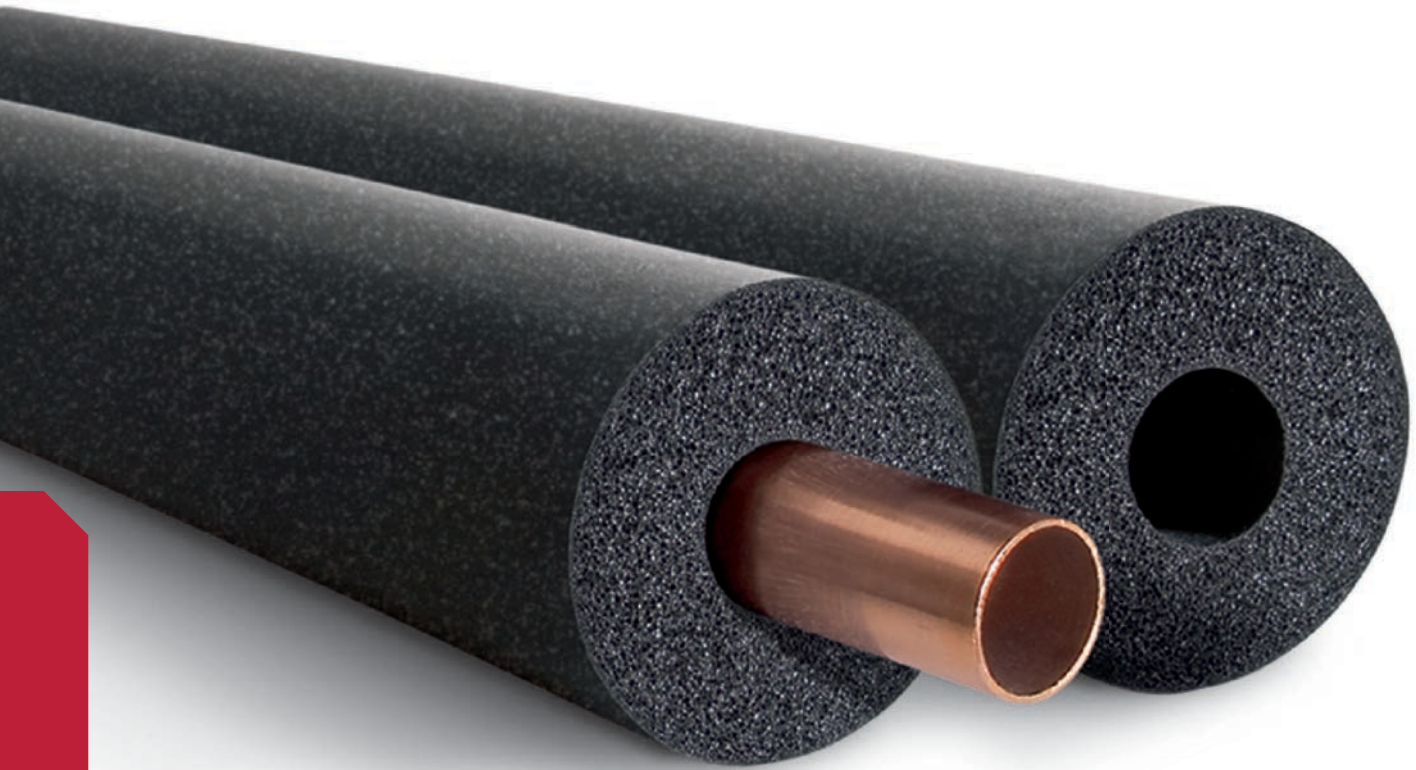# ArmaFlex® Protect

THE ALL-IN-ONE FLEXIBLE FIRE BARRIER FOR CONDENSATION CONTROL & SYSTEM COMPATIBILITY AT PIPE PENETRATIONS
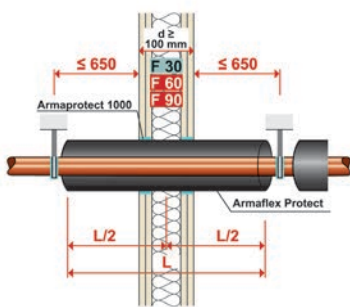
- One solution for hot and cold applications

- For steel, copper and plastic pipes

- Covers rigid-walls, ceilings and light-walls

- Quick and easy installation

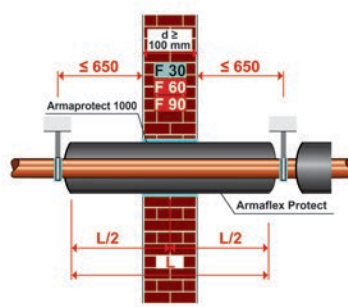- Up to 120 minutes fire resistance according to EN13501
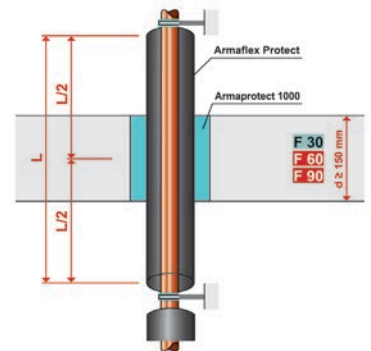
PROPERTIES

Direct connection to AF/ArmaFlex tubes

Copper pipes Øda ≤ 89 mm

Closed cell

Steel pipes Øda ≤ 329.9mm

Expands in case of fire

ArmaProtect 1000 flame retardant paste

Plastic pipes Øda ≤ 75 mm

FLEXIBLE WALL

d ≥ 100 mm
F 30
F 60
F 90
≤ 650   ≤ 650
Armaprotect 1000
Armaflex Protect
L/2   L/2
L

RIGID WALL

d ≥ 100 mm
F 30
F 60
F 90
≤ 650   ≤ 650
Armaprotect 1000
Armaflex Protect
L/2   L/2

RIGID CEILINGS

Armaflex Protect
Armaprotect 1000
L/2
L
L/2
F 30
F 60
F 90
d ≥ 150 mm

The purpose of installing ArmaFlex Protect is to provide technical insulation at the point of pipe penetrations to provide fire resistance in flexible and rigid walls as well as rigid ceilings. ArmaFlex Protect must be installed centered with the opening in the wall. The annular gap is filled with ArmaProtect 1000.
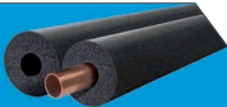
COMPLETE SYSTEM

- **ArmaFlex Protect**

- **ArmaProtect 1000**

- **ArmaProtect PP**

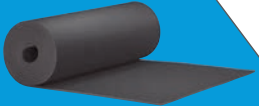- **ArmaFlex Adhesive 520**

RANGE

TUBE
Tubes

SHEET
Continuous sheet (rolls)

RECOMMENDED PRODUCTS
For a complete installation

ArmaFlex 520 adhesive

**ArmaFlex RS850 adhesive**

ArmaFlex Cleaner

TECHNICAL DATA

Flexible fire protection and insulation for non-combustible pipes, combustible pipes and pipes containing combustible medium for use through fire-resistant walls and cellings (EI30 TO EI120).

Material type	Elastomeric foam based synthetic rubber.
Colour	Black
Applications	Insulation and 120 min fire protection barrier for non-combustible pipes up to 323mm and combustible pipes up to 75mm.
Special features	Armaflex Protect fulfils fire protection requirements irrespective of adjoining insulation

| Property	Value/Assessment	Test	Standards & Remarks
Temperature Range			
Max service temperature	+85˚C		
Min service temperature	-50˚C		
Thermal Conductivity			
	λ 0˚C ≤ 0.056 W/(m·K)		Tested acc. to EN 12667 & EN ISO 8497
Water Vapour Diffusion Resistance			
	$\mu \geq 7000$	EU 5670	Tested acc.to EN 12086 & EN 13469
Fire Performance			
Reaction to fire			
Tubes	E_L		Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2
Sheets	E		
Practical fire behaviour	Self-extinguishing, does not drip and does not spread flames.		
Fire resistance of structural element	R30 - R90 & EI30 - EI120	EU4384 D 4226 D 4305	Classified acc. to DIN 4102-11 & EN 1366-3
Other technical features			
UV resistance	Suitable for indoor use only.		
Storage & Shelf life	3 years from production date		Stored in dry rooms at normal relative humidity (50% to 70%) and ambient temperature (0˚C - 35˚C). Cartons to be stored horizontally. Minimum temperature for transport -50˚C frost-free storage before installation.

TUBES

Length - 2m, **Colour** - Black
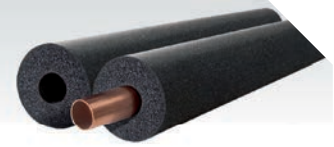
Pipe max. Outside - Ø (mm)	Thickness (mm)	Code	m/carton
10	19	PRO-AX-19X010 •	18
12	19	PRO-AX-19X012 •	17
15	19	PRO-AX-19X015 •	16
16	20	PRO-AX-20X016 •	14
18	20	PRO-AX-20X018 •	13
20	20	PRO-AX-20X020 •	12
22	20	PRO-AX-20X022 •	12
25	20	PRO-AX-20X025 •	11
28	25	PRO-AX-25X028 •	9
32	25	PRO-AX-25X032 •	8
35	25	PRO-AX-25X035 •	8
40	25	PRO-AX-25X040 •	6
42	25	PRO-AX-25X042 •	6
48	25	PRO-AX-25X048 •	5
50	25	PRO-AX-25X050 •	5
54	25	PRO-AX-25X054 •	5
60	25	PRO-AX-25X060 •	4
64	25	PRO-AX-25X063 •	4
76	25	PRO-AX-25X076 •	4
89	25	PRO-AX-25X089 •	4

CONTINUOUS SHEET (ROLLS)

Width - 1m, **Colour** - Black
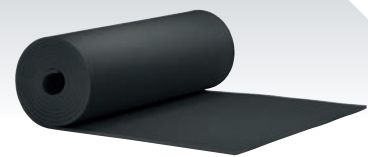
Code	Roll Length (m)	Width (m)	Thickness (mm)	m²/carton	Rolls/carton
PRO-AX-13MM/E	6	0.5	13	2X3	2

Other information
• Not a stock item
For sealing purposes at least two layers of sheet material must be installed

ArmaProtect 1000
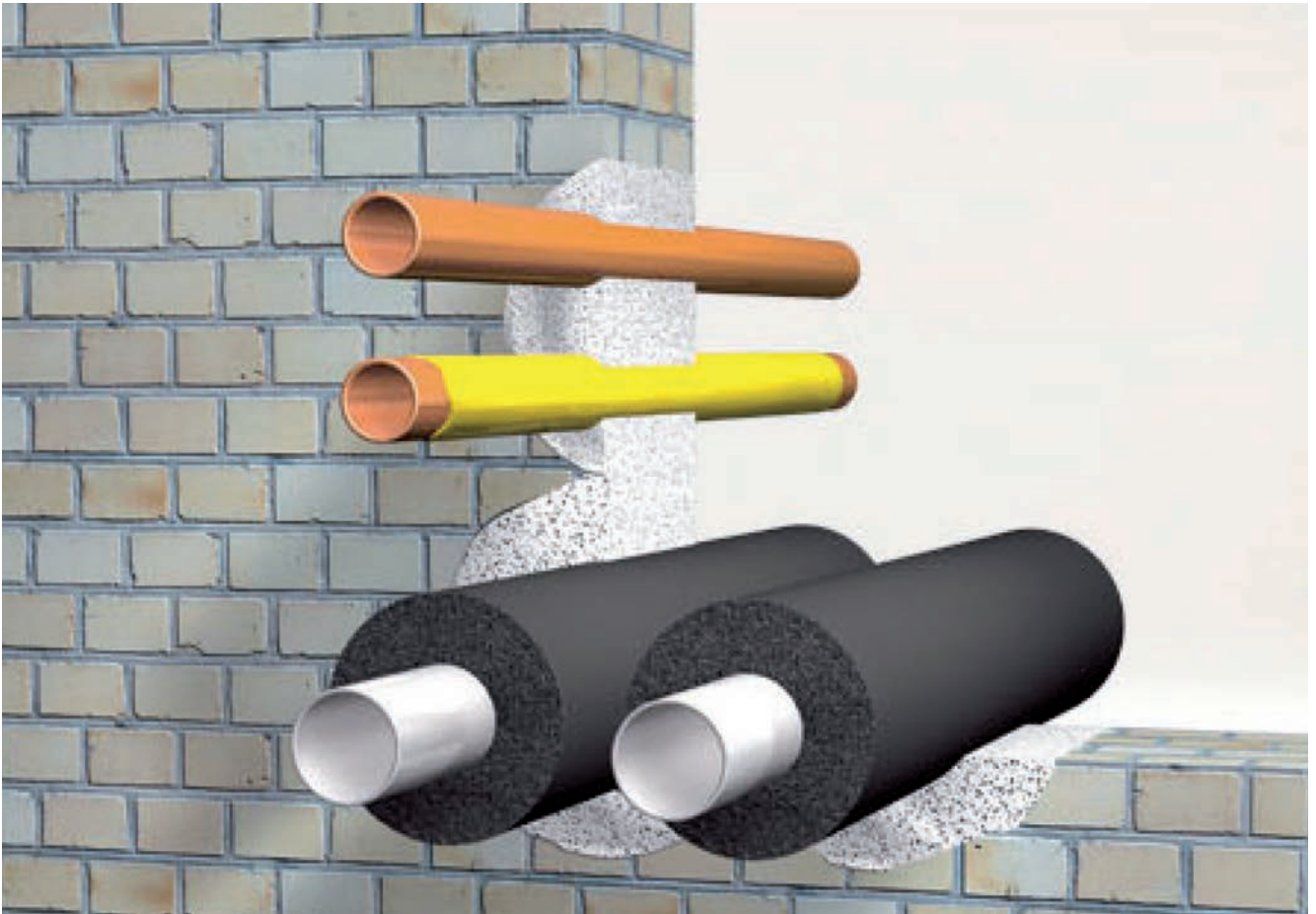
QUICK AND EASY TO APPLY FIRESTOP FILLER FOR PIPE PENETRATIONS INSULATED WITH ARMAFLEX PROTECT

- Ready to use straight from the tub
- Easy to apply by hand - no tools or formwork needed
- Resealable container, no material waste
- System solution for pipe and cable penetrations
- Non-combustible A1 EN 13501
- Melting point > 1000 °C

RANGE

FIRE STOP FILLER

Armaprotect 1000 firestop filler is a practical, ready-to-use, mortar with excellent fire-protection, thermal insulation and noise control properties. It's self-hardening and very easy to apply by hand. Use to seal around gaps, with no formwork required and easy to apply in tight spaces

| Material type	High temperature resistant mortar with hollow microspheres and inorganic binding agents.
Colour	Light grey
Applications	Ideal system solution for sealing annular gaps in applications using ArmaFlex Protect, ArmaProtect 1000 can be used for penetrations with individual pipes and electricity cables. Only for indoor use.
Special features	Can be used in combination with ArmaFlex Protect systems.
Assembly	The ready-to-use, ArmaProtect 1000 firestop filler is supplied in tubs and can be applied using either a spatula or by hand. The substrate must be dry and free of dust and grease. The room temperature must not fall below -5˚C during application. Once it has dried hard, the firestop filler can be sanded, drilled and cut.

Property	Value/Assessment	Test	Standards & Remarks
Thermal Conductivity			
	λ 10˚C ≤ 0.052 W/(m·K)	EU 5738	Tested acc. to EN 12667
Fire Performance			
Reaction to fire	Non combustible (UK), Euroclass A1	D5738	Classified acc. to EN 13501-1 Tested acc. to EN ISO 1182 & EN ISO 1716
Other technical features			
Density	Approx 180kg/m^3 (after drying)		
Compression strengh	0.4 N/mm^2		Tested acc. to EN 1015-11
Drying time	48 hours		Drying time takes longer in high humidity, low temperature and limited air flow condidtions.
Melting point	>1000˚C	D5738	Tested acc. to DIN 4102-17
Water-soluble chlorides	<0.001%		Tested acc. to DIN EN 1015-17
Yield	1:1		
Storage & Shelf life	24 months in original sealed container		Store in a cool, dry place. Protect from temperatures below +5˚C.

ARMAPROTECT 1000

| Code	Packaging Units	Pieces/carton
PRO-1000-0.5B	0.5l	20
PRO-1000-1.0	1l	27
PRO-1000-2.5	2.5l	12
PRO-1000-5.0	5l	8

ArmaProtect PP
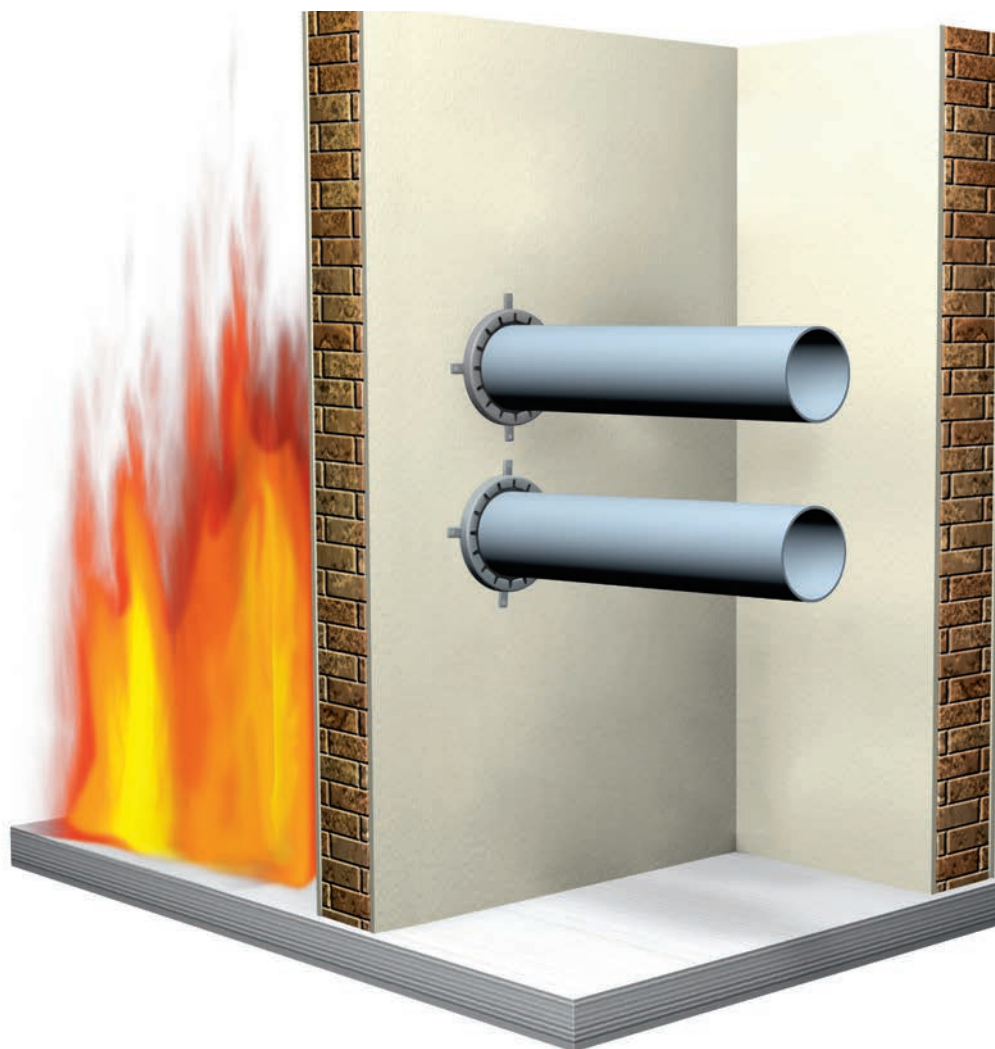
THE FIRE SLEEVE TO STOP FIRE SPREADING THROUGH PLASTIC PIPES INSULATED WITH ARMAFLEX

- Ready to use straight from the tub
- Approved for plastic pipes with ArmaFlex insulation
- Approved for beverage pipes (python)
- Easy to apply and meets regulations
- Free of heavy metal bonds

RANGE

ARMAPROTECT PP SLEEVES
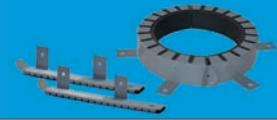
ARMAPROTECT PP MOUNTING KIT

TECHNICAL DATA

Pipe collar for plastic pipe penetration seals to meet fire resistance class R90.

Material type	Solid metal sleeve equipped with several layers of high performance intumescent material. In the event of a fire, the intumescent material expands with high pressure to hermetically seal the opening against flames and smoke.
Colour	Light grey
Applications	Fire resistant collar for pipe penetrations in solid walls and ceilings made of concrete, aerated concrete or lightweight partition walls. Two pieces required for walls, one piece for ceilings.
Special features	Identification sign included. Particulary suited for multiple-use beverage lines (python tubing).
Assembly	For fire resistant seals on combustible supply / drainage pipes with/without insulation: • PVC, PP PE-HD, LDPE, PB, PE-X, ABS, ASA pipes up to Ø 200mm • Multi-layer composite pipes up to Ø 110mm • Pipe-in-pipe system up to Ø 160mm • PVDF pipes up to Ø 90mm • Sound-reducing wastewater pipes (Friaphon, Geberit dB20 + Silent PP, Georg Fischer COOL-FIT, POLO-KAL NG + XS, Rehau Raupiano plus, Wavin AS + Si Tech, Ostendorf Skolan dB) up to Ø 200mm • Beverage lines up to Ø 108mm • PE/PVC pipes with AF/ArmaFlex Class 0 or SH/ArmaFlex insulation up to Ø 160mm Can be installed on pipe sleeves/inclined penetrations.
Remarks	The collar may only be used for the pipe materials and dimensions defined by the general building authorities.

Property	Value/Assessment		Test	Standards & Remarks
Fire Performance				
Fire resistance of structural element	Wall penetrations	$\leq$R90	D3968	Tested acc. to DIN 4102, Part 11
	Ceiling penetrations			
Other technical features				
Start of reaction / volume expansion	Approx. + 170˚C / 18 times in the event of fire			
Health aspects	Free of fibres and compounds containing heavy materials.			

ARMAPROTECT PP SLEEVES

For flameproof sealing of combustible supply and sewage pipes with/without insulation.
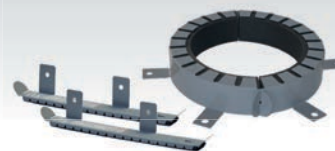
Code	Height	Outer Ø pipe or insulation (mm)	Pieces/carton
PRO-PP-032	26	32/34	5
PRO-PP-040	26	40/42	5
PRO-PP-050	26	50/52	5
PRO-PP-063 •	26	63/65	10
PRO-PP-075	26	75/77	10
PRO-PP-090	26.6	90/92	10
PRO-PP-110	26.6	110/112	10
PRO-PP-125 •	40	125	2
PRO-PP-140 •	40	140	2
PRO-PP-160 •	40	160	2
PRO-PP-200 •	40	200	2

ARMAPROTECT PP MOUNTING KIT

Accessories for fixing ArmaProtect collars through solid walls and ceilings.

Code	For Armaprotect PP	Pieces/carton
PRO-PP-032-052	32-52	1
PRO-PP-063-125	63-125	1
PRO-PP-140-160	140-160	1
PRO-PP-180-200	180-200	1

Other information
• Not a stock item

ArmaFlex® adhesives

A FULL RANGE OF OF CONTACT ADHESIVES FOR COMPATIBILITY WITH ALL TYPES OF ARMAFLEX

- **ArmaFlex RS850 & Ultima RS850**
  Non-drip for faster & cleaner applications. Ideal for hard to access areas with reduced solvent content to meet the requirements for sustainable building projects.
- **Armaflex 520 & Ultima 700**
  Tried & tested for superior ArmaFlex reliability
- **ArmaFlex HT 625**
  Specially formulated to perform at higher temperatures for HT/ArmaFlex products. Can also be used on all ArmaFlex materials, excluding ArmaFlex Ultima.

RS850

High viscosity non-drip thixotropic adhesives, ArmaFlex RS850 and ArmaFlex Ultima RS850 ensure faster and cleaner application. They offer a longer shelf life once stored and emit minimum emission of solvents when they are not being used.

NON-DRIP

SOLVENT FREE CLEANER

ArmaFlex SF Cleaner can be used to clean the surfaces of technical insulation materials and the application surface. It comes in a practical spray bottle.

HT625

HT625 is a one-component adhesive which has been developed to bond ArmaFlex insulation applied on high temperature lines. Compatible with HT/ArmaFlex, it guarantees a homogeneous and safe bonding at joins and seams

520

ArmaFlex 520 adhesive is a polychloroprene based solvent. The material has low viscosity for ease of application and quick drying characteristics. In its dry state, ArmaFlex 520 adhesive is not flammable. The adhesive is particularly suitable for joining ArmaFlex flexible elastomeric insulation and for bonding the material to clean surfaces. When properly cured the adhesive maintains the resistance to water vapour expected of ArmaFlex.

TECHNICAL DATA

Armaflex adhesives based on modified chloroprene rubber in a blend of solvents.

ARMAFLEX 520
Specially formulated adhesive developed for ArmaFlex insulation materials.

Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Colour	Beige
Material special info	Liquid
Applications	Gluing of all flexible ArmaFlex insulation materials (except HT/ArmaFlex & ArmaFlex Ultima).
Special features	Specially formulated adhesive for uniform and safe seam bonding of ArmaFlex insulation materials.
Assembly	Please observe our installation instructions/product data sheets. Application temperature: ideally +20˚C, not below 0˚C. At temperatures below +5˚C or high humidity approx above 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is poor or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight. Shake and stir well before use. Apply thinly to the areas to be bonded with a brush or spatula. For contact adhesion press together with force during the contact adhesion time. Detailed application guidance is available.
Remarks	The adhesive achieves its final strength after 36 hours. Only then should plant be put into operation. Never insulate plant which is in operation or work in strong sunlight. Wait 36 hours before applying coatings (exception: ArmaFinish 99), adhesive tape, coverings etc.

ARMAFLEX RS850
Non-drip one component adhesive in gel form. Specifically developed for ArmaFlex insulation materials based on synthetic rubber.

Material type	Thixotropic contact adhesive on polychloroprene basis.
Colour	Beige
Material special info	Gel form
Applications	Application on pipes, ducts and tanks with service temperature up to +70˚C. Gluing of all flexible ArmaFlex insulation materials (except HT/ArmaFlex & ArmaFlex Ultima).
Special features	Specially formulated adhesive for uniform and safe seam bonding of ArmaFlex insulation materials.
Assembly	Please observe our installation instructions/product data sheets. Application temperature: ideally +20˚C, not below 0˚C. At temperatures below +5˚C or high humidity approx above 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is poor or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight. Shake and stir well before use. Apply thinly to the areas to be bonded with a brush or spatula. For contact adhesion press together with force during the contact adhesion time. Detailed application guidance is avalable.
Remarks	The adhesive achieves its final strength after 24 hours. The system should never be operated during this time and any self-adhesive tape or protective coating (exception: ArmaFinish 99), should only be applied after the time has elapsed.

	ArmaFlex 520 adhesive	ArmaFlex RS850 adhesive
Temperature Range		
Max service temperature	+105˚C	+70˚C
Min service temperature	-50˚C (for temperatures below -50 ˚C please contact our technical department)	-40˚C
Performance		
Coverage (guidance only)	Minimum consumption with the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption unslit > consumption slit) • 10mm > 1,120m per litre > 140m per litre • 20mm > 280m per litre > 70m per litre • 30mm > 175m per litre > 45m per litre • 40mm > 130m per litre > 35m per litre Sheets • 3-4 m² per litre	
Storage & shelf life		
	12 months Store as cool as possible but protected from frost. In the event of frost any gelification is reversible on warming	36 months in an unopened container. Store between 0˚C and 35˚C in a dry place. Do not store with explosive substances or spontaneosly combusting substances. Store as cool as possible but protected from frost. Cold or frozen adhesive (under 5˚C) will become fully useable if slowly acclimatised up to working temperature (approx 20˚C)
Preparation of surfaces		
	Clean surfaces and ArmaFlex Ultima surface with Armaflex Cleaner. Compatibility with bases: • Very good adhesion to metallic sufaces. • The adhesive's compatibility with colour coated sufaces needs to be tested. • Incompatible with asphalt, bitumen and red lead (linseed oil-based)	Clean surfaces and ArmaFlex Ultima surface with Armaflex Cleaner. Compatibility with bases: • Very good adhesion to metallic surfaces. • The adhesive's compatibility with colour coated surfaces needs to be tested. • Incompatible with asphalt, bitumen, red lead (linseed oil-based), polystyrene and plasticated PVC
Woking time at 20 ˚C		
Wet adhesion time	Up to 2 minutes	
Drying time	3- 5 mins	2 min
Contact adhesion	15 - 20 mins	10 - 15 mins
Setting	36 hours	24 hours
The open time depends on the quantity as well as indoor climate conditions. Before operating plant the setting time needs to be allowed to elapse.		
Other technical features		
Flash point	approx -20 ˚C	-17˚C
Explosion limits	Lower: approx 1 Vol % Upper: approx 13 Vol %	Lower: approx 1.1 Vol % Upper: approx 11.5 Vol %
Hazard class	Highly flammable, Regulation of inflammable liquids.	
Ageing stability	Very good	
Resistance to weathering	Very good	
Recycling	Allocation of a waste code number, according to the European Waste Catalouge, should be carried out in agreement with the regional waste disposal company. For details see relevant Safety Data Sheet. Packaging must be emptied of all residues. Packaging with traces of cured product can be recycled. Packaging with uncured product must be recycled into new product.	
Transport classes	Depending on the type of transport	

TECHNICAL DATA

ARMAFLEX HT625 One-component adhesive for high temperature applications, specifically developed for HT/ArmaFlex insulations but also suitable for all ArmaFlex synthetic rubber based insulation materials.	
Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Colour	Beige
Material special info	Liquid
Applications	Application on pipes and tanks with service temperature up to +150°C. Gluing of HT/ArmaFlex insulation materials and other Armaflex synthetic rubber based insulation materials (except Armaflex Ultima).
Special features	Specially formulated adhesive for uniform and safe seam bonding of ArmaFlex insulation materials applied on high temperature lines.
Assembly	Please observe our installation instructions/product data sheets. Application temperature: ideally +20°C, not below 0°C. At temperatures below +5°C or high humidity approx above 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is poor or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight.
Remarks	The adhesive achieves its final strength after 36 hours. Only then should plant be put into operation. Wait 36 hours before applying coatings (exception: ArmaFinish 99), adhesive tape, coverings etc.

Temperature Range	
Max service temperature	+150°C (For temperatures above +110°C please contact our technical department)
Min service temperature	-50°C (For temperatures below -50 °C please contact our technical department)

Performance	
Coverage (guidance only)	Minimum consumption with the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption unslit > consumption slit) • 10mm > 1120m per litre > 140m per litre • 20mm > 280m per litre > 70m per litre • 30mm > 175m per litre > 45m per litre • 40mm > 130m per litre > 35m per litre Sheets • 3-4 m² per litre

Storage & shelf life
12 months in an unopened container. Do not store with expolsive substances / spontaneously combusting substances. Store as cool as possible but protected from frost. In the event of frost any gelification is reversible on warming

Preparation of surfaces
Clean surfaces and ArmaFlex surface with ArmaFlex Cleaner. Compatibility with bases: • Very good adhesion to metallic sufaces.   • The adhesive's compatibility with colour coated sufaces needs to be tested.   • Incompatible with Asphalt, bitumen and red lead (linseed oil-based)

Woking time	
Drying time	3- 5 mins
Contact adhesion	15 - 20 mins
Setting	36 hours
The open time depends on the quantity as well as indoor climate conditions. Before operating plant the setting time needs to be allowed to lapse.	

Other technical features	
Flash point	approx -26 °C
Expolsion limits	Lower: approx 1.1 Vol %; Upper: approx 12.8 Vol %
Hazard class	Highly flammable
Ageing stability	Very good
Resistance to weathering	Very good
Recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. For deatils see relevant Safety Data Sheet. Packaging must be emptied of all residues. Packaging with traces of cured product can be recycled. Packaging with uncured product must be recycled into new product.
Transport classes	Depending on the type of transport

TECHNICAL DATA

ARMAFLEX ULTIMA 700
One-component adhesive specifically developed for ArmaFlex Ultima and insulating materials based on Armaprene® synthetic rubbers.

Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Colour	Blue
Applications	Application on pipes and tanks with service temperature up to +110˚C. Gluing of ArmaFlex Ultima and insulation materials based on Armaprene® synthetic rubbers.
Assembly	Please observe our installation instructions/product data sheets. Application temperature: ideally +15˚C to +20˚C, not below 0˚C. At temperatures below +5˚C or high humidity approx above 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is poor or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight.
Remarks	The adhesive achieves its final strength after 36 hours. Only then should plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

ARMAFLEX ULTIMA RS850
Non-drip one component adhesive gel form. Specifically designed for processing ArmaFlex and insulating materials based on Armaprene® synthetic rubbers

Material type	Thixotropic one component contact adhesive based on polychloroprene.
Colour	Blue
Material special information	Gel based
Applications	Application on pipes and tanks with service temperature up to +70˚C. Gluing of ArmaFlex Ultima and insulation materials based on Armaprene® synthetic rubbers.
Assembly	Please observe our installation instructions/product data sheets. Application temperature: ideally +15˚C to +20˚C, not below +10˚C. At temperatures below +5˚C or high humidity approx above 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is bad or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight.
Remarks	The adhesive achieves its final strength after 24 hours. The system should not be operated during this period and any self-adhesive tape or protective coatings should only be applied after this period has elapsed.

	ULTIMA 700	ULTIMA RS850
Temperature Range		
Max service temperature	+110˚C (for temperatures above +110˚C please contact our technical department)	+70˚C
Min service temperature	-50˚C (for temperatures below -50 ˚C please contact our technical department)	-40˚C (for temperatures below -40 ˚C please contact our technical department)
Performance		
Coverage (guidance only)	Minimum consumption with the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption unslit > consumption slit) • 10mm > 1,120m per litre > 140m per litre • 20mm > 280m per litre > 70m per litre • 30mm > 175m per litre > 45m per litre • 40mm > 130m per litre > 35m per litre Sheets • 3-4 m^2 per litre	
Storage & shelf life		
	12 months in an unopened container. Store as cool as possible but protected from frost. In the event of frost any gelification is reversible on warming	18 months in an unopened container. Store between 0˚C and 35˚C in a dry place. Do not store with explosive substances or spontaneously combusting substances. In the event of frost any gelling is reversible on warming
Preparation of surfaces		
	Clean surfaces and ArmaFlex Ultima surface with ArmaFlex Cleaner. Compatibility with bases: • Very good adhesion to metallic sufaces. • The adhesive's compatibility with colour coated sufaces needs to be tested. • Incompatible with asphalt, bitumen and red lead (linseed oil-based)	Clean surfaces and ArmaFlex Ultima surface with ArmaFlex Cleaner. Compatibility with bases: • Very good adhesion to metallic surfaces. • The adhesive's compatibility with colour coated sufaces needs to be tested. • Incompatible with asphalt, bitumen, red lead (linseed oil-based), polystyrene and plasticated PVC
Working time		
Drying time	3- 5 mins	2 min
Contact adhesion	15 - 20 mins	10 - 15 mins
Setting	36 hours	24 hours
The open time depends on the quantity as well as indoor climate conditions. Before operating plant the setting time needs to be allowed to elapse.		
Other technical features		
Flash point	approx -26 ˚C	
Expolsion limits	Lower: approx 1.1 Vol % Upper: approx 12.8 Vol %	
Hazard class	Highly flammable	
Ageing stability	Very good	
Resistance to weathering	Very good	
Recycling	Allocation of a waste code number, according to the European Waste Catalouge, should be carried out in agreement with the regional waste disposal company. For details see relevant Safety Data Sheet. Packaging must be emptied of all residues. Packaging with traces of cured product can be recycled. Packaging with uncured product must be recycled into new product.	
Transport classes	Depending on the type of transport	

ARMAFLEX RS850

Code	Description	Pieces/carton	£/pc
ADH-RS850/0.5	ArmaFlex RS850 0.5 Litre can	6	25.44

ARMAFLEX 520

Code	Description	Pieces/carton	£/pc
ADH-520/0.25E	ArmaFlex 520 0.25 Litre can with brush	24	8.82
ADH-520/0.5E	ArmaFlex 520 0.5 Litre can	12	15.20
ADH-520/1.0E	ArmaFlex 520 1.0 Litre can	12	25.67
ADH-520/2.5E	ArmaFlex 520 2.5 Litre can	8	64.19

ARMAFLEX ULTIMA 700

Code	Description	Pices/carton	£/pc
AHU-700/1.0	ArmaFlex Ultima 700 Adhesive, 1 Litre cans	12	37.17

ARMAFLEX ULTIMA RS850

Code	Description	Pices/carton	£/pc
AHU-RS850/0.5	ArmaFlex Ultima RS850 Adhesive, 0.75 Litre cans	6	35.61

ARMAFLEX HT625 ADHESIVE

Code	Description	Pices/carton
ADH-HT625/0.25	ArmaFlex HT625 one component adhesive, 0.25 Litre can, with brush	40
ADH-HT625/0.5	ArmaFlex HT625 one component adhesive, 0.5 Litre can, with brush	12
ADH-HT625/1.0	ArmaFlex HT625 one component adhesive, 1 Litre can, with brush	12

ArmaFlex® accessories

ARMAFLEX TOOLS FOR THE PROFESSIONALS!

When it comes to preventing condensation and energy losses on equipment, not only high-quality insulation material is crucial, but also the installation.

ArmaFlex insulation materials not only have the required technical properties, they can also be installed quickly and easily. Armacell already offers various tools and aids such as the ArmaFlex Application Manual and installation videos.

Now all the tools and aids are available in a lightweight, robust, lockable aluminium case!

PROPERTIES

ARMAFINISH 99

THE ELASTIC PAINT DESIGNED FOR PROTECTION & COVERING OF ARMAFLEX

- **Resistant to weathering and ageing**
- **Coating remains elastic**
- **Drip-free paint**
- **Specially developed for covering Armaflex®**
- **Protection of Armaflex® insulation materials**

ArmaFinish 99 is a water-based coating using an advanced terpolymer resin system. When properly applied the coating is suitable for the protection of ArmaFlex flexible thermal insulation materials against sunlight, UV radiation and chemical attack. The coating, when fully cured, maintains the flexibility, resistance to water vapour and fire performance of ArmaFlex material. Where resistance to damage is a particular requirement, the coating may be further strengthened using a mesh glass fibre scrim.

ARMAFLEX CLEANER

SURFACE CLEANER PREPARATION FOR ARMAFLEX® INSTALLATIONS

- **Ensures a clean surface before the use of ArmaFlex® Adhesives**
- **Removal of dirt from surfaces**
- **Cleaning of brushes and tools contaminated with ArmaFlex® adhesive**

ArmaFlex cleaner is a clear, colourless liquid. It is used for the removal of grease oils and dirt from surfaces prior to the use of ArmaFlex adhesives or ArmaFinish 99 paint. The cleaner may also be used to clean ArmaFlex adhesive from tools and brushes.

ARMAFLEX SF CLEANER
Solvent free cleaner

ArmaFlex SF Cleaner can be used to clean the dirty surfaces of technical installations as well as the surfaces of insulating materials. It comes with a very practical spray bottle.

TECHNICAL DATA

	ARMAFLEX SF Cleaner Water-soluble cleaner	ARMAFLEX Cleaner Special cleaner for use with all ArmaFlex adhesives
Colour	Beige	Clear
Material special info	Liquid	Liquid
Applications	Cleaning of surfaces where ArmaFlex is to be installed.	Cleaning of surfaces where ArmaFlex is to be installed.
Assembly	To ensure a perfect adhesion all contaminated sufaces, including ArmaFlex, must be cleaned.	To ensure a perfect adhesion all contaminated sufaces, including ArmaFlex, must be cleaned. In addition the cleaner can be used to sufaces where ArmaFinish 99 is being applied.
Remarks	ArmaFlex SF cleaner to be spayed onto areas that require cleaning and allowed to settle (time depending on the amount of dirt) before washing off.	Can also be used to clean tools.
Storage & shelf life	12 months sealed in original container. Keep container tightly closed in a cool, well ventilated place. Protect from frost and do not store below +5 ˚C.	12 months sealed in original container. Keep container tightly closed in a cool, well ventilated place. Protect from heat & direct sunlight. Do not store together with explosive substances or spontaneously combusting subtances.
Preparation of surfaces	Clean surfaces and ArmaFlex surface with ArmaFlex Cleaner. Compatibility with bases: • Very good adhesion to metallic sufaces. • The adhesive's compatibility with colour coated sufaces needs to be tested. • Incompatible with asphalt, bitumen and red lead (linseed oil-based)	
Flash point	>100 ˚C	approx -20 ˚C
Explosion limits		Lower: approx 1% Vol, Upper: approx 13 % Vol. Regulation of inflammable liquids.
Recycling	Dispose of waste according to applicable legislation, for more details see the relevant safety data sheets.	Allocation of a waste code number, according to the European Waste Catalouge, should be carried out in agreement with the regional waste disposal company. For details see relevant Safety Data Sheet. Packaging must be emptied of all residues. Cans must be emptied prior to recycling. Cans containing adhesive must be recycled into new product.
Transport classes	Non hazardous material as defined by the transport regulations.	Dependent on the transport sector

ARMAFINISH 99	
UV resistant paint that remains permanently elastic, resistant to weathering and with good ageing resistance.	
Colour	Black, White (RAL 9001) OR GREY (RAL 7037)
Material type	Non-drip
Material special info	Normal consumption: 0.55 Litres per M^2 when two coats applied (corresponds to a dry film thickness of 0.26mm)
Applications	Protection of ArmaFlex insulation materials when installed outdoors and for marking purposes when used indoors.
Assembly	ArmaFlex insulation (except HT/ArmaFlex & ArmaFlex Ultima, see product data sheets) installed outdoors, should be covered with two coats. Application temperature: +10˚C to +30 ˚C, Drying time: 2 hours (+20 ˚C), Max relative humidity: 80%. It's necessary to allow 2 hours between each coat and the second coat must be applied within 7 days. The paint may be applied with a brush or roller and tools cleaned with with water or ArmaFlex cleaner.
Remarks	Unprotected ArmaFlex must not be exposed to weathering for more than 3 days and ArmaFinish 99 paint should be applied as soon as possible. The protective coating should be inspected at regular intervals. After 2 years at the latest a further two coats should be applied.
Storage & shelf life	12 months in unopened container. Once open keep container tightly closed in a cool, well ventilated place and potect from frost.
Explosion limits	None
Recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. For details see relevant Safety Data Sheet. Cans must be emptied prior to recycling. Cans containing adhesive must be recycled into new product.

ARMAFLEX CLEANER

Code	Description	Pices/carton
CLEANER/1.0	Special cleaner for use with ArmaFlex Adhesive	4
SF-CLEANER/1.0	Solvent free cleaner for use with ArmaFlex Adhesive	6

ARMAFINISH 99 PAINT

Code	Description	Pices/carton
FINISH/BK-2.5	Protective paint for ArmaFlex, black, 2.5 Litres	4
FINISH/WH-2.5	Protective paint for ArmaFlex, White, 2.5 Litres	4
FINISH/GY-2.5	Protective paint for ArmaFlex, grey, 2.5 Litres	4

TAPE

Colour - Black , Microban®

Code	Description	Colour	Width (mm)	Length (m)	Thickness (mm)	Rolls/carton
AF-TAPE-MC	AF/ArmaFlex tape	Black	50	15	3	12
HT-TAPE	HT/ArmaFlex tape	Black	50	15	3	12
NH-TAPE	NH/ArmaFlex tape	Dark Grey	50	15	3	12
UD-TAPE	ArmaFlex Ultima tape	Blue	50	15	3	12
ACH-PSATAPES-30	Arma-Chek Silver tape	Silver	30	25	0.08	10
ACH-PSATAPES-50	Arma-Chek Silver tape	Silver	50	50	0.08	6
ACH-TAPED2025 •	Arma-Chek D tape	Dark Grey	20	25	0.18	12
ACH-TAPED5050 •	Arma-Chek D tape	Dark Grey	50	50	0.18	6
ACH-TAPED10025 •	Arma-Chek D tape	Dark Grey	100	25	0.18	3

MASTICS

Code	Description	Pieces/carton
ACH-MASTICSD	Mastic black. Sealing compound for installing Arma-Chek outdoors, 290 ml	12
ACH-MASTICS	Sealing compound for installing Arma-Chek R, Cartridge 290 ml	12

TOOLS

Code	Description	Pices/carton
BLADES	Spare blades for tube slitter-knife (50x6 pcs)	50x6
BLADES-PCS	Spare blades for tube slitter-knife (6 pcs)	6
CERAMIC KNIFE	Knife with ceramic blade (10 cm) and rubber grip (9 cm)	1
CUTTING-SET	ArmaFlex knife-set (3 knives + 1 sharpening stone)	1
GLUEM-BRUSH11MM	Gluemaster extra brush points with cap (11mm diameter)	5x4
GLUEM-BRUSH17MM	Gluemaster extra brush points with cap (17mm diameter)	5x4
GLUEMASTER B	ArmaFlex Gluemaster (adhesive pump)	12
SLITTER	Special tube slitter-knife	10

TOOLBOX

Length - 570mm, Width - 325mm, Thickness - 160mm, Aluminium toolbox

Code	Description	Pices/carton
TOOLBOX	Case containing tools to install ArmaFlex	1

TOOLS FOR THE PROFESSIONALS

ARMAFLEX TOOLBOX

All the tools and aids required to install ArmaFlex professionally in a lightweight, yet robust, aluminium case. With all the high-quality tools for measuring, cutting and gluing elastomeric insulation materials insulators, are well-equipped for all fields of application.

MEASURING CORRECTLY

- **ArmaFlex Application Manual**
- **Folding rule with circumference scale**
- **Callipers (300 mm) to determine diameters precisely**
- **Edding & silver-ink marker & ballpoint pen**
- **Bow compass with holder**

CUT PERFECTLY

- **ArmaFlex template**
- **4 knives: with blade length of 9, 17, 27 cm & 1 ceramic knife**
- **Knife holster**
- **Sharpening stone**
- **Copper pipe ends (6 different diameters)**
- **Sharpening tool for copper pipe ends**

GLUE NEATLY

- **ArmaFlex short-bristle brushes 14, 70mm flat brush**
- **ArmaFlex gluemaster (adhesive pump)**
- **Cleaning cloth for tools**

Armaflex Toolbox
Install it. Trust it.

armacell

Pipe Diameter chart

COPPER PIPES

STEEL PIPES

PLASTIC PIPES

Insulation bore size (mm)	COPPER PIPE		STEEL PIPE			PASTIC PIPE
	OD (mm)	OD (inch)	Nominal Ø (DN)	OD (mm)	OD (inch)	OD (mm)
6	6	1/4				6
10	10	3/8	6	10.2	1/8	10
12	12	1/2				12
15	15	5/8	8	13.5	1/4	
18	18	3/4	10	17.2	3/8	16
20	19	3/4				20
22	22	7/8	15	21.3	1/2	
28	28	1 1/8	20	26.9	3/4	25
35	35	1 3/8	25	33.7	1	
42	42	1 5/8	32	42.4	1 1/4	40
48	48	1 7/8	40	48.3	1 1/2	
54	54	2 1/8				50
60	60	2 5/8	50	60.3	2	
67	67	2 5/8				63
76	76	3	65	76.1	2 1/2	75
80	80	3 1/8				
89	89	3 1/2	80	88.9	3	
93	92	3 5/8				90
108	108	4 1/4				
114	114	4 1/2	100	114.3	4	110
Sheet required						125
	133					
			125	139.7	5	140
	159					160
			150	168.3	6	
						180
	219		200	219.1	8	
						225
						250
	267					
			250	273	10	
						280
						315
			300	329.9	12	
			350	355.6	14	355
			400	406.4	16	400
			450	457	18	
			500	508	20	
			600	610	24	

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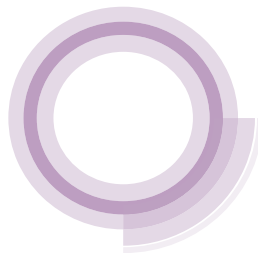e: derek.hood@armacell.com
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