kaiflex® PROTECT

Resistant to mechanical impact

Insulation protects pipework from condensation, corrosion and energy loss whilst reducing noise levels and playing a role in health & safety provision. Whenever exposed, insulation is covered to ensure it remains free from damage whilst also exhibiting a visual appearance in fitting with its location. Applying the correct covering system will increase the lifespan of insulation, keeping pipework dry and corrosion free for longer periods of time.

Selecting the most appropriate protective covering can be an involved process. The first and most crucial decision to take is to use a non-metallic covering system. Non-metallic covering systems are completely free from any risk of galvanic or bi-metallic corrosion - reducing the monitoring and maintenance requirements.

Kaimann offers a full and varied range of Kaiflex Protect covering systems to suit the needs of almost any project. All Kaiflex Protect systems are non-metallic and applied without the need for specialist labour or hot working permits.

kaiflex® PROTECT Alu-TEC

Rigid PVC cladding with a bright surface finish

Semi-rigid PVC pipe covering with permanent curl characteristics, Kaiflex Alu-TEC protects insulation from damage whilst providing a durable anti-static surface finish.

Kaiflex Alu-TEC gives a visually attractive surface resembling a brightly polished Aluminium pipe, providing all of the advantages of a metallic cladding but with the added benefits of an anti-static surface finish that cannot corrode.

- Semi-rigid PVC shell snaps over insulation
- Attractive low emissivity surface resembles metal
- Durable and protective covering
- Non-metallic covering free from corrosion

Kaiflex Protect Alu-TEC Technical Specification: Covering

Polymer		PVC-Aluminium composite	
Colour		Silver	
Thickness		230 µm	
Upper Temperature Limit		+75°C	
Lower Temperature Limit		-25°C	see remark (1)
Water Vapour Permeability		< 0.028 g/m²/d	Test acc. to ISO 15106-2
Weight		340 g/m²	Test acc. to EN 22286
Tensile Strength	MD (2)	200 N / 15 mm	Test acc. to EN ISO 527-3
	CD (2)	175 N / 15 mm	
Elongation	MD (2)	45%	Test acc. to EN ISO 527-3
	CD (2)	51%	
Tear Strength	MD (2)	70 N	Test acc. to EN ISO 527-3
	CD (2)	28 N	
Puncture Resistance	Ø 0.8 mm	23 N	Test acc. to prEN 14477
	Ø 0.3 mm	87 N	
Resistance to ...	UV radiation	Excellent	
	Impact	Good	
Outdoor applications		**No** additional protection against UV radiation required	

Remark (1)   For temperatures below -25°C please contact our Technical Support Team for advice.

Remark (2)   MD and CD refer to "**M**achine **D**irection" and "**C**ross **D**irection" accordingly.

Remark (3)   As standard Kaiflex Protect Alu-TEC is based on Kaiflex ST Class O insulation. It is also available based on Kaiflex HF and Kaiflex BluEco substrates. Prices and delivery quoted on request.

kaiflex® PROTECT Alu-TEC

Rigid PVC cladding with a bright surface finish

Kaiflex Protect Alu-TEC pre-covered selfseal tubes

Insulation: Kaiflex ST Class 0; Colour Covering: silver Length: 1 m; overlap with selfadhesive strip

Copper Pipe Cu			Iron & Steel pipe Fe		13 mm Insulation Thickness			19 mm Insulation Thickness			25 mm Insulation Thickness		
NB inch	Nom OD inch	Nom OD mm	NB inch	Nom OD mm	Reference	m / carton		Reference	m / carton		Reference	m / carton	
1/2	5/8	15			ST-TEC-13x015	77		ST-TEC-19x015	43		ST-TEC-25x015	30	
5/8	3/4				ST-TEC-13x020	60		ST-TEC-19x020	38		ST-TEC-25x020	25	
3/4	7/8	22	1/2	21.3	ST-TEC-13x022	55		ST-TEC-19x022	37		ST-TEC-25x022	21	
1	1 1/8	28	3/4	26.9	ST-TEC-13x028	43		ST-TEC-19x028	29		ST-TEC-25x028	20	
1 1/4	1 3/8	35	1	33.7	ST-TEC-13x035	38		ST-TEC-19x035	24		ST-TEC-25x035	16	
1 1/2	1 5/8	42	1 1/4	42.4	ST-TEC-13x042	28		ST-TEC-19x042	20		ST-TEC-25x042	12	
			1 1/2	48.3	ST-TEC-13x048	24		ST-TEC-19x048	15		ST-TEC-25x048	12	
2	2 1/8	54			ST-TEC-13x054	23		ST-TEC-19x054	15		ST-TEC-25x054	11	
			2	60.3	ST-TEC-13x060	20		ST-TEC-19x060	14		ST-TEC-25x060	11	
					ST-TEC-13x067	20		ST-TEC-19x067	14				
2 3/16	3	76.1	2 1/2	76.1	ST-TEC-13x076	17		ST-TEC-19x076	14		ST-TEC-25x076	9	
		80			ST-TEC-13x080	15		ST-TEC-19x080	13				
			3	88.9	ST-TEC-13x089	15		ST-TEC-19x089	11		ST-TEC-25x089	7	
			3 1/2	101.6	ST-TEC-13x102 [1]	15		ST-TEC-19x102 [1]	10				
4	4 1/4	108			ST-TEC-13x108 [1]	14		ST-TEC-19x108 [1]	10		ST-TEC-25x108 [1]	5	
			4	114.3	ST-TEC-13x114 [1]	14		ST-TEC-19x114 [1]	9		ST-TEC-25x114 [1]	5	
				125.0	ST-TEC-13x125 [1]	10		ST-TEC-19x125 [1]	9				
		133		133.0	ST-TEC-13x133 [1]	9		ST-TEC-19x133 [1]	6				
			5	139.7	ST-TEC-13x140 [1]	9		ST-TEC-19x140 [1]	5		ST-TEC-25x140 [1]	3	

Kaiflex Protect Alu-TEC pre-covered continous sheet

Insulation: Kaiflex ST Class 0; Colour Covering: silver

Insulation Thickness mm	Width mm	Length m	Pre-covered continous sheet			Pre-covered continous sheet with self-adhesive backing		
			Reference	m² / carton		Reference	m² / carton	
10	1000	24	ST-TEC-10-E	20		ST-TEC-10-A-E	20	
13	1000	14	ST-TEC-13-E	14		ST-TEC-13-A-E	14	
19	1000	10	ST-TEC-19-E	10		ST-TEC-19-A-E	10	
25	1000	8	ST-TEC-25-E	8		ST-TEC-25-A-E	8	
32	1000	6	ST-TEC-32-E	6		ST-TEC-32-A-E	6	

Kaiflex Protect ALU-TEC covering

Silver covering for Kaiflex insulation products

Reference	Width mm	Length of roll m	m² / roll	
TEC-COVER	1000	25	25	

- Kaiflex Protect Alu-TEC is also available based on Kaiflex HF and Kaiflex BluEco substrates; price and delivery quoted on request
- All Kaiflex Protect Alu-TEC pre-covered tubes which are marked with (1) are delivered as slitted tubes only
- Kaiflex Protect Alu-TEC products: Delivery 10 working days

kaiflex® PROTECT ALU-NET

Bright surface finish for internal applications

Glass fibre reinforced Aluminium foil covering for Kaiflex insulation, Kaiflex Protect Alu-NET protects insulation against mechanical damage and can be supplied either separately as rolls of thin sheet or pre-applied to Kaiflex tube or sheet.

Kaiflex Protect Alu-NET is particularly attractive with a superior aluminium finish that provides an alternative to metal cladding on a range of applications.
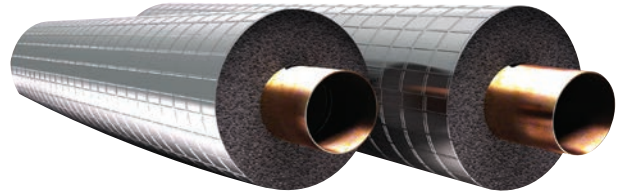
- Attractive Aluminium foil finish
- Protects against impact
- Cleanable surface

Kaiflex Protect Alu-NET Technical Specification: Covering

Material		LDPE / Glass cloth / Aluminium foil composite	
Colour		Silver	
Upper Temperature Limit		+75°C	
Lower Temperature Limit		-25°C	see remark (1)
Water Vapour Permeability		< 0.03 g/m²/d	Test acc. to DIN 53122
Weight		86 g/m²	
Tensile Strength		250 N / 50 mm	Test acc. to DIN 53354
Elongation		4%	Test acc. to DIN 53354
Resistance to ...	UV radiation	Very Good	
	Impact	Extremely Good	
Outdoor applications		Application **indoors only**	

Remark (1)   For temperatures below -25°C please contact our Technical Support Team for advice.

Remark (2)   As standard Kaiflex Protect Alu-TEC is based on Kaiflex ST Class O insulation. It is also available based on Kaiflex EPDMplus, Kaiflex HF and Kaiflex BluEco substrates.
Prices and delivery quoted on request.

Bright surface finish for internal applications

Kaiflex Protect Alu-NET pre-covered selfseal tubes

Insulation: Kaiflex ST Class O; Colour Covering: silver; Length: 1 m; overlap with selfadhesive strip

Copper Pipe Cu			Iron & Steel pipe Fe		13 mm Insulation Thickness		19 mm Insulation Thickness		25 mm Insulation Thickness	
NB inch	Nom OD inch	Nom OD mm	NB inch	Nom OD mm	Reference	m / carton	Reference	m / carton	Reference	m / carton
1/2	5/8	15			ALUNET-13x015	77	ALUNET-19x015	43	ALUNET-25x015	30
5/8	3/4				ALUNET-13x020	60	ALUNET-19x020	38	ALUNET-25x020	25
3/4	7/8	22	1/2	21.3	ALUNET-13x022	55	ALUNET-19x022	37	ALUNET-25x022	21
1	1 1/8	28	3/4	26.9	ALUNET-13x028	43	ALUNET-19x028	29	ALUNET-25x028	20
1 1/4	1 3/8	35	1	33.7	ALUNET-13x035	38	ALUNET-19x035	24	ALUNET-25x035	16
1 1/2	1 5/8	42	1 1/4	42.4	ALUNET-13x042	28	ALUNET-19x042	20	ALUNET-25x042	12
			1 1/2	48.3	ALUNET-13x048	24	ALUNET-19x048	15	ALUNET-25x048	12
2	2 1/8	54			ALUNET-13x054	23	ALUNET-19x054	15	ALUNET-25x054	11
			2	60.3	ALUNET-13x060	20	ALUNET-19x060	14	ALUNET-25x060	11
					ALUNET-13x067	20	ALUNET-19x067	14		
2 3/16	3	76.1	2 1/2	76.1	ALUNET-13x076	17	ALUNET-19x076	14	ALUNET-25x076	9
		80			ALUNET-13x080	15	ALUNET-19x080	13		
			3	88.9	ALUNET-13x089	15	ALUNET-19x089	11	ALUNET-25x089	7
			3 1/2	101.6	ALUNET-13x102 [1]	15	ALUNET-19x102 [1]	10		
4	4 1/4	108			ALUNET-13x108 [1]	14	ALUNET-19x108 [1]	10	ALUNET-25x108 [1]	5
			4	114.3	ALUNET-13x114 [1]	14	ALUNET-19x114 [1]	9	ALUNET-25x114 [1]	5
				125.0	ALUNET-13x125 [1]	10	ALUNET-19x125 [1]	9		
		133		133.0	ALUNET-13x133 [1]	9	ALUNET-19x133 [1]	6		
			5	139.7	ALUNET-13x140 [1]	9	ALUNET-19x140 [1]	5	ALUNET-25x140 [1]	3
		159		160	ALUNET-13x160 [1]	8	ALUNET-19x160 [1]	4		

Kaiflex Protect Alu-NET pre-covered continous sheet

Insulation: Kaiflex ST Class O; Colour Covering: silver

Insulation Thickness mm	Width mm	Length m	Pre-covered continous sheet		Pre-covered continous sheet with self-adhesive backing	
			Reference	m ² / carton	Reference	m ² / carton
10	1000	24	ALUNET-10-E	20	ALUNET-10-A-E	20
13	1000	14	ALUNET-13-E	14	ALUNET-13-A-E	14
19	1000	10	ALUNET-19-E	10	ALUNET-19-A-E	10
25	1000	8	ALUNET-25-E	8	ALUNET-25-A-E	8
32	1000	6	ALUNET-32-E	6	ALUNET-32-A-E	6

- Kaiflex Protect Alu-NET is also available based on Kaiflex HF and Kaiflex BluEco substrates; price and delivery quoted on request
- All Kaiflex Protect Alu-NET pre-covered tubes which are marked with (1) are delivered as slitted tubes only
- Kaiflex Protect Alu-NET products: Delivery 10 working days

kaiflex® PROTECT F-Black

Mechanical resistance with a black surface finish

Tough black woven glass fibre fabric covering for Kaiflex insulation, Kaiflex Protect F Black protects insulation against mechanical damage and can be supplied either separately as rolls of thin sheet or pre-applied to Kaiflex tube or sheet.

Kaiflex Protect F Black is attractive, unobtrusive, easy to clean and ideal for covering pipe and duct insulation publicly exposed to view. The covering is also UV resistant and waterproof making it suitable for outdoor use.

- Weather & UV resistant for outdoor use
- Durable and protective covering
- Non-metallic covering free from corrosion

Kaiflex Protect F-Black Covering Technical Specification

Material		Woven glass fibre cloth with UV-protective film	
Colour		Black	
Upper Temperature Limit		+75°C	
Lower Temperature Limit		-25°C	see remark (1)
Weight		245 g/m²	Test acc. to EN 22286
Elongation		5%	Test acc. to EN ISO 13934
Tensile Strength	MD	3100 N / 50 mm	Test acc. to EN ISO 13934
	CD	2700 N / 50 mm	
Tear Strength	MD	165 N	Test acc. to EN ISO 53363
	CD	180 N	
Resistance to ...	UV radiation	Very Good	
	Impact	Good	
Outdoor applications		**No** additional protection against UV radiation required	

Remark (1)   For temperatures below -25°C please contact our Technical Support Team for advice.

Remark (2)   MD and CD refer to "**M**achine **D**irection" and "**C**ross **D**irection" accordingly.

Remark (3)   As standard Kaiflex Protect F-Black is based on Kaiflex ST Class 0 insulation. It is also available based on Kaiflex EPDMplus, Kaiflex HF and Kaiflex BluEco substrates.
Prices and delivery quoted on request.

Kaiflex Protect F-Black pre-covered selfseal tubes

Insulation: Kaiflex ST Class O; Colour Covering: black Length: 1 m; overlap with selfadhesive strip

NB inch	Nom OD inch	Nom OD mm	NB inch	Nom OD mm	Reference	m / carton	Reference	m / carton	Reference	m / carton
Copper Pipe Cu			Iron & Steel pipe Fe		13 mm Insulation Thickness		19 mm Insulation Thickness		25 mm Insulation Thickness	
1/2	5/8	15			STFB-13x015	77	STFB-19x015	43	STFB-25x015	30
5/8	3/4				STFB-13x020	60	STFB-19x020	38	STFB-25x020	25
3/4	7/8	22	1/2	21.3	STFB-13x022	55	STFB-19x022	37	STFB-25x022	21
1	1 1/8	28	3/4	26.9	STFB-13x028	43	STFB-19x028	29	STFB-25x028	20
1 1/4	1 3/8	35	1	33.7	STFB-13x035	38	STFB-19x035	24	STFB-25x035	16
1 1/2	1 5/8	42	1 1/4	42.4	STFB-13x042	28	STFB-19x042	20	STFB-25x042	12
			1 1/2	48.3	STFB-13x048	24	STFB-19x048	15	STFB-25x048	12
2	2 1/8	54			STFB-13x054	23	STFB-19x054	15	STFB-25x054	11
			2	60.3	STFB-13x060	20	STFB-19x060	14	STFB-25x060	11
					STFB-13x067	20	STFB-19x067	14		
2 3/16	3	76.1	2 1/2	76.1	STFB-13x076	17	STFB-19x076	14	STFB-25x076	9
		80			STFB-13x080	15	STFB-19x080	13		
			3	88.9	STFB-13x089	15	STFB-19x089	11	STFB-25x089	7
			3 1/2	101.6	STFB-13x102 [1]	15	STFB-19x102 [1]	10		
4	4 1/4	108			STFB-13x108 [1]	14	STFB-19x108 [1]	10	STFB-25x108 [1]	5
			4	114.3	STFB-13x114 [1]	14	STFB-19x114 [1]	9	STFB-25x114 [1]	5
				125.0	STFB-13x125 [1]	10	STFB-19x125 [1]	9		
		133		133.0	STFB-13x133 [1]	9	STFB-19x133 [1]	6		
			5	139.7	STFB-13x140 [1]	9	STFB-19x140 [1]	5	STFB-25x140 [1]	3
		159		160	STFB-13x160 [1]	8	STFB-19x160 [1]	4		

Kaiflex Protect F-Black pre-covered continous sheet

Insulation: Kaiflex ST Class O; Colour Covering: black

Insulation Thickness mm	Width mm	Length m	Pre-covered continous sheet		Pre-covered continous sheet with self-adhesive backing	
			Reference	m² / carton	Reference	m² / carton
10	1000	24	STFB-10-E	20	STFB-10-A-E	20
13	1000	14	STFB-13-E	14	STFB-13-A-E	14
19	1000	10	STFB-19-E	10	STFB-19-A-E	10
25	1000	8	STFB-25-E	8	STFB-25-A-E	8
32	1000	6	STFB-32-E	6	STFB-32-A-E	6

Kaiflex Protect F-Black covering

Black covering for the insulation products: Kaiflex ST Class O, Kaiflex EPDM Plus, Kaiflex HF and Kaiflex BluEco

| Reference	Width / mm	Length of roll / m	m² / roll
FB-COVER	1000	25	25

- Kaiflex Protect F is also available based on Kaiflex HF and Kaiflex BluEco substrates; price and delivery quoted on request
- All Kaiflex Protect F pre-covered tubes which are marked with (1) are delivered as slitted tubes only
- Kaiflex Protect F products: Delivery 10 working days

kaiflex® **PROTECT** *F-Alu*

Mechanical resistance with a bright surface finish

Tough woven glass fibre with a low emissivity aluminium finish, Kaiflex Protect F Alu protects insulation whilst providing a professional and durable finish.

Kaiflex Protect F-Alu is supplied either pre-applied to Kaiflex tube or sheet or separately on rolls and is a particularly attractive covering option for plant rooms and light industrial applications. As a non-metallic covering system, Kaiflex Protect F-Alu is free from any risk of corrosion and can be easily installed on site without the need for hot working permits.

- Attractive low emissivity surface resembles metal
- Durable and protective covering
- Non-metallic covering free from corrosion
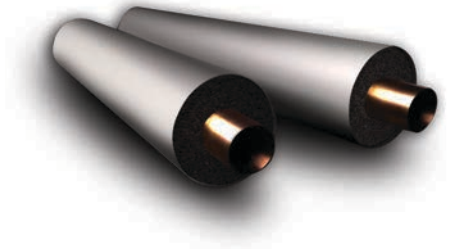
Kaiflex Protect F-Alu Covering Technical Specification

Material		Woven glass fibre cloth with UV-protective film	
Colour		Silver	
Upper Temperature Limit		+75°C	
Lower Temperature Limit		-25°C	see remark (1)
Weight		275 g/m²	Test acc. to EN 22286
Elongation		7%	Test acc. to EN ISO 13934
Tensile Strength	MD	4020 N / 50 mm	Test acc. to EN ISO 13934
	CD	3250 N / 50 mm	
Tear Strength	MD	335 N	Test acc. to EN ISO 13934
	CD	350 N	
Resistance to ...	UV radiation	Very Good	
	Impact	Good	
Outdoor applications		**No** additional protection against UV radiation required	

Remark (1)   For temperatures below -25°C please contact our Technical Support Team for advice.

Remark (2)   MD and CD refer to "**M**achine **D**irection" and "**C**ross **D**irection" accordingly.

Remark (3)   As standard Kaiflex Protect F-Alu is based on Kaiflex ST Class O insulation. It is also available based on Kaiflex EPDMplus, Kaiflex HF and Kaiflex BluEco substrates. Prices and delivery quoted on request.

kaiflex® PROTECT F-Alu

Mechanical resistance with a bright surface finish

Kaiflex Protect F-Alu pre-covered selfseal tubes

Insulation: Kaiflex ST Class O; Colour Covering: silver; Length: 1 m; overlap with selfadhesive strip

Copper Pipe Cu			Iron & Steel pipe Fe		13 mm Insulation Thickness			19 mm Insulation Thickness			25 mm Insulation Thickness		
NB inch	Nom OD inch	Nom OD mm	NB inch	Nom OD mm	Reference	m / carton		Reference	m / carton		Reference	m / carton	
1/2	5/8	15			STFA-13x015	77		STFA-19x015	43		STFA-25x015	30	
5/8	3/4				STFA-13x020	60		STFA-19x020	38		STFA-25x020	25	
3/4	7/8	22	1/2	21.3	STFA-13x022	55		STFA-19x022	37		STFA-25x022	21	
1	1 1/8	28	3/4	26.9	STFA-13x028	43		STFA-19x028	29		STFA-25x028	20	
1 1/4	1 3/8	35	1	33.7	STFA-13x035	38		STFA-19x035	24		STFA-25x035	16	
1 1/2	1 5/8	42	1 1/4	42.4	STFA-13x042	28		STFA-19x042	20		STFA-25x042	12	
			1 1/2	48.3	STFA-13x048	24		STFA-19x048	15		STFA-25x048	12	
2	2 1/8	54			STFA-13x054	23		STFA-19x054	15		STFA-25x054	11	
			2	60.3	STFA-13x060	20		STFA-19x060	14		STFA-25x060	11	
					STFA-13x067	20		STFA-19x067	14				
2 3/16	3	76.1	2 1/2	76.1	STFA-13x076	17		STFA-19x076	14		STFA-25x076	9	
		80			STFA-13x080	15		STFA-19x080	13				
			3	88.9	STFA-13x089	15		STFA-19x089	11		STFA-25x089	7	
			3 1/2	101.6	STFA-13x102 [1]	15		STFA-19x102 [1]	10				
4	4 1/4	108			STFA-13x108 [1]	14		STFA-19x108 [1]	10		STFA-25x108 [1]	5	
			4	114.3	STFA-13x114 [1]	14		STFA-19x114 [1]	9		STFA-25x114 [1]	5	
				125.0	STFA-13x125 [1]	10		STFA-19x125 [1]	9				
		133		133.0	STFA-13x133 [1]	9		STFA-19x133 [1]	6				
			5	139.7	STFA-13x140 [1]	9		STFA-19x140 [1]	5		STFA-25x140 [1]	3	
		159		160	STFA-13x160 [1]	8		STFA-19x160 [1]	4				

Kaiflex Protect F-Alu pre-covered continous sheet

Insulation: Kaiflex ST Class O; Colour Covering: silver

Insulation Thickness mm	Width mm	Length m	Pre-covered continous sheet			Pre-covered continous sheet with self-adhesive backing		
			Reference	m² / carton		Reference	m² / carton	
10	1000	24	STFA-10-E	20		STFA-10-A-E	20	
13	1000	14	STFA-13-E	14		STFA-13-A-E	14	
19	1000	10	STFA-19-E	10		STFA-19-A-E	10	
25	1000	8	STFA-25-E	8		STFA-25-A-E	8	
32	1000	6	STFA-32-E	6		STFA-32-A-E	6	

Kaiflex Protect F-Black covering

Silver covering for the insulation products: Kaiflex ST Class O, Kaiflex EPDM Plus, Kaiflex HF and Kaiflex BluEco

Reference	Width / mm	Length of roll / m	m² / roll	
FA-COVER	1000	25	25	

- Kaiflex Protect F is also available based on Kaiflex HF and Kaiflex BluEco substrates; price and delivery quoted on request
- All Kaiflex Protect F pre-covered tubes which are marked with (1) are delivered as slitted tubes only
- Kaiflex Protect F products: Delivery 10 working days

Resistant to mechanical impact

Kaiflex Protect Alu tape

Colour: silver; recommended for Kaiflex Protect ALU-TEC, Kaiflex Protect Alu-NET and Kaiflex Protect F-Alu; suitable for indoor use only

Width mm	Length m	Reference	rolls / carton	
19	25	**ALU-TAPE19**	36	
50	50	**ALU-TAPE50**	24	
100	50	**ALU-TAPE100**	12	

Kaiflex Protect Alu butyl tape

Colour: silver; recommended for Kaiflex Protect ALU-TEC and Kaiflex Protect F-Alu; suitable for outdoor use

Width mm	Length m	Reference	rolls / carton	
20	25	**ALU-BYT-TAPE20**	30	
50	25	**ALU-BYT-TAPE50**	12	
100	25	**ALU-BYT-TAPE100**	6	

Kaiflex Protect Black butyl tape

Colour: black; recommended for Kaiflex Protect F-Black; suitable for outdoor use

Width mm	Length m	Reference	rolls / carton	
20	20	**BLK-BYT-TAPE20**	30	
50	20	**BLK-BYT-TAPE50**	12	
100	20	**BLK-BYT-TAPE100**	6	

Kaiflex Mastic sealing compound

Reference	Colour	Cartridge content / ml	cartridges / carton	
MASTIC-GY	Grey	290	12	
MASTIC-BK	Black	290	12	
MASTIC-TR	Translucent	290	12	

- Kaiflex Protect products: 10 working days