KÖSTER
Waterproofing Systems

KÖSTER TPO 1.5 FR

Technical Data Sheet RT 815 150 FR W

Issued: 2024-08-13

Certificate of conformity of the factory production control 0761-CPR-0422 MPA Braunschweig,
Official Test Report according to 1204/0445/23 DIN EN 13956 MPA Braunschweig

TPO / FPO roofing membrane with glass fleece center reinforcement

Features
KÖSTER TPO FR membranes are hot-air-welding roofing and waterproofing membranes made of thermoplastic polyolefins (FPO/ TPO) based on Polyethylene with centrally embedded glass fleece reinforcement. KÖSTER TPO FR membranes are classified as Broof(t2) and Broof(t3) and are only available in white color with an SRI > 85. The KÖSTER TPO FR membranes and can be applied with different application methods such as mechanical fastening and loose-laid under ballast.

- Plastic waterproofing membrane made of high quality thermoplastic polyolefins based on polyethylene (PE)
- central glass fleece insert
- uniform material quality (no difference between upper and lower side)
- homogeneous seam bonding with hot air welding
- temperature and weather resistant
- classified according to Broof (t2)/(t3)
- aging and rot resistant
- high cold flexibility (≤ -30 °C)
- UV-stable
- bitumen compatible
- polystyrene compatible
- suitable for all types of insulation
- resistant against normal mechanical stresses
- resistant to microorganisms and rodent attack
- environmentally friendly
- free of softeners and chlorine
- safe for health, water, soil, and plants
- recyclable

Technical Data
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Fields of Application
KÖSTER TPO FR roofing membranes are used to waterproof unventilated and ventilated flat roofs, pitched roofs, green roofs and roof gardens with ballast and in cases of direct exposure to weathering.

Application
Please refer to the TPO Installation Instructions and the Technical Manual for TPO of KÖSTER BAUCHEMIE AG for correct application of KÖSTER TPO Roofing and Waterproofing Membranes.

Cleaning
Aged membranes can be mechanically cleaned by sanding or with KÖSTER TPO Cleaner.

Packaging

RT 815 150 FR W	1.5 mm x 1.50 m x 20 m

Related products

KÖSTER Contact Adhesive	Prod. code RT 102
KÖSTER TPO Cleaner	Prod. code RT 105 002
KÖSTER External Corner light grey 90 degrees	Prod. code RT 901 001
KÖSTER Internal Corner light grey 90 degrees	Prod. code RT 902 001
KÖSTER TPO Metal Composite Sheet light grey	Prod. code RT 910 002
KÖSTER TPO Metal Composite Coil light grey	Prod. code RT 910 030
KÖSTER Wall connection profile 60 mm	Prod. code RT 919 003
KÖSTER Bar for membrane fastening	Prod. code RT 919 004

R - Roofing membranes, roof waterproofing

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KÖSTER
Waterproofing Systems

CE 0761 15	**KÖSTER BAUCHEMIE AG** **Dieselstraße 1-10, 26607 Aurich** **KÖSTER TPO 1.5 FR** **EN 13956** **0761-CPR-0422** **TPO / FPO roofing membrane with central glass fleece insert**
Length according to DIN EN 1848-2	20 m
Width according to DIN EN 1848-2	1.50 m
Effective thickness according to DIN EN 1849-2	1.5 mm
	DIN EN 13956: 2012 **waterproofing of flat and sloped roofs. Application by loose laying with ballast or mechanical fastening**
Designation according to SPEC 20.000-201	DE/E1-FPO-BV-E-GV-1,5
Color	white
Visible Defects according to DIN EN 1850-2	free from visible defects
Straightness according to DIN EN 1848-2	≤ 50 mm
Flatness according to DIN EN 1848-2	≤ 10 mm
Mass per unit area according to DIN EN 1849-2	1900 g/m²
Water tightness according to DIN EN 1928 (Method B)	400 kPa/72h dicht
Exposure to liquid chemicals, including water according to DIN EN 1847	passed (Method B)
Exposure to external fire according to DIN CEN/TS 1187; DIN 4102-7; DIN EN 13501-5	Broof(t2)/(t3)[1)]
Reaction to fire according to EN 13501-1	Class E
Resistance to hail according to DIN EN 13583	
Rigid substrate	≥ 30 m/s
Soft substrate	≥ 38 m/s
Peel resistance of the overlap according to DIN EN 12316-2	≥ 400 N/50 mm
Shear resistance of the overlap according to DIN EN 12317-2	Failure beyond the overlap
Water vapor diffusion resistance according to DIN EN 1931	SD: > 500 m
Tensile characterisitcs according to DIN EN 12311-2	
Tensile strength	≥ 5 N/mm² (Method B)
Elongation at break	≥ 400 % (Method B)
Resistance to shock loads according to DIN EN 12691	≥ 800 mm (Method A)
Method A	≥ 700 mm
Method B	≥ 1250 mm
Resistance to static loading according to DIN EN 12730	
Method A	≥ 15 kg
Method B	≥ 20 kg
Tear continuation resistance according to DIN EN 12310-2	≥ 140 N
Root penetration resistance	given
Dimensional stability according to DIN EN 1107-2	≤ 0.2 %
Folding at low temperatures according to DIN EN 495-5	≤ - 30 °C
Behavior under UV irradiation, elevated temperatures, and water according to DIN EN 1297 (1000 h)	passed: Level 0
Ozone resistance according to DIN EN 1844	passed
Exposure to bitumen according to DIN EN 1548	passed
Durabilty against heat storage according to DIN EN 1296, DIN EN 1928 (Method A)	watertight

[1)] Requirements are met for roofs tested by KÖSTER in Germany. Further information can be requested from KÖSTER.

R - Roofing membranes, roof waterproofing

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KÖSTER TPO 1.8 FR

Technical Data Sheet RT 818 150 FR W

Issued: 2024-06-12

Certificate of conformity of the factory production control 0761-CPR-0422 MPA Braunschweig,
Official Test Report according to 1204/0445/23 DIN EN 13956 MPA Braunschweig

TPO / FPO roofing membrane with glass fleece center reinforcement

Features
KÖSTER TPO FR membranes are hot-air-welding roofing and waterproofing membranes made of thermoplastic polyolefins (FPO/ TPO) based on Polyethylene with centrally embedded glass fleece reinforcement. KÖSTER TPO FR membranes are classified as Broof(t2) and Broof(t3) and are only available in white color with an SRI > 85. The KÖSTER TPO FR membranes and can be applied with different application methods such as mechanical fastening and loose-laid under ballast.

- Plastic waterproofing membrane made of high quality thermoplastic polyolefins based on polyethylene (PE)
- central glass fleece insert
- uniform material quality (no difference between upper and lower side)
- homogeneous seam bonding with hot air welding
- temperature and weather resistant
- classified according Broof(t2)/(t3)
- aging and rot resistant
- high cold flexibility (≤ -30 °C)
- UV-stable
- bitumen compatible
- polystyrene compatible
- suitable for all types of insulation
- resistant against normal mechanical stresses
- resistant to microorganisms and rodent attack
- environmentally friendly
- free of softeners and chlorine
- safe for health, water, soil, and plants
- recyclable

Technical Data
Refer to last page

Fields of Application
KÖSTER TPO FR roofing membranes are used to waterproof unventilated and ventilated flat roofs, pitched roofs, green roofs and roof gardens with ballast and in cases of direct exposure to weathering.

Application
Please refer to the TPO Installation Instructions and the Technical Manual for TPO of KÖSTER BAUCHEMIE AG for correct application of KÖSTER TPO Roofing and Waterproofing Membranes.

Cleaning
Aged membranes can be mechanically cleaned by sanding or with KÖSTER TPO Cleaner.

Packaging

RT 818 150 FR W	1.8 mm x 1.50 m x 20 m

Related products

KÖSTER Contact Adhesive	Prod. code RT 102
KÖSTER TPO Cleaner	Prod. code RT 105 002
KÖSTER External Corner light grey 90 degrees	Prod. code RT 901 001
KÖSTER Internal Corner light grey 90 degrees	Prod. code RT 902 001
KÖSTER TPO Metal Composite Sheet light grey	Prod. code RT 910 002
KÖSTER TPO Metal Composite Coil light grey	Prod. code RT 910 030
KÖSTER Wall connection profile 60 mm	Prod. code RT 919 003
KÖSTER Bar for membrane fastening	Prod. code RT 919 004

R - Roofing membranes, roof waterproofing

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CE 0761 15	**KÖSTER BAUCHEMIE AG** **Dieselstraße 1-10, 26607 Aurich** **KÖSTER TPO 1.8 FR** **EN 13956** **0761-CPR-0422** **TPO / FPO roofing membrane with central glass fleece insert**
Length according to DIN EN 1848-2	20 m
Width according to DIN EN 1848-2	1.50 m
Effective thickness according to DIN EN 1849-2	1.8 mm
	DIN EN 13956: 2012 waterproofing of flat and sloped roofs. Application by loose laying with ballast or mechanical fastening
Designation according to SPEC 20.000-201	DE/E1-FPO-BV-E-GV-1,8
Color	white
Visible Defects according to DIN EN 1850-2	free from visible defects
Straightness according to DIN EN 1848-2	≤ 50 mm
Flatness according to DIN EN 1848-2	≤ 10 mm
Mass per unit area according to DIN EN 1849-2	2200 g/m²
Water tightness according to DIN EN 1928 (Method B)	400 kPa/72h dicht
Exposure to liquid chemicals, including water according to DIN EN 1847	passed (Method B)
Exposure to external fire according to DIN CEN/TS 1187; DIN 4102-7; DIN EN 13501-5	Broof(t2)/(t3)[1)]
Reaction to fire according to EN 13501-1	Class E
Resistance to hail according to DIN EN 13583	
Rigid substrate	≥ 30 m/s
Soft substrate	≥ 38 m/s
Peel resistance of the overlap according to DIN EN 12316-2	≥ 400 N/50 mm
Shear resistance of the overlap according to DIN EN 12317-2	Failure beyond the overlap
Water vapor diffusion resistance according to DIN EN 1931	SD: > 800 m
Tensile characterisitcs according to DIN EN 12311-2	
Tensile strength	≥ 5 N/mm² (Method B)
Elongation at break	≥ 400 % (Method B)
Resistance to shock loads according to DIN EN 12691	≥ 800 mm (Method A)
Method A	≥ 700 mm
Method B	≥ 1250 mm
Resistance to static loading according to DIN EN 12730	
Method A	≥ 15 kg
Method B	≥ 20 kg
Tear continuation resistance according to DIN EN 12310-2	≥ 140 N
Root penetration resistance	given
Dimensional stability according to DIN EN 1107-2	≤ 0.2 %
Folding at low temperatures according to DIN EN 495-5	≤ - 30 °C
Behavior under UV irradiation, elevated temperatures, and water according to DIN EN 1297 (1000 h)	passed: Level 0
Ozone resistance according to DIN EN 1844	passed
Exposure to bitumen according to DIN EN 1548	passed
Durabilty against heat storage according to DIN EN 1296, DIN EN 1928 (Method A)	watertight

[1)] Requirements are met for roofs tested by KÖSTER in Germany. Further information can be requested from KÖSTER.

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KÖSTER
Waterproofing Systems

KÖSTER TPO Pro 1.5

Technical Data Sheet RT 815 150 Pro W

Issued: 2024-08-21

- Certificate of conformity of factory production control 0761-CPR-0422 MPA Braunschweig
- Certificate of conformity of factory production control 0761-CPR-0423 MPA Braunschweig
- EPD-KBC-20210162-IBC1-DE Environmental Product Declaration according to the ISO 14025 and EN 15804+A2

TPO / FPO roofing and waterproofing membrane with glass fleece center reinforcement

Features

Sustainable TPO / FPO thermoplastic polyolefines roofing and waterproofing membrane (PE-based), produced with > 50% of high-quality recycled polymers (near-to-prime). The KÖSTER Pro 1.5 membrane is conformed to DIN EN 13967 and DIN EN 13956 and it is classified as a moisture barrier Type T. It is highly tear resistant and provides a very high flexibility so that even large cracks are bridged securely.

- Uniform material quality (no difference between upper and lower sides)
- Seams bonded with hot air welding
- High cold flexibility (≤ -30 °C)
- High Solar Reflectance (SRI > 95)
- UV-stable / resistant
- Compatible with bitumen membranes (old roofs restoration)
- Compatible with polystyrene
- Suitable for all types of insulation
- Resistant against normal mechanical stresses
- Resistant to microorganisms and rodent attack
- Resistant to standing water (puddles formation in roofs)
- Aging and rot resistant
- Free of plasticizers, softeners and chlorine
- Harmless to health, water, soil, animals and plants
- Sustainable (> 50% recycled polymers)
- Environmentally friendly
- 100% Recyclable

Technical Data

See last page

Fields of Application

KÖSTER TPO Pro Roofing and Waterproofing Membranes are used to waterproof flat roofs in cases of direct exposure to weathering. The membranes can be mechanically fastened or installed with ballast.

Substrate

For KÖSTER TPO Pro roofing membranes which have been exposed to weathering for a certain period of time, it is essential to carry out welding tests before further welding. If the welding result is unsatisfactory, the membrane must be roughened in the welding area with suitable grinding equipment. Alternatively, the KÖSTER TPO Cleaner can be used to pre-treat the weld seam.

Application

Please refer to the TPO Installation Instructions and the Technical Manual for TPO of KÖSTER BAUCHEMIE AG for correct application of KÖSTER TPO Roofing and Waterproofing Membranes.

Packaging

RT 815 150 Pro W	1.5 mm x 1.50 m x 20 m

Other

Due to the use of recycled raw materials, slight color differences may occur in different production batches. This has no impact on the quality and durability of the KÖSTER TPO Pro roofing membrane. We recommend paying attention to the batch number when laying and using it in individual construction phases.

Related products

KÖSTER Contact Adhesive	Prod. code RT 102
KÖSTER TPO Cleaner	Prod. code RT 105 002
KÖSTER External Corner light grey 90 degrees	Prod. code RT 901 001
KÖSTER Internal Corner light grey 90 degrees	Prod. code RT 902 001
KÖSTER TPO Metal Composite Sheet light grey	Prod. code RT 910 002
KÖSTER TPO Metal Composite Coil light grey	Prod. code RT 910 030
KÖSTER Wall connection profile 60 mm	Prod. code RT 919 003
KÖSTER Bar for membrane fastening	Prod. code RT 919 004

R - Roofing membranes, roof waterproofing

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CE 0761 15	KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich KÖSTER TPO Pro 1.5 EN 13956 0761-CPR-0422 EN 13967 0761-CPR-0423 FPO (PE) roofing and waterproofing membrane made of flexible Polyolefin with central glass fleece insert	
Length according to DIN EN 1848-2	20 m	
Width according to DIN EN 1848-2	1,50 m	
Effective thickness according to DIN EN 1849-2	1,5 mm	
	DIN EN 13956: 2012 waterproofing of flat and sloped roofs. Application by loose laying with ballast or mechanical fastening	**DIN EN 13967:2012 Vapor Barrier Type T**
Designation according DIN SPEC 20000-201 and DIN SPEC 20000-202	DE/E1-FPO-BV-E-GV-1,5	BA-FPO-BV-E-GV-1,5
Color	white	white
Visible Defects according to DIN EN 1850-2	free from visible defects	free from visible defects
Straightness according to DIN EN 1848-2	≤ 50 mm	≤ 50 mm
Flatness according to DIN EN 1848-2	≤ 10 mm	
Mass per unit area according to DIN EN 1849-2	1490 g /m²	1490 g /m²
Water tightness according to DIN EN 1928 (Method B)	400 kPa/72h watertight	400 kPa/72h watertight
Exposure to liquid chemicals, including water according to DIN EN 1847	passed (Method B)	watertight (Method A)
Exposure to external fire according to DIN CEN/TS 1187; DIN 4102-7; DIN EN 13501-5	Broof(t1)[1)]	-
Reaction to fire according to EN 13501-1	Class E	Class E
Resistance to hail according to DIN EN 13583		
Rigid substrate	≥ 25 m/s	-
Soft substrate	≥ 38 m/s	
Peel resistance of the overlap according to DIN EN 12316-2	≥ 400 N/50 mm	-
Shear resistance of the overlap according to DIN EN 12317-2	Failure beyond the overlap	Failure beyond the overlap
Water vapor diffusion resistance according to DIN EN 1931	μ = 85.000	μ = 85.000
Tensile characterisitcs according to DIN EN 12311-2		
Tensile strength	≥ 5 N/mm² (Method B)	≥ 5 N/mm² (Method B)
Elongation at break	≥ 350 % (Method B)	≥ 350 % (Method B)
Resistance to shock loads according to DIN EN 12691		
Method A	≥ 400 mm	≥ 400 mm
Method B	≥ 1000 mm	≥ 1000 mm
Resistance to static loading according to DIN EN 12730		
Method A	≥ 20 kg	≥ 20 kg
Method B	≥ 20 kg	≥ 20 kg
Tear continuation resistance according to DIN EN 12310-2	≥ 175 N	≥ 175 N
Dimensional stability according to DIN EN 1107-2	≤ 0,2 %	≤ 0,2 %
Folding at low temperatures according to DIN EN 495-5	≤ - 30 °C	-
Behavior under UV irradiation, elevated temperatures, and water according to DIN EN 1297 (1000 h)	passed: Level 0	-
Ozone resistance according to DIN EN 1844	passed: Cracking level 0	-
Exposure to bitumen according to DIN EN 1548	passed	watertight
Durabilty against heat storage according to DIN EN 1296, DIN EN 1928 (Method A)	watertight	watertight
Tear resistance (nail shank) according to DIN EN 12310-1	≥ 400 N	≥ 400 N

1) Requirements are met for roof structures tested by KÖSTER in Germany. Information on this is available from KÖSTER.

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Waterproofing Systems

KÖSTER TPO Pro 1.8

Technical Data Sheet RT 818 150 Pro W

Issued: 2024-08-21

- Certificate of conformity of factory production control 0761-CPR-0422 MPA Braunschweig
- Certificate of conformity of factory production control 0761-CPR-0423 MPA Braunschweig
- EPD-KBC-20210162-IBC1-DE Environmental Product Declaration according to the ISO 14025 and EN 15804+A2

TPO / FPO roofing and waterproofing membrane with glass fleece center reinforcement

Features

Sustainable TPO / FPO thermoplastic polyolefines roofing and waterproofing membrane (PE-based), produced with > 50% of high-quality recycled polymers (near-to-prime). The KÖSTER Pro 1.8 membrane is conformed to DIN EN 13967 and DIN EN 13956 and it is classified as a moisture barrier Type T. It is highly tear resistant and provides a very high flexibility so that even large cracks are bridged securely.

- Uniform material quality (no difference between upper and lower sides)
- Seams bonded with hot air welding
- High cold flexibility (≤ -30 °C)
- High Solar Reflectance (SRI > 95)
- UV-stable / resistant
- Compatible with bitumen membranes (old roofs restoration)
- Compatible with polystyrene
- Suitable for all types of insulation
- Resistant against normal mechanical stresses
- Resistant to microorganisms and rodent attack
- Resistant to standing water (puddles formation in roofs)
- Aging and rot resistant
- Free of plasticizers, softeners and chlorine
- Harmless to health, water, soil, animals and plants
- Sustainable (> 50% recycled polymers)
- Environmentally friendly
- 100% Recyclable

Technical Data

See last page

Fields of Application

KÖSTER TPO Pro Roofing and Waterproofing Membranes are used to waterproof flat roofs in cases of direct exposure to weathering. The membranes can be mechanically fastened or installed with ballast.

Substrate

For KÖSTER TPO Pro roofing membranes which have been exposed to weathering for a certain period of time, it is essential to carry out welding tests before further welding. If the welding result is unsatisfactory, the membrane must be roughened in the welding area with suitable grinding equipment. Alternatively, the KÖSTER TPO Cleaner can be used to pre-treat the weld seam.

Application

Please refer to the TPO Installation Instructions and the Technical Manual for TPO of KÖSTER BAUCHEMIE AG for correct application of KÖSTER TPO Roofing and Waterproofing Membranes.

Packaging

RT 818 150 Pro W	1.8 mm x 1.50 m x 20 m

Other

Due to the use of recycled raw materials, slight color differences may occur in different production batches. This has no impact on the quality and durability of the KÖSTER TPO Pro roofing membrane. We recommend paying attention to the batch number when laying and using it in individual construction phases.

Related products

KÖSTER Contact Adhesive	Prod. code RT 102
KÖSTER TPO Cleaner	Prod. code RT 105 002
KÖSTER External Corner light grey 90 degrees	Prod. code RT 901 001
KÖSTER Internal Corner light grey 90 degrees	Prod. code RT 902 001
KÖSTER Round Corner Patch light grey	Prod. code RT 903 001
KÖSTER TPO Metal Composite Sheet light grey	Prod. code RT 910 002
KÖSTER TPO Metal Composite Coil light grey	Prod. code RT 910 030
KÖSTER Wall connection profile 60 mm	Prod. code RT 919 003
KÖSTER Bar for membrane fastening	Prod. code RT 919 004

R - Roofing membranes, roof waterproofing

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KÖSTER
Waterproofing Systems

CE 0761 15	**KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich KÖSTER TPO Pro 1.8 EN 13956 0761-CPR-0422 EN 13967 0761-CPR-0423 FPO (PE) roofing and waterproofing membrane made of flexible Polyolefin with central glass fleece insert**	
Length according to DIN EN 1848-2	20 m	
Width according to DIN EN 1848-2	1,50 m	
Effective thickness according to DIN EN 1849-2	1,8 mm	
	DIN EN 13956: 2012 waterproofing of flat and sloped roofs. Application by loose laying with ballast or mechanical fastening	**DIN EN 13967:2012 Vapor Barrier Type T**
Designation according DIN SPEC 20000-201 and DIN SPEC 20000-202	DE/E1-FPO-BV-E-GV-1,8	BA-FPO-BV-E-GV-1,8
Color	white	white
Visible Defects according to DIN EN 1850-2	free from visible defects	free from visible defects
Straightness according to DIN EN 1848-2	≤ 50 mm	≤ 50 mm
Flatness according to DIN EN 1848-2	≤ 10 mm	
Mass per unit area according to DIN EN 1849-2	1780 g /m²	1780 g /m²
Water tightness according to DIN EN 1928 (Method B)	400 kPa/72h watertight	400 kPa/72h watertight
Exposure to liquid chemicals, including water according to DIN EN 1847	passed (Method B)	watertight (Method A)
Exposure to external fire according to DIN CEN/TS 1187; DIN 4102-7; DIN EN 13501-5	Broof(t1)[1)]	-
Reaction to fire according to EN 13501-1	Class E	Class E
Resistance to hail according to DIN EN 13583		
Rigid substrate	≥ 25 m/s	-
Soft substrate	≥ 38 m/s	
Peel resistance of the overlap according to DIN EN 12316-2	≥ 400 N/50 mm	-
Shear resistance of the overlap according to DIN EN 12317-2	Failure beyond the overlap	Failure beyond the overlap
Water vapor diffusion resistance according to DIN EN 1931	μ = 85.000	μ = 85.000
Tensile characterisitcs according to DIN EN 12311-2		
Tensile strength	≥ 5 N/mm² (Method B)	≥ 5 N/mm² (Method B)
Elongation at break	≥ 350 % (Method B)	≥ 350 % (Method B)
Resistance to shock loads according to DIN EN 12691		
Method A	≥ 400 mm	≥ 400 mm
Method B	≥ 1000 mm	≥ 1000 mm
Resistance to static loading according to DIN EN 12730		
Method A	≥ 20 kg	≥ 20 kg
Method B	≥ 20 kg	≥ 20 kg
Tear continuation resistance according to DIN EN 12310-2	≥ 175 N	≥ 175 N
Dimensional stability according to DIN EN 1107-2	≤ 0,2 %	≤ 0,2 %
Folding at low temperatures according to DIN EN 495-5	≤ - 30 °C	-
Behavior under UV irradiation, elevated temperatures, and water according to DIN EN 1297 (1000 h)	passed: Level 0	-
Ozone resistance according to DIN EN 1844	passed: Cracking level 0	-
Exposure to bitumen according to DIN EN 1548	passed	watertight
Durabilty against heat storage according to DIN EN 1296, DIN EN 1928 (Method A)	watertight	watertight
Tear resistance (nail shank) according to DIN EN 12310-1	≥ 400 N	≥ 400 N

1) Requirements are met for roof structures tested by KÖSTER in Germany. Information on this is available from KÖSTER.

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KÖSTER
Waterproofing Systems

KÖSTER TPO 1.5

Technical Data Sheet RT 815

Issued: 2024-07-25

EPD-KBC-20160014-IBC1-DE Environmental Product Declaration according to the ISO 14025 and EN 15804
Official Test Report according to 1200/057/15 DIN EN 13956 MPA Braunschweig, Official Test Report according to 5278/015/14 DIN EN 13967 MPA Braunschweig, Certificate of conformity of the factory production control 0761-CPR-0422 MPA Braunschweig, Fish test A14-02548 BMG Zürich, Official Test Report acccording to ETAG 006 4/2015 I.F.I. Aachen

TPO Roofing and Waterproofing membrane with centrally embedded glass fleece

Features
- Plastic waterproofing membrane made of high quality thermoplastic polyolefins based on polyethylene (PE)
- central glass fleece insert
- uniform material quality (no difference between upper and lower side)
- homogeneous seam bonding with hot air welding
- temperature and weather resistant
- aging and rot resistant
- high cold flexibility (≤ -50 °C)
- UV-stable
- root resistant
- bitumen compatible
- polystyrene compatible
- suitable for all types of insulation
- resistant against normal mechanical stresses
- resistant to microorganisms and rodent attack
- environmentally friendly
- free of softeners and chlorine
- safe for health, water, soil, and plants
- recyclable

Technical Data
Refer to last page

Fields of Application
KÖSTER TPO Roofing and Waterproofing Membranes are used to waterproof unventilated and ventilated flat roofs, pitched roofs, green roofs, terraces, balconies, roof gardens and underground garages with ballast and in cases of direct exposure to weathering. KÖSTER TPO Roofing and Waterproofing Membranes can be used for the waterproofing of basements, wet rooms and tanks.
Can be used for building waterproofing in accordance with DIN 18195, DIN 18531-18535.

Application
Please refer to the TPO Installation Instructions and the Technical Manual for TPO of KÖSTER BAUCHEMIE AG for correct application of KÖSTER TPO Roofing and Waterproofing Membranes.

Cleaning
Aged membranes can be mechanically cleaned by sanding or with KÖSTER TPO Cleaner.

Packaging

RT 815 025	1.5 mm x 0.25 m x 20 m
RT 815 035	1.5 mm x 0.35 m x 20 m
RT 815 052	1.5 mm x 0.525 m x 20 m
RT 815 075	1.5 mm x 0.75 m x 20 m
RT 815 105	1.5 mm x 1.05 m x 20 m
RT 815 150	1.5 mm x 1.50 m x 20 m

Safety
Observe all local, State, and Governmental safety guidelines when installing the membrane.

Related products

KÖSTER Contact Adhesive	Prod. code RT 102
KÖSTER TPO 2.0 U	Prod. code RT 820 U
KÖSTER External Corner light grey 90 degrees	Prod. code RT 901 001
KÖSTER Internal Corner light grey 90 degrees	Prod. code RT 902 001
KÖSTER TPO Metal Composite Sheet light grey	Prod. code RT 910 002
KÖSTER TPO Metal Composite Coil light grey	Prod. code RT 910 030
KÖSTER Wall connection profile 60 mm	Prod. code RT 919 003
KÖSTER Bar for membrane fastening	Prod. code RT 919 004

R - Roofing membranes, roof waterproofing

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KÖSTER
Waterproofing Systems

CE 0761 15	**KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich KÖSTER TPO 1.5 EN 13956 0761-CPR-0422 EN 13967 0761-CPR-0423 TPO (PE) roofing and waterproofing membrane with central glass fleece insert**	
Length according to DIN EN 1848-2	20 m	
Width according to DIN EN 1848-2	2.10; 1.50; 1.05; 0.75; 0.525; 0.35; 0.25 m	
Effective thickness according to DIN EN 1849-2	1.5 mm	
	DIN EN 13956: 2012 waterproofing of flat and sloped roofs. Application by loose laying with ballast or mechanical fastening	**DIN EN 13967:2012 Vapor Barrier Type T**
Designation according DIN SPEC 20000-201 and DIN SPEC 20000-202	DE/E1-FPO-BV-E-GV-1,5	BA-FPO-BV-E-GV-1,5
Color	light grey	light grey
Visible Defects according to DIN EN 1850-2	free from visible defects	free from visible defects
Straightness according to DIN EN 1848-2	≤ 50 mm	≤ 50 mm
Flatness according to DIN EN 1848-2	≤ 10 mm	
Mass per unit area according to DIN EN 1849-2	1490 g /m²	1490 g /m²
Water tightness according to DIN EN 1928 (Method B)	400 kPa/24h watertight	400 kPa/72h watertight
Exposure to liquid chemicals, including water according to DIN EN 1847	passed (Method B)	watertight (Method A)
Exposure to external fire according to DIN CEN/TS 1187; DIN 4102-7; DIN EN 13501-5	Broof(t1)[1)]	-
Reaction to fire according to EN 13501-1	Class E	Class E
Resistance to hail according to DIN EN 13583		
Rigid substrate	≥ 25 m/s	-
Soft substrate	≥ 38 m/s	
Peel resistance of the overlap according to DIN EN 12316-2	≥ 500 N/50 mm	-
Shear resistance of the overlap according to DIN EN 12317-2	Failure beyond the overlap	Failure beyond the overlap
Water vapor diffusion resistance according to DIN EN 1931	μ = 85,000; Sd = 127.5 m	μ = 85,000; Sd = 127.5 m
Tensile characterisitcs according to DIN EN 12311-2		
Tensile strength	≥ 6 N/mm² (Method B)	≥ 6 N/mm² (Method B)
Elongation at break	≥ 500 % (Method B)	≥ 500 % (Method B)
Resistance to shock loads according to DIN EN 12691		
Method A	≥ 500 mm	≥ 500 mm
Method B	≥ 1000 mm	≥ 1000 mm
Resistance to static loading according to DIN EN 12730		
Method A	≥ 20 kg	≥ 20 kg
Method B	≥ 20 kg	≥ 20 kg
Tear continuation resistance according to DIN EN 12310-2	≥ 175 N	≥ 175 N
Root penetration resistance [2)]	given	-
Dimensional stability according to DIN EN 1107-2	≤ 0.2 %	≤ 0.2 %
Folding at low temperatures according to DIN EN 495-5	≤ - 50 °C	-
Behavior under UV irradiation, elevated temperatures, and water according to DIN EN 1297 (1000 h)	passed: Level 0	-
Ozone resistance according to DIN EN 1844	passed	-
Exposure to bitumen according to DIN EN 1548	passed	watertight
Durabilty against heat storage according to DIN EN 1296, DIN EN 1928 (Method A)	watertight	watertight
Tear resistance (nail shank) according to DIN EN 12310-1	≥ 500 N	≥ 500 N

1) Requirements are met for roofs tested by KÖSTER in Germany. Further information can be requested from KÖSTER. 2) Applies only to green roofs

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KÖSTER
Waterproofing Systems

KÖSTER TPO 1.8

Technical Data Sheet RT 818

Issued: 2024-08-05

EPD-KBC-20160014-IBC1-DE Environmental Product Declaration according to the ISO 14025 and EN 15804

Official Test Report according to 1200/057/15 DIN EN 13956 MPA Braunschweig, Official Test Report according to 5278/015/14 DIN EN 13967 MPA Braunschweig, Certificate of conformity of the factory production control 0761-CPR-0422 MPA Braunschweig, Fish test A14-02548 BMG Zürich, Official Test Report acccording to ETAG 006 4/2015 I.F.I. Aachen

TPO Roofing and Waterproofing membrane with centrally embedded glass fleece

Features
- Plastic waterproofing membrane made of high quality thermoplastic polyolefins based on polyethylene (PE)
- central glass fleece insert
- uniform material quality (no difference between upper and lower side)
- homogeneous seam bonding with hot air welding
- temperature and weather resistant
- aging and rot resistant
- high cold flexibility (≤ -50 °C)
- UV-stable
- root resistant
- compatible with bitumen
- compatible with polystyrene
- suitable for all types of insulation
- resistant against normal mechanical stresses
- resistant to microorganisms and rodent attack
- environmentally friendly
- free of softeners and chlorine
- safe for health, water, soil, and plants
- recyclable

Technical Data
Refer to last page

Fields of Application
KÖSTER TPO Roofing and Waterproofing Membranes are used to waterproof unventilated and ventilated flat roofs, pitched roofs, green roofs, terraces, balconies, roof gardens and underground garages with ballast and in cases of direct exposure to weathering. KÖSTER TPO Roofing and Waterproofing Membranes can be used for the waterproofing of basements, wet rooms and tanks.

Application
Please refer to the TPO Installation Instructions and the Technical Manual for TPO of KÖSTER BAUCHEMIE AG for correct application of KÖSTER TPO Roofing and Waterproofing Membranes.

Packaging

RT 818 025	1.8 mm x 0.25 m x 20 m
RT 818 035	1.8 mm x 0.35 m x 20 m
RT 818 052	1.8 mm x 0.525 m x 20 m
RT 818 075	1.8 mm x 0.75 m x 20 m
RT 818 105	1.8 mm x 1.05 m x 20 m
RT 818 150	1.8 mm x 1.50 m x 20 m
RT 818 210	1.8 mm x 2.10 m x 20 m

Related products

KÖSTER Contact Adhesive	Prod. code RT 102
KÖSTER TPO 2.0 U	Prod. code RT 820 U
KÖSTER External Corner light grey 90 degrees	Prod. code RT 901 001
KÖSTER Internal Corner light grey 90 degrees	Prod. code RT 902 001
KÖSTER TPO Metal Composite Sheet light grey	Prod. code RT 910 002
KÖSTER TPO Metal Composite Coil light grey	Prod. code RT 910 030
KÖSTER Wall connection profile 60 mm	Prod. code RT 919 003
KÖSTER Bar for membrane fastening	Prod. code RT 919 004

R - Roofing membranes, roof waterproofing

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KÖSTER
Waterproofing Systems

CE 0761 15	**KÖSTER BAUCHEMIE AG** **Dieselstraße 1-10, 26607 Aurich** **KÖSTER TPO 1.8** **EN 13956 0761-CPR-0422** **EN 13967 0761-CPR-0423** **TPO (PE) roofing and waterproofing membrane with central glass fleece insert**	
Length according to DIN EN 1848-2	20 m (65´ 7 3/8")	
Width according to DIN EN 1848-2 metric	2.10; 1.50; 1.05; 0.75; 0.525; 0.35; 0.25 m	
Width according to DIN EN 1848-2 standard	6´10 5/8", 4´11 5/8", 3´5 3/8", 2´5 1/2", 1´8 5/8", 1´1 3/4", 9 7/8"	
Effective thickness according to DIN EN 1849-2	1.8 mm (71 mil)	
	DIN EN 13956: 2012 waterproofing of flat and sloped roofs. Application by loose laying with ballast or mechanical fastening	**DIN EN 13967:2012 Vapor Barrier Type T**
Designation according DIN SPEC 20000-201 and DIN SPEC 20000-202	DE/E1-FPO-BV-E-GV-1,8	BA-FPO-BV-E-GV-1,8
Color	light grey	light grey
Visible Defects according to DIN EN 1850-2	free from visible defects	free from visible defects
Straightness according to DIN EN 1848-2	≤ 50 mm (1 7/8")	≤ 50 mm (1 7/8")
Flatness according to DIN EN 1848-2	≤ 10 mm (3/8")	
Mass per unit area according to DIN EN 1849-2	1740 g /m² (5.7 oz/ft²)	1740 g /m² (5.7 oz/ft²)
Water tightness according to DIN EN 1928 (Method B)	400 kPa/24h watertight	400 kPa/72h watertight
Exposure to liquid chemicals, including water according to DIN EN 1847	passed (Method B)	watertight (Method A)
Exposure to external fire according to DIN CEN/TS 1187; DIN 4102-7; DIN EN 13501-5	Broof(t1)[1)]	-
Reaction to fire according to EN 13501-1	Class E	Class E
Resistance to hail according to DIN EN 13583		
Rigid substrate	≥ 25 m/s (56 mph)	-
Soft substrate	≥ 40 m/s (89 mph)	
Peel resistance of the overlap according to DIN EN 12316-2	≥ 500 N/50 mm (57 lb/in)	-
Shear resistance of the overlap according to DIN EN 12317-2	Failure beyond the overlap	Failure beyond the overlap
Water vapor diffusion resistance according to DIN EN 1931	μ = 85,000; Sd = 153 m	μ = 85,000; Sd = 153 m
Tensile characterisitcs according to DIN EN 12311-2		
Tensile strength	≥ 7 N/mm² (Method B) (1015 psi)	≥ 7 N/mm² (Method B) (1015 psi)
Elongation at break	≥ 500 % (Method B)	≥ 500 % (Method B)
Resistance to shock loads according to DIN EN 12691		
Method A	≥ 750 mm (29.5")	≥ 750 mm (29.5")
Method B	≥ 1250 mm (49.2")	≥ 1250 mm (49.2")
Resistance to static loading according to DIN EN 12730		
Method A	≥ 20 kg (44 lbs)	≥ 20 kg (44 lbs)
Method B	≥ 20 kg (44 lbs)	≥ 20 kg (44 lbs)
Tear continuation resistance according to DIN EN 12310-2	≥ 200 N (45 lbs)	≥ 200 N (45 lbs)
Root penetration resistance [2)]	given	-
Dimensional stability according to DIN EN 1107-2	≤ 0.2 %	≤ 0.2 %
Folding at low temperatures according to DIN EN 495-5	≤ - 50 °C	-
Behavior under UV irradiation, elevated temperatures, and water according to DIN EN 1297 (1000 h)	passed: Level 0	-
Ozone resistance according to DIN EN 1844	passed	-
Exposure to bitumen according to DIN EN 1548	passed	watertight
Durabilty against heat storage according to DIN EN 1296, DIN EN 1928 (Method A)	watertight	watertight

Tear resistance (nail shank) according to DIN EN 12310-1	≥ 500 N (112.4 lbs)	≥ 500 N (112.4 lbs)

1) Requirements are met for roofs tested by KÖSTER in Germany. Further information can be requested from KÖSTER. 2) Applies only to green roofs

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