



Arma-Chek[®]
system s

TOUGH ENOUGH TO FACE THE CHALLENGE

Minimising the risk of corrosion under insulation

Protecting your investment



Arma-Chek – for extreme conditions

In 1995, the Arma-Chek system, a tough new thermal insulation, was launched – specifically designed to protect against the harshest environments. The system was based on the highly successful Armaflex flexible insulation with a strong and durable terpolymer water based coating.

Arma-Chek – the benefits

This unique combination offers the key benefits of resistance to weather and impact as well as flame spread, thermal conductivity and the ingress of water vapour – giving outstanding performance and maximum protection against corrosion under insulation.

The highest safety standards

The Arma-Chek system successfully



achieved approval and certification from The American Bureau of Shipping, Lloyd's Register and Det Norske Veritas – organisations that set the highest maritime safety standards.

Dry wrap covering

Recent additions to the range include Arma-Chek S and Arma-Chek D each consisting of Armaflex with a highly specialised dry-wrap woven covering. These new coverings speed application time in the demanding environments of the petrochemical, maritime and offshore industries.

Arma-Chek S is a dry-wrap covering of woven glass fibre with a bright metallic finish, specially developed for land based industries that operate in a clean environment and demand an insulation that provides extreme resistance to corrosion.

Arma-Chek D is a black woven glass fibre covering introduced to fulfil demand from the maritime and offshore industries for a dry wrap insulation offering an exceptional resistance to water vapour ingress, green water washover and under insulation corrosion.

Arma-Chek offshore and onshore

These new Arma-Chek coverings allow the benefits of this exceptional insulation to become readily available to a wider range of industries that operate within the most challenging environments in the world.



Arma-Chek system – the advantages

- Designed to give maximum protection in extreme conditions, minimising the risk of corrosion under insulation
- IMO certified system in accordance with SOLAS rules provides a high degree of safety and fire protection
- Lightweight and flexible for easy and speedy application with low maintenance, resulting in time and cost savings
- Low thermal conductivity and good acoustic performance – double benefits from one insulation system
- Very high resistance to water vapour transmission and water ingress giving long term insulation efficiency
- Low toxicity index for added safety assurance
- High performance UV reflective coatings with excellent resistance to extreme weather and damage, for longer life
- CFC and HCFC free with an ozone depletion potential of zero – NH and HT Armaflex are also PVC free
- Meets international standards, including ISO 9002 and 14001
- Full technical support and applications assistance



Arma-Chek used to protect tanks at Bayer Leverkusen installation



The Arma-Chek range

Arma-Chek S

Introduced to satisfy a growing demand from industry – Arma-Chek S is a woven glass fibre dry-wrap insulation covering with a bright metallic finish. Enclosing an Armaflex substrate, the insulation has exceptional resistance to corrosion and damage. The bright metallic finish insulation is ideal for clean room environments, internal plant rooms and industrial complexes.

- Bright metallic finish enhances solar reflectivity
- Easily cleaned – easily maintained
- Will not pick up or contribute to bacterial growth



Arma-Chek D

Developed for the offshore and maritime industries, this black, woven glass fibre covering for Armaflex offers exceptional resistance to salt water and corrosion under insulation, whilst still remaining flexible on a moving environment. It will not stain or mark. Its light weight and permanent curl characteristics make it quick and easy to install – without the need for heavy equipment.

- Exceptional resistance to salt water and damage
- Eliminates risk of galvanic corrosion
- Light weight and quick to fit – providing cost and time saving benefits



Arma-Chek

The original Arma-Chek insulation developed for the harsh environments of oil and gas offshore and also petrochemical complexes. The Armaflex substrate is covered with a durable terpolymer paint with glass fibre mat embedded. Arma-Chek has exceptional resistance to flame spread, is both waterproof and weatherproof with a very effective vapour barrier.

- Gives maximum protection against green water washover
- Outstanding resistance to spread of flame
- Extremely good resistance to UV attack



Armaflex – consistent quality and reliability

Armaflex – the world leader

Armaflex is the leading elastomeric insulation, with its closed cell structure and built-in vapour barrier. The range of Armaflex products is in use the world over, providing efficient insulation for the domestic and industrial sectors on air conditioning, refrigeration, process pipework and water services.



Armaflex – the advantages

The Armaflex range has significant advantages. It is light weight and flexible and the built-in vapour barrier minimises the risk of corrosion under insulation – a significant problem for coastal industries. It is also dust, fibre, CFC and HCFC free with an ozone depletion potential of zero. Armaflex has exceptional behaviour in fire – self-extinguishing; no flammable droplets; does not spread flame. All these advantages, combined with major savings in installation time and costs, make Armaflex the first choice for contractors and operators.



Armacell is committed to stringent quality tests and continuous research & development

Armaflex – the heart of Arma-Chek

When used as substrates for Arma-Chek – NH, HT and Class O Armaflex have been tested and have passed international standards. Advice on installation of these materials is available from Armacell International technical services.

Armaflex Technical Data	HT Armaflex	NH Armaflex	Class O Armaflex
Temperature range			
Minimum line temperature	-175°C•	-175°C•	-175°C•
Maximum line temperature	+150°C• (+175°C)•	+105°C	+105°C
Flat surfaces and tape		+85°C	+85°C
Thermal Conductivity (mean temperature)			
BS874 Part 2 1986 (‡ DIN 52 612/3)			
0°C W/(m.K)	0.040	0.040	0.035
+40°C W/(m.K)	0.045	0.045	0.039
Water vapour permeability – Moisture Resistance factor	μ>3,000	μ>2,000	μ>5,000
Fire performance			
Surface spread of flame , BS476 Part 7 1997 DIN 4102	Class 1 B2	Class 1 B2	Class 1†
Fire propagation , BS476 Part 6 1989 Total Index of Performance (I) Sub index (i _i)			Less than 12† Less than 6†
Fire rating		Ignitable – B1 no flammable droplets – Tr1	
Smoke development NBS for 13mm (ASTM E 662 – 79)			
Dm (Corr) smouldering Index	200	68	
Dm (Corr) flaming Index	100	60	
• For information on temperatures below -40°C or above +150°C, please consult local Armacell Technical Department. † This meets the 1991 Building Regulations (England and Wales) and the Building Standards (Scotland) Regulations 1990 for the Class O fire category. Additional technical information is available on request			

Arma-Chek S – Technical Data		
Temperature Range	Minimum surface temperature Maximum surface temperature	–40°C • (with NH, Class O) +105°C (with HT – constant) +150°C • (with HT – intermittent) +175°C •
Impact Resistance		Good §
UV Resistance		Extremely Good §
Density		1400 g/ltr
Colour		Silver
Pack Sizes:	Roll Tape Pre-Coated Sheet	1.1m x 25m length 50mm x 100m length 13mm, 19mm and 25mm thickness

Arma-Chek D – Technical Data		
Temperature Range	Minimum surface temperature Maximum surface temperature	–40°C • (with NH, Class O) +105°C (with HT – constant) +150°C • (with HT – intermittent) +175°C •
Impact Resistance		Extremely Good §
UV Resistance		Extremely Good §
Density		1200 g/ltr
Colour		Black
Pack Sizes:	Roll Tape Pre-Coated Sheet	1.1m x 25m length 50mm x 25m length 19mm and 25mm thickness

Arma-Chek – Technical Data		
Temperature Range	Minimum surface temperature Maximum surface temperature	– 30°C +80°C
Toxicity Test NES 713	Toxicity index	4.3
EEMUA Sound Data formerly OCMA Spec No. NWG 5	Overall insertion loss with 100mm thickness	19dB(A)
Impact Resistance BS 3900 Part 3 E3	5mm indentation	Withstands without defect
Chemical Resistance		Good
Ultraviolet and Condensation Resistance	Q-UV weather-o-meter to ASTM G53-88, 3000 hours exposure	No discolouration or crazing
Solids Content	By volume	48%
Density		1500 g/ltr
Drying Time BK Drying Time	Touch dry Through dry	2 hours 10 hours
Colour	Blue base-coat, Grey top-coat	Other colours on request
Pack Sizes:	Paint Scrim	10 ltr bucket – plastic or metal 1 x 200m length roll

• For information on temperatures below –40°C or above +150°C, please consult local Armacell Technical Department.

§ For more information on test procedure, please contact local Armacell Technical Department.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended by the recipient.