484.4
Tolerances	Thickness tolerances	5 mm (0.2 in) nominal thickness					± 1 mm		
		10 mm (0.4 in) nominal thickness					± 2.5 mm		
	Width tolerances	± 3%							
	Length tolerances	± 5%							

All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Armacell does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Armacell also does not assume any liability towards any person resulting from the use of said data or technical information. Armacell reserves the right to revoke, modify or amend this document at any moment. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. This document does not constitute nor is part of a legal offer to sell or to contract.

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ABOUT ARMACELL

As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With more than 3,300 employees and 27 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.

For more information, please visit:
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