KÖSTER
Waterproofing Systems

KÖSTER TPO 1.5 FR

Technical Data Sheet RT 815 150 FR W

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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(t1), 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 (t1)/(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

Other
For the manufacturer's warranty of KÖSTER BAUCHEMIE AG for TPO roofing membranes, the inspection of and compliance with the KÖSTER Roof Inspection and Maintenance Manual is mandatory.

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

KÖSTER BAUCHEMIE AG • Dieselstraße 1-10 • D-26607 Aurich • Tel. 04941/9709-0 • info@koester.eu • www.koester.eu

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CE 0761 24	**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 (t1)/(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[2)]
Shear resistance of the overlap according to DIN EN 12317-2	Failure beyond the overlap[2)]
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	
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
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 (5000 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.
2) Value measured under laboratory conditions in accordance with EN 12316-2 and EN 12317-2. In addition to the product properties, the peel value depends on the processing and the construction site environment. It is essential that the shear value test results in a break outside the joint seam (also under construction site conditions).

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