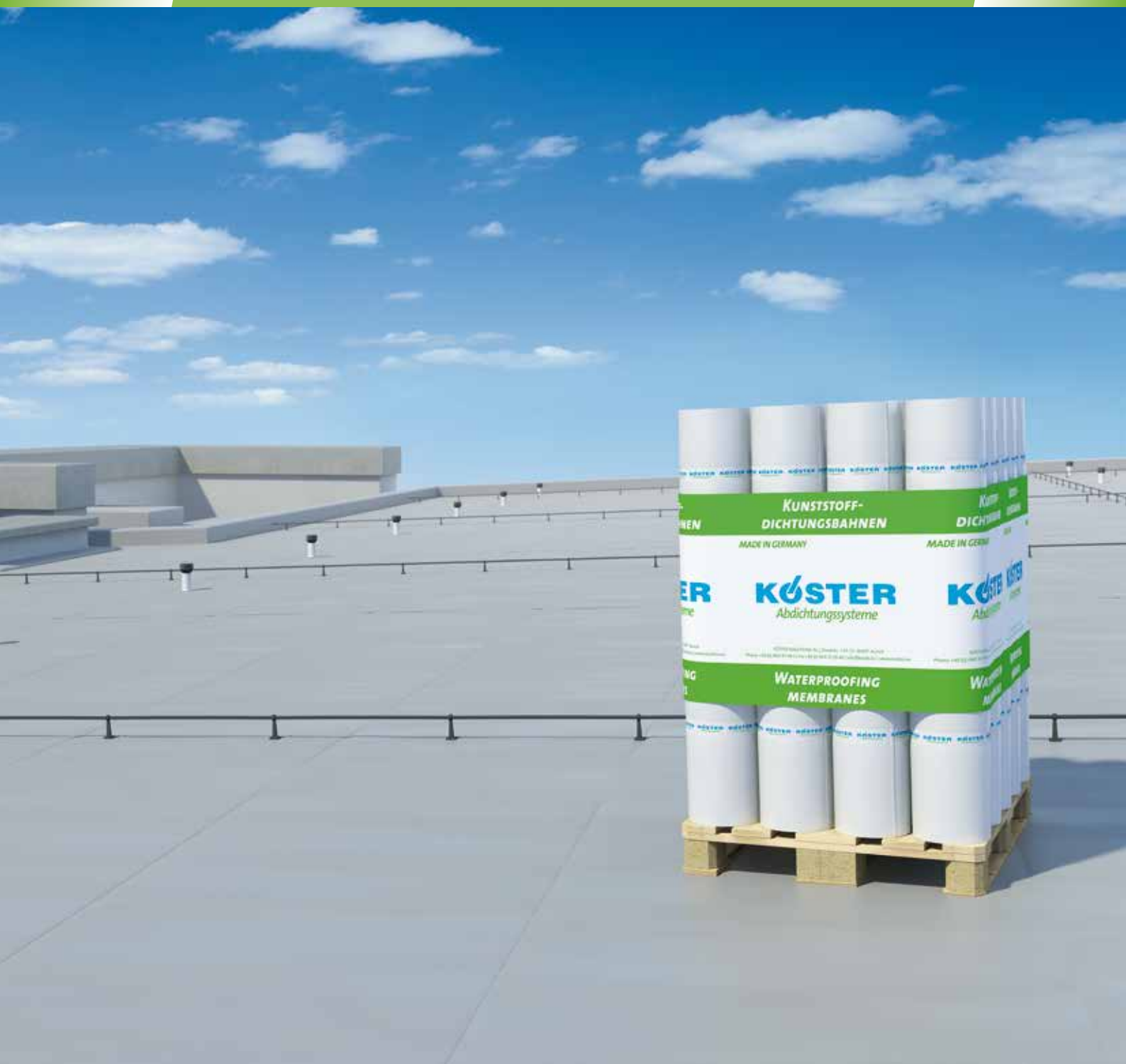


# ***ROOF WATERPROOFING WITH THERMOPLASTIC POLYOLEFIN MEMBRANES***



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ROSTER

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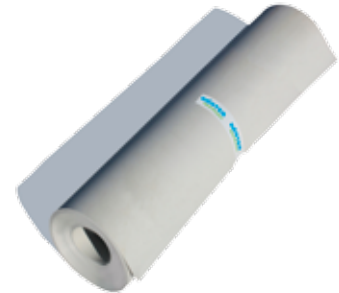
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ROSTER

## KÖSTER TPO Membranes

*In the field of roof waterproofing, high-quality materials and skilled workmanship can not only make a difference but actually save time and money. The KÖSTER BAUCHEMIE AG has been a worldwide leading manufacturer of high-quality roofing and waterproofing membranes for 30 years.*

*KÖSTER TPO Membranes stand out through their excellent application characteristics, flexibility, and weldability. The unique composition of polyethylene (PE) allows for the easy and uncomplicated welding of seams due to:*

- a wide temperature range
- no chemical cleaning required
- long lasting weldability of the membrane



### Advantages of TPO Roofing Membranes



*Does not contaminate groundwater*



*UV resistant*



*Resistant to root and rhizome penetration*



*Does not contain non-molecularly bound plasticizers*



*Customizable color*



*Direct application to EPS insulation possible*



*Low maintenance*



*Rotproof*

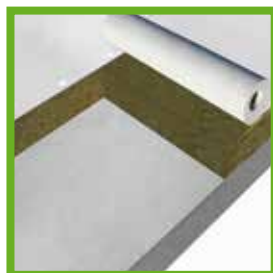


*Acid and kerosene resistant*

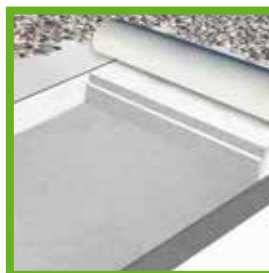


*Resistant against Microorganisms*

### Installation methods:



*Mechanical fastening*



*Loose laying with ballast*



*Bonded application*



*Green roofs*







## Flat roofs

Roofs are affected by various exposures such as cold, heat, rain, hail, snow, extreme wind, UV and infrared rays, as well as many different types of chemicals. Additionally, roofs are subject to movement and other mechanical stresses from the construction itself. As a result, roofs must be able to withstand a lot of stress. Continuously.

At the same time occupants and users place a variety of demands on roofs. They should be architecturally sophisticated, offer roof terraces with plenty of comfortable space to relax, or provide energy through attached solar panels. In addition, many other installations and structures can be found on roofs such as ventilation shafts, transmitter masts, and chimneys.

In choosing a roof type, the following factors must be considered:

- Safety
- Durability
- Economic efficiency
- Environmental impact
- Light weight
- Easy installation
- Low maintenance

If roof waterproofing is well planned and executed, the building will be protected over many decades.

## References



Flat roof waterproofing with KÖSTER TPO, REAL Supermarket, Germany



Flat roof waterproofing with KÖSTER TPO, Schiphol Airport, Amsterdam



Flat roof waterproofing with KÖSTER TPO, Pingo Doce Supermarket, Portugal



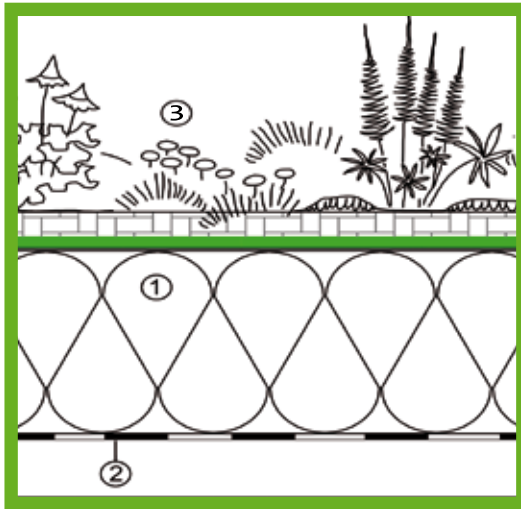
Flat roof waterproofing with KÖSTER TPO, EDEKA Supermarket, Germany







## Green roofs



KÖSTER TPO Membrane (green); (1) Insulation; (2) Substructure; (3) Landscaping

*In its immediate environment, a green roof can have a positive impact on humidity, solar radiation, and air temperature. For instance, during summer months plants absorb and reflect a large part of UV radiation.*

*Moreover, a further positive effect is observed through the evaporation of water on the leaf surface causing subsequent evaporative heat loss. In fact, various measurements show a temperature difference up to + 10 °C between green and ungreen roof surfaces during midday hours.*



**Protection against  
UV-radiation**



**Proven root resistance**



**Ecological  
compensation areas**



*KÖSTER TPO membranes can be loose laid under green roofs where the green roof serves as a ballast and protects the membrane against wind uplift. Additionally, KÖSTER TPO Membranes are resistant to root and rhizome penetration. This allows for planting and cultivation directly on top of the membrane.*





## Cool roofs

*Achieving energy efficiency through color: less heat is produced from sun exposure onto light surfaces than onto dark surfaces.*

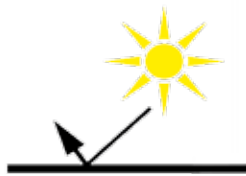


*With the KÖSTER TPO Membrane in white, sunlight is reflected. As a result, the roof temperature is reduced. In addition to lowering the cooling demand for the entire building, a low roof temperature also increases the efficiency of the installed photovoltaic system. In cases where a ventilation system is present, the transportation of cool air throughout the building is also dramatically increased. This leads not only to reduced energy consumption but also has a positive effect on the environment.*

*The white KÖSTER TPO Roofing Membrane achieved an outstanding score of 106. The Solar Reflectance Index (SRI) measures the solar reflectance of surfaces. The reference SRI value for a black roof is 0, while the reference SRI value for a white roof is 100.*



**Energy efficient**

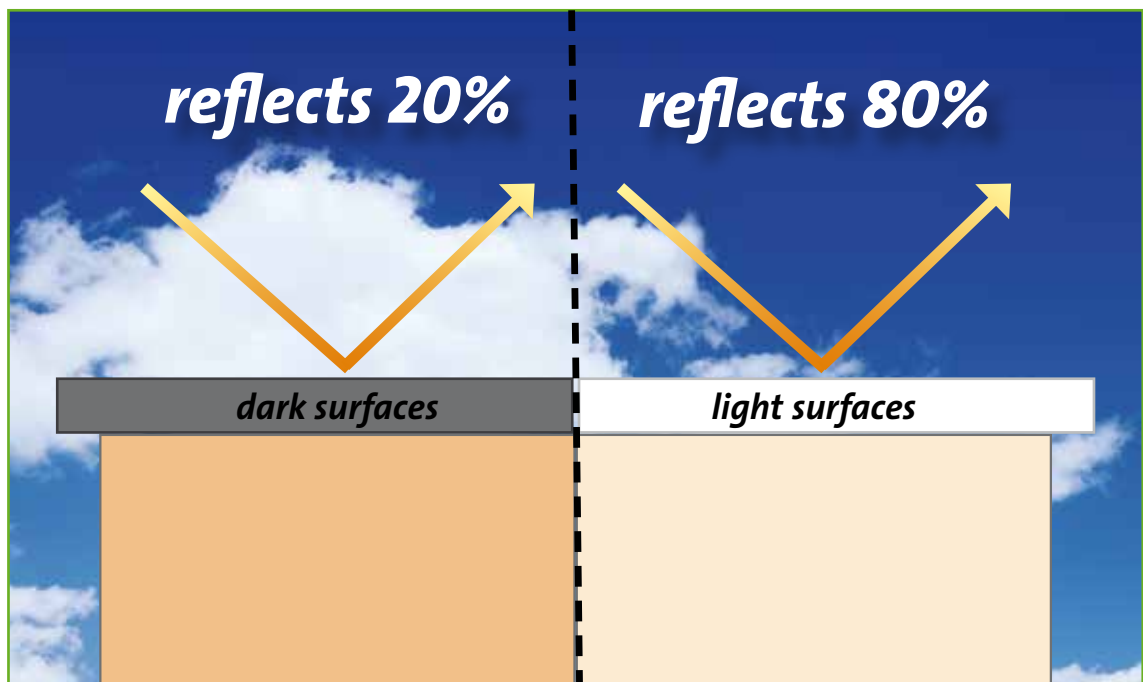


**high SRI value (106)**



**Cooling effect**

### Solar reflective KÖSTER TPO white





## ***Our Service***

*We want our partners to benefit from our technical know-how and experience. The distribution of our products via technical consultants ensures that our customers receive the support they need in order to apply our products effectively and properly. This long-term thinking in the interest of our customers is very important to us. As a result, technical support is an integral part of our service.*

### ***Technical support***



### ***On-site consultation***



### ***Practical and theoretical trainings***







## The KÖSTER Warranty Program

### Premium

A warranty claim exists provided leakage in KÖSTER TPO membranes have resulted from material failure. Warranties must be requested individually for each construction project in advance. Warranties are valid for a period of 10, 15, or 20 years.

The warranty covers:

- Up to 20 years for KÖSTER TPO membranes with a thickness of 2.0 mm
- Up to 10 years for KÖSTER TPO membranes with a thickness of 1.5 mm and 1.8 mm
- Free material replacement
- Reimbursement of labor costs for the installation of membranes
- Material replacement for any damaged components included in the roofing system
- Reimbursement of labor costs for the replacement of any damaged components included in the roofing system

### Premium Plus

A warranty claim exists provided leakage in KÖSTER TPO membranes have resulted from material failure. Warranties must be requested individually for each construction project in advance. The warranty is valid for a period of 25 years.

The warranty covers:

- Up to 25 years for KÖSTER TPO membranes with a thickness of 2.0 mm
- Free material replacement
- Reimbursement of labor costs for the installation of membranes
- Material replacement for any damaged components included in the roofing system
- Reimbursement of labor costs for the replacement of any damaged components included in the roofing system
- + The policyholder only pays a one-time surcharge per m<sup>2</sup> of roof area during the entire warranty period
- + Reimbursement of consequential damages incurred and resulting financial losses covered by an extended product liability insurance policy from the Allianz AG

### Premium

Material warranty

up to 20 years

KÖSTER TPO 1.5 - 2.0

### Premium Plus

Additional product liability insurance policy from the Allianz AG

up to 25 years

KÖSTER TPO 2.0

## Building and Sustainability

*The KÖSTER BAUCHEMIE AG is committed to preserving and protecting the environment. We use state-of-the-art raw materials and production technologies in conjunction with a strong and continuous research and development. Today, this means that most of our materials are solvent-free and formulated to minimize environmental impact, as well as protect the health of those who work with our materials. Additionally, the KÖSTER BAUCHEMIE AG is a member of IBU, a German institute dedicated to sustainable building. As a member, the KÖSTER BAUCHEMIE AG is required to provide full transparency regarding the environmental impact of its products.*

*KÖSTER TPO Roofing Membranes also allow the possibility of a light and resource-saving roof structure. They can reflect sunlight (in light colors) and can thus reduce the energy consumption of air conditioning systems, especially in warmer regions. Additionally they can be optimally combined with modern insulation materials and permit the installation of solar panels. In contrast to other roofing membranes, KÖSTER TPO Roofing Membranes can be recycled and do not release plasticizers into the environment. Moreover, they will not turn brittle and are therefore more durable. Lastly, KÖSTER TPO Roofing Membranes provide an optimal basis for green roofs.*



**IBU member**



**Environmental  
Product Declaration**



**CE certified**



**Recyclable**



## Product Catalog

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### **TPO membrane with embedded glass fleece**

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KÖSTER TPO Membranes are polyolefin-based thermoplastic roofing and waterproofing membranes with centrally embedded glass fiber mesh. KÖSTER TPO Membranes can be loose laid (under ballast) or mechanically fastened.

KÖSTER TPO 2.0 W is a white thermoplastic roofing and waterproofing membrane with a SRI value of 106.

<b>Product name</b>	<b>Thickness</b>
RT 815 - KÖSTER TPO 1.5	1.5 mm
RT 818 - KÖSTER TPO 1.8	1.8 mm
RT 820 - KÖSTER TPO 2.0	2.0 mm
RT 820 W - KÖSTER TPO 2.0 W	2.0 mm

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### **TPO membrane with polyester fleece backing**

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KÖSTER TPO F Membranes are polyolefin-based thermoplastic roofing and waterproofing membranes with centrally embedded glass fiber mesh and fleece laminated underside. KÖSTER TPO F Membranes can be fully or strip adhered with KÖSTER Membrane Adhesive or fully adhered with hot bitumen. The membranes can also be loose laid (under ballast) or mechanically fastened.

KÖSTER TPO 2.0 F (FR) has improved flame-resistant properties (FR) und fulfills the requirements for hard roofs for direct adhesion to EPS insulation.

KÖSTER TPO 2.0 F W is a white thermoplastic roofing and waterproofing membrane with a SRI value of 106.

<b>Product name</b>	<b>Thickness</b>
RT 820 F - KÖSTER TPO 2.0 F	2.0 mm
RT 820 F (FR) - KÖSTER TPO 2.0 F (FR)	2.0 mm
RT 820 F W - KÖSTER TPO 2.0 F W	2.0 mm

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### **Self-adhered TPO membrane with polyester fleece backing**

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KÖSTER self-adhered TPO Membranes are polyolefin-based thermoplastic roofing and waterproofing membranes with centrally embedded glass fiber mesh, special self-adhered fleece laminated underside, and improved flame-resistant properties (FR). The membranes are classified as Broof (t1) and fulfill the requirements for hard roofs and are suitable for the direct adhesion to EPS insulation.

<b>Product name</b>	<b>Thickness</b>
RT 815 SK (FR) - KÖSTER TPO 1.5 SK (FR)	1.5 mm

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### **Unreinforced, homogenous TPO membrane**

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KÖSTER TPO 2.0 U is an unreinforced homogeneous TPO Membrane for the creation of drainage and ventilation flanges and corner reinforcements.

<b>Product name</b>	<b>Thickness</b>
RT 820 U - KÖSTER TPO 2.0 U	2.0 mm

## References





## References





*Service you can depend on*

*With our service and distribution network in many countries world-wide we can offer you professional advice and technical support immediately and on the spot. Your required waterproofing materials can be delivered promptly and will protect your property efficiently and lastingly.*



*For further information, please contact:*

**KÖSTER**  
*Waterproofing Systems*



**DEUTSCHE  
BAUCHEMIE**



KÖSTER BAUCHEMIE AG | Dieselstraße 1–10 | D-26607 Aurich | Germany  
Phone: +49 (4941) 9709-0 | Fax: +49 (4941) 9709-40 | [info@koster.eu](mailto:info@koster.eu) | [www.koster.eu](http://www.koster.eu)