

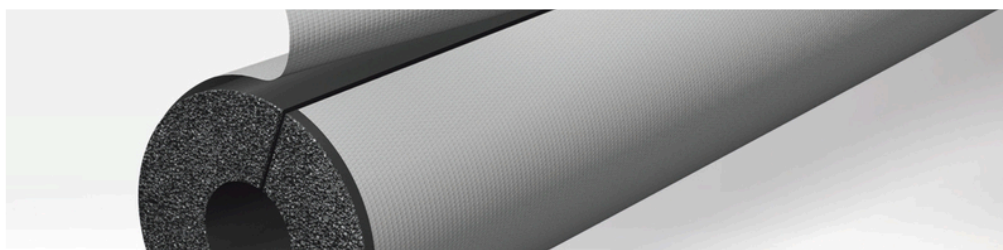


INSTALL IT. SAFEGUARD YOUR
EQUIPMENT.

Arma-Chek R

Flexible non-metallic covering for
industrial insulation

- // Flexible polymeric covering formulated with CSM (CSPE) with combined acoustic barrier performance, ISO 15665 compliant
- // Excellent mechanical and weathering protection
- // Specially developed for use in offshore and industrial environments
- // Reduces the risk of corrosion under insulation (CUI)
- // Resistant to UV, salt water and chemicals
- // In-built water vapour barrier $\mu > 50.000$
- // Works in harmony with ArmaFlex , expanding and contracting as required
- // IMO certified



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TECHNICAL DATA - ARMA-CHEK R

Brief description	Flexible covering system for elastomeric and other insulation material types. Especially developed for use in offshore and industrial environments.
Product colour range	Grey
Special features	Exceptional resistance to UV attack, salt water and mechanical impact. Reduces the risk of Corrosion Under Insulation (CUI). Excellent acoustic performance with natural dampening properties to reduce re-radiation effects.
Product range	Sheets in rolls, 1 and 2 mm thickness / width 700 and 1,400mm. Arma-Chek Mastic is available for sealing of joints and seams.
Applications	Mechanical and weathering protection of insulated pipework, fittings, vessels and equipment in offshore, heavy industry, chemical and petrochemical environments.
Installation	The ArmaFlex and ArmaClad Arma-Chek installation manuals should be consulted before assembly. We offer special installation courses for the application of ArmaClad Arma-Chek.

Approvals and compliance

Specification compliance	<ul style="list-style-type: none"> MED Module B (EC type examination certificate) by DNV-GL / IMO 2010 FTP (Fire Test Procedure) Code part 2 and part 5.
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Property	Value / Assessment				Standard / Test method
Temperature range					
Service temperature ¹	Min. °C	Min. °F	Max. °C	Max. °F	
	-50	-58	100	212	
Fire Performance and Approvals					
Surface spread of flame	Class 0 Class 1				BS 476 Part 6, BS 476 Part 7
Reaction to fire	B-s3, d0				EN 13501-1, EN 13823, EN ISO 11925-2
Surface burning characteristics	< 25 flame spread index				ASTM E84
Surface flammability ²	IMO Part 2 (smoke generation and toxicity) IMO Part 5 (surface flammability) M1				IMO 2010 FTP Code, Part 2, IMO 2010 FTP Code, Part 5, NF P 92-507
Resistance to water vapour					
Water vapour diffusion resistance factor ³	$\mu \geq 50,000$				EN 12086 ⁴
Water vapour permeability	$\leq 3.91 \times 10^{\exp(-12)} \text{ g/(m}\cdot\text{s}\cdot\text{Pa)}$ ($\leq 0.0027 \text{ Perm-inch}$)				EN 12086 ⁴
Corrosion mitigation					
Leachable (water-soluble) chlorides ⁵	$\leq 100 \text{ ppm (mg/kg or } \mu\text{g/g)}$				EN 13468, ASTM C871 ⁶
Leachable (water-soluble) ammonia ions ⁵	$\leq 100 \text{ ppm (mg/kg or } \mu\text{g/g)}$				EN 13468, ASTM C871 ⁶
Physical attributes					
Density	1,650 to 1,750 kg/m ³ (103.00 to 109.25 lb/ft ³)				ISO 845, ASTM D1622
Mechanical properties					
Tensile strength	$\geq 4.5 \text{ MPa}$ ($\geq 653 \text{ psi}$) [MD]				ISO 37 ⁷
Elongation	$\geq 200\%$ [MD/CD]				ISO 37
Tear strength	$\geq 7.0 \text{ N/mm}$ ($\geq 40 \text{ lbf/in}$) [MD/CD]				ISO 34-1 ⁸

Property	Value / Assessment	Standard / Test method
Bursting strength ^{5,9}	582.72 N / 131 lbf Section 18.2 of the test standard Result for 2mm material only.	ASTM D751
Puncture resistance ⁵	104.44 N / 23.48 lbf Result for 2mm material only.	ASTM D751
Hydrostatic pressure of joints ⁵	No leak at 6.89 bar [70.4 m] (100 psi)	ASTM D5385
Resistance to mechanical impact	Good	
Acoustic performance		
System acoustic insertion loss ¹⁰	When used as part of a system Arma-Chek R complies to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D.	ISO 15665, ISO 3741 ¹¹
Weather and UV resistance		
UV resistance ¹²	Excellent	EN ISO 4892-2
Weather resistance	Excellent [Allunga Exposure Laboratory test]	
Resistance to ozone ¹³	Excellent	DIN 53509-1
Health and environment		
Fungal growth ⁵	No growth	ASTM C1338
Other technical features		
Additional remarks	When installation of Arma-Chek R covering is conducted under ambient temperatures that differ from the final site conditions, or where ambient temperatures are expected to fluctuate, slight wrinkling of the installed Arma-Chek R covering may be expected. Caused by the natural contraction and expansion of the the underlying Armaflex insulation material, this wrinkling is solely aesthetic and has no effect the technical performance or integrity of the installed insulation system. Please consult Technical Services for additional guidance.	
Adhesion and sealing	Armaflex Adhesive 520 or Adhesive HT625 shall be used for reliable adhesion. Minimum overlap should be ensured. Arma-Chek Mastic shall be used for sealing of joints and seams in accordance with our application manual.	
Application conditions ^{14,15}	Application temperature: +5°C to +35°C (+41°F to +95°F) Max. relative humidity: 80%	
Shelf life ¹⁶	Maximum of 3 years.	
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight and in no direct contact with ground.	

¹Service temperature determined based on thermal ageing behaviour.

²The product satisfies the criteria of surface flammability [Part 5] for bulkheads, ceilings and linings as required by IMO 2010 FTP Code for insulation of pipe fittings for cold service systems. Further to this mandatory requirement the product satisfies the criteria of surface flammability [Part 5] and smoke generation and toxicity [Part 2] for floor coverings and primary deck coverings.

³Water vapour diffusion resistance factor is based on actual net thickness.

⁴Equivalent method to ASTM E96.

⁵Based on single test results. Can be used for information / reference only.

⁶Specimen prepared according to EN 13486: neither cut, ground nor blended. Test temperature +100°C, leaching time 0.5 hours as specified in the standard for product maximum service temperature.

⁷Type 2 sample.

⁸Minimum value in Machine Direction (MD) and in Cross Direction (CD). Method B, procedure (b), angle test piece with a nick.

⁹Result for 2mm material only.

¹⁰For further information, please contact our Customer Service.

¹¹Equivalent method to ASTM E1222.

¹²1000h cracking, no visible discoloration, 3000 / 5000h cracking under microscope, slight discoloration.

¹³Tested at 48h / 25 ± 5 ppm / 20 ± 2 % elongation / no crack.

¹⁴Application temperature refers to the ambient temperature during installation and the surface temperature of the substrate (e.g. ArmaClad Arma-Chek R covering) to which the product is installed.

¹⁵For environmental conditions outside the given range, please contact Technical Services.

¹⁶Shelf 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.

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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 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.

For more information, please visit:
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