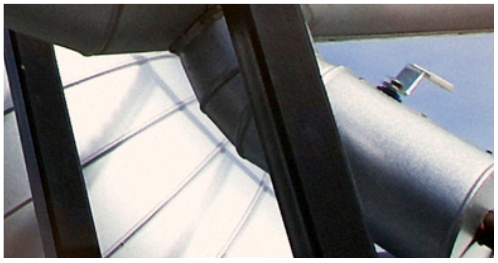
INSULATION JUST GOT EVEN BETTER

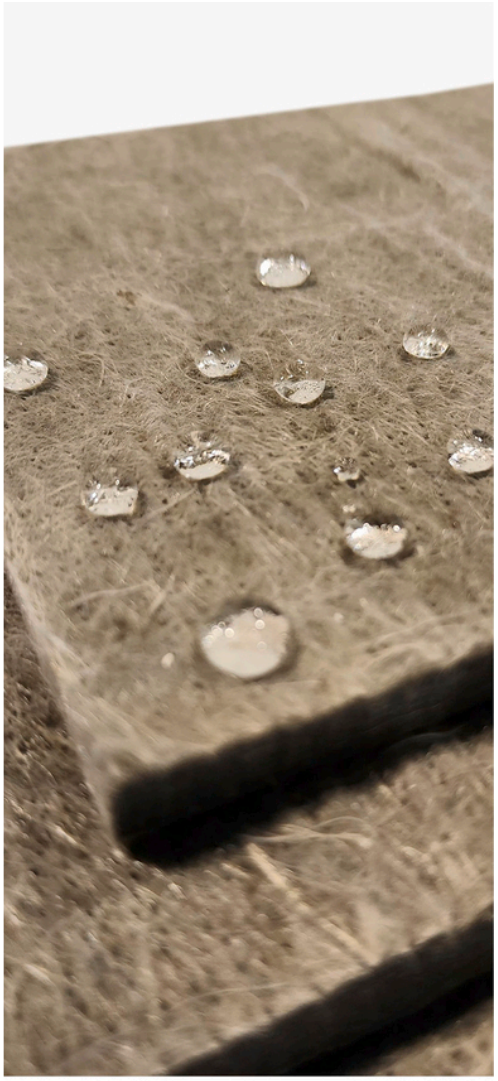
ArmaGel XGH

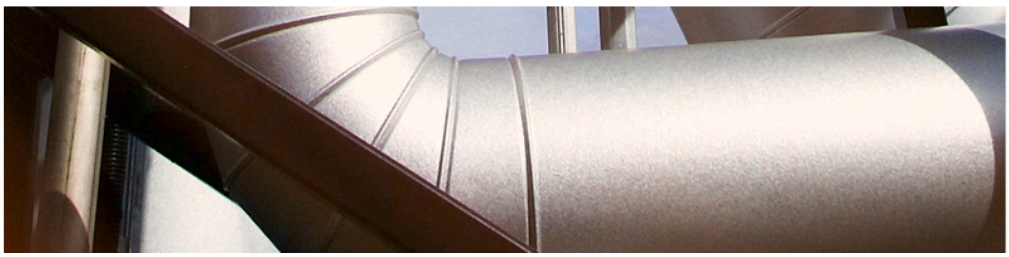
Next generation, flexible, aerogel blanket for high-temperature applications

// ASTM C1728 compliant
// IOGP S-738 (JIP33) compliant
// Hot conditions up to 650°C (1200°F)
// Up to five times better thermal performance than traditional insulation materials
// Mitigates the risk of corrosion under insulation (CUI)

www.armacell.com







armacell®
ArmaGel®

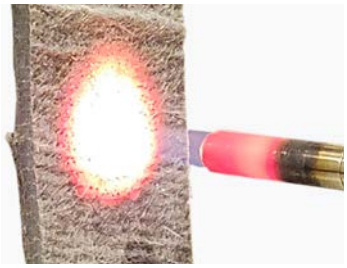
INSULATION JUST GOT EVEN BETTER.

ArmaGel XGH

The next generation of aerogel blanket technology. Superior thermal performance with excellent CUI protection and non-combustibility. ASTM C1728 compliant. Designed for safety and conditions up to 650°C (1200°F). ArmaGel XGH is the reliable solution for high-temperature applications.

Proprietary dust control

High-temperature / Non-combustible



Flexible

Hydrophobic

Learn more about our ArmaGel portfolio

ArmaGel XGH	//	Next generation aerogel blanket for high-temperature applications
ArmaGel HT	//	Flexible aerogel blanket for high-temperature applications
ArmaGel HTL	//	Non-combustible aerogel insulation
ArmaGel HTF	//	Fire protection aerogel insulation
ArmaGel DT	//	Cryogenic and dual-temperature aerogel insulation
ArmaGel Rail	//	Double-side laminated flexible aerogel insulation blanket

UP TO

80%

THINNER

than traditional insulation products

UP TO

5 ×

SUPERIOR THERMAL PERFORMANCE

than traditional insulation products

YOUR BENEFITS

// Superior thermal performance
Offering up to 5 times superior thermal performance versus traditional insulation products.

// Save space & weight
Up to 80% saving in insulation thickness and reduce insulation system weight.

// CUI defence
Hydrophobicity and breathability enhances protection against corrosion under insulation (CUI).

// Reduce downtime and save money
Product installation and removal is made simple, reducing the downtime. Reusable due to durable format to save money during regular maintenance cycles.

// Versatile format
Can be cut and fit into any pipe and equipment.

// Reduce labour cost
Cuts easily and conforms to preferred shapes, with less wastage, making it the right fit for installers.

// Optimised inventory management
Sheet in roll form reduces inventory management and logistic costs relative to rigid/preformed insulation. Available in 5, 10 and 20 mm thicknesses.

// Dust control
Proprietary dust control technology ensures a cleaner, more efficient work environment.

// Non-combustible
Enhance asset safety with ArmaGel XGH.

TECHNICAL DATA - ARMAGEL XGH

Brief description	ArmaGel XGH is a flexible aerogel blanket suitable for elevated temperature applications with maximum operating temperatures up to 650°C (1200°F). ArmaGel XGH is compliant to ASTM C1728, Type III, Grade 1A. ArmaGel XGH is also compliant to IOGP S-738 (JIP33).
Material type	Aerogel blanket.
Product colour range	Grey
Special features	ArmaGel XGH is resistant to elevated operating temperatures up to 650°C (1200°F).
Product range	Sheets in rolls, 5 mm (0.2 in), 10 mm (0.4 in) and 20 mm (0.8 in) thickness, width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.
Applications	Thermal insulation/protection of pipes, vessels and ducts (including elbows, fittings, flanges etc.) in offshore, industrial (typically oil and gas) and process equipment facilities.
Installation	For industrial applications it is recommended to consult the relevant Armacell application manual(s). For further information please contact our Technical Services.

Property	Value / Assessment									Standard / Test method
Temperature range										
Service temperature[1,2,3,4,5]	Max. °C					Max. °F				ASTM C411, ASTM C447
	650					1.200				
Thermal conductivity										
Declared thermal conductivity[6]	θm	24°C (75°F)	38°C (100°F)	93°C (200°F)	149°C (300°F)	204°C (400°F)	260°C (500°F)	316°C (600°F)	371°C (700°F)	ASTM C177
	λd ≤ [W/(m·K)]	0,021	0,022	0,023	0,025	0,029	0,032	0,036	0,043	
	k ≤ [Btu·in/(h·ft²·°F)]	0,14	0,15	0,16	0,18	0,20	0,22	0,25	0,30	
Temperature resistance										
Hot surface performance[2]	Pass									ASTM C411
Linear shrinkage under soaking heat	<2% in width and length									ASTM C356
Fire Performance and Approvals										
Reaction to fire[2]	A2-s1,d0, Non-combustible									EN 13501-1
Surface burning characteristics	≤ 5 flame spread index ≤ 10 smoke development									ASTM E84
Resistance to water vapour										
Water vapour sorption	≤ 5% by weight									ASTM C1104
Resistance to water										
Hydrophobic	Yes									
Water absorption	Pass									ASTM C1763
Corrosion mitigation										
Corrosiveness to steel	Pass									ASTM C1617, Procedure A
Stress corrosion cracking	Pass, no cracks									ASTM C692, ASTM C795
Physical attributes										
Nominal density	180 kg/m³ (11 lb/ft³)									ASTM C303
Mechanical properties										
Compressive strength[7]	≥ 3 psi/ 20.7 kPa at 10% compression									ASTM C165

Property	Value / Assessment	Standard / Test method
Flexibility of insulation blankets	Flexible	ASTM C1101
Weather and UV resistance		
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 construction considerations which need to be made for each jacketing system.	
Health and environment		
Fungal growth	No growth	ASTM C1338
Health aspects	Neutral	
Other technical features		
Shelf life	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	
Storage[8]	Max. 3 years	

[1] For use in temperatures beyond the published value, please contact Technical Services.

[2] For operating temperatures above 400°C (752°F) a metallic foil barrier with 0.05 mm (0.002 inch) thickness must be additionally installed. For details please contact Technical Services.

[3] For live line installations, refer to the ArmaGel high temperature application manual.

[4] For design/installation above 80 mm thickness, contact Armacell technical services.

[5] ArmaGel XGH is designed for application where the operating temperatures are above ambient. In the event that the operating temperatures are below ambient please consult our technical services for further information and support.

[6] Measured under a load of 1.5 kPa (0.22 psi).

[7] Test performed with a preload of 13.8 kPa (2 psi).

[8] Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed 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.

Roll - jumbo

Item	Thickness [mm]	Thickness [Inch]	Width (m)	Width [inch]	Length [m]	Length [ft]	Content [metric]	Content [imperial]
AXH-05-00/150P	5	0,2	1,5	59	54	177,2	81 m²	871.9 ft²
AXH-10-00/150P	10	0,4	1,5	59	30	98,4	45 m²	484.4 ft²
AXH-20-00/150P	20	0,8	1,5	59	15	49,2	22.5 m²	242.2 ft²

Other information	
Thickness tolerance	5 mm (0.2 in) thickness: ± 1 mm 10 mm (0.4 in) thickness: ± 2.5 mm 20 mm (0.8 in) thickness: ± 5 mm
Length tolerance	± 5%
Width tolerance	± 3%

Roll - standard

Item	Thickness [mm]	Thickness [Inch]	Width (m)	Width [inch]	Length [m]	Length [ft]	Content [metric]	Content [imperial]
AXH-05-00/150S	5	0,2	1,5	59	18	59,1	27 m²	290.6 ft²
AXH-10-00/150S	10	0,4	1,5	59	10	32,8	15 m²	161.5 ft²
AXH-20-00/150S	20	0,8	1,5	59	5	16,4	7.5 m²	80.7 ft²

Other information	
Thickness tolerance	5 mm (0.2 in) nominal thickness: ± 1 mm 10 mm (0.4 in) nominal thickness: ± 2.5 mm 20 mm (0.8 in) thickness: ± 5 mm
Length tolerance	± 5%
Width tolerance	± 3%

ArmaGel | ArmaGel XGH | Brochure | 032025 | en-GB

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 25 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.

armacell®
ArmaGel®

For more information, please visit:
www.armacell.com