



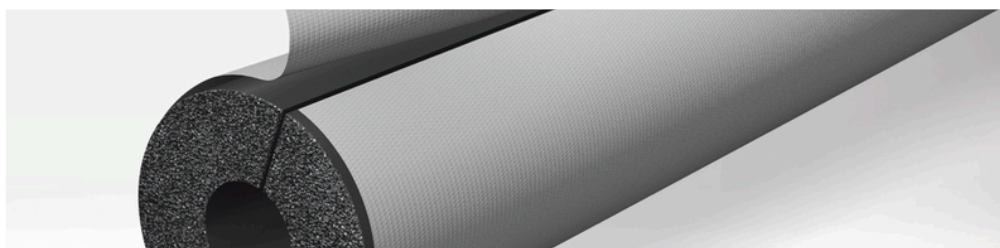
INSTALL IT. SAFEGUARD YOUR  
EQUIPMENT.

# 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"> <li>MED Module B (EC type examination certificate) by DNV-GL / IMO 2010 FTP (Fire Test Procedure) Code part 2 and part 5.</li> </ul>
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Property	Value / Assessment				Standard / Test method
<b>Temperature range</b>					
Service temperature <sup>1</sup>	Min. °C	Min. °F	Max. °C	Max. °F	
	-50	-58	100	212	
<b>Fire Performance and Approvals</b>					
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 <sup>2</sup>	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
<b>Resistance to water vapour</b>					
Water vapour diffusion resistance factor <sup>3</sup>	$\mu \geq 50,000$				EN 12086 <sup>4</sup>
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 <sup>4</sup>
<b>Corrosion mitigation</b>					
Leachable (water-soluble) chlorides <sup>5</sup>	$\leq 100 \text{ ppm (mg/kg or } \mu\text{g/g)}$				EN 13468, ASTM C871 <sup>6</sup>
Leachable (water-soluble) ammonia ions <sup>5</sup>	$\leq 100 \text{ ppm (mg/kg or } \mu\text{g/g)}$				EN 13468, ASTM C871 <sup>6</sup>
<b>Physical attributes</b>					
Density	1,650 to 1,750 kg/m <sup>3</sup> (103.00 to 109.25 lb/ft <sup>3</sup> )				ISO 845, ASTM D1622
<b>Mechanical properties</b>					
Tensile strength	$\geq 4.5 \text{ MPa}$ ( $\geq 653 \text{ psi}$ ) [MD]				ISO 37 <sup>7</sup>
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 <sup>8</sup>

Property	Value / Assessment	Standard / Test method
Bursting strength <sup>5,9</sup>	582.72 N / 131 lbf Section 18.2 of the test standard Result for 2mm material only.	ASTM D751
Puncture resistance <sup>5</sup>	104.44 N / 23.48 lbf Result for 2mm material only.	ASTM D751
Hydrostatic pressure of joints <sup>5</sup>	No leak at 6.89 bar [70.4 m] (100 psi)	ASTM D5385
Resistance to mechanical impact	Good	
<b>Acoustic performance</b>		
System acoustic insertion loss <sup>10</sup>	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 <sup>11</sup>
<b>Weather and UV resistance</b>		
UV resistance <sup>12</sup>	Excellent	EN ISO 4892-2
Weather resistance	Excellent [Allunga Exposure Laboratory test]	
Resistance to ozone <sup>13</sup>	Excellent	DIN 53509-1
<b>Health and environment</b>		
Fungal growth <sup>5</sup>	No growth	ASTM C1338
<b>Other technical features</b>		
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 <sup>14,15</sup>	Application temperature: +5°C to +35°C (+41°F to +95°F) Max. relative humidity: 80%	
Shelf life <sup>16</sup>	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.	

<sup>1</sup>Service temperature determined based on thermal ageing behaviour.

<sup>2</sup>The 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.

<sup>3</sup>Water vapour diffusion resistance factor is based on actual net thickness.

<sup>4</sup>Equivalent method to ASTM E96.

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

<sup>6</sup>Specimen 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.

<sup>7</sup>Type 2 sample.

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

<sup>9</sup>Result for 2mm material only.

<sup>10</sup>For further information, please contact our Customer Service.

<sup>11</sup>Equivalent method to ASTM E1222.

<sup>12</sup>1000h cracking, no visible discoloration, 3000 / 5000h cracking under microscope, slight discoloration.

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

<sup>14</sup>Application 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.

<sup>15</sup>For environmental conditions outside the given range, please contact Technical Services.

<sup>16</sup>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.

Covering, endless

Item	Thickness [mm]	Width [mm]	Length [m]	Content [metric]
RCS-R05/1-07-GY	1	700	5	3.5 m <sup>2</sup>
RCS-R05/1-14-GY	1	1,400	5	7 m <sup>2</sup>
RCS-R05/2-07-GY	2	700	5	3.5 m <sup>2</sup>
RCS-R10/1-07-GY	1	700	10	7 m <sup>2</sup>
RCS-R10/1-14-GY	1	1,400	10	14 m <sup>2</sup>
RCS-R10/2-07-GY	2	700	10	7 m <sup>2</sup>
RCS-R20/1-07-GY	1	700	20	14 m <sup>2</sup>

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

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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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