



## KÖSTER TPO Aqua 2.5 Geo

**KÖSTER TPO Aqua 2.5 Geo is a FPO/TPO-PE based homogeneous geomembrane for hydraulic works. It is used for the waterproofing of water supply and storage structures of all kinds.**

### Features

- Reduces installation time for earlier use of the structure
- Bridges joints and large cracks
- Low friction surface increases water flow
- Higher flow leads to higher hydraulic efficiency
- No cost in expensive joint systems
- Stops leakages – reduces water losses down to 1 to 2%
- The best protection for the structure against deterioration
- Provides embankment stability when applied directly on compacted soil
- High UV resistance ensures long-life with minimum maintenance
- Reduced algae growth on the surface of the membrane
- Reduced formation of vegetation

### Technical Data

Roll width	2.10 m
Roll length	20 m
Thickness TPO	2.5 mm
Thickness total	3.5 mm
Weight Geotextil	500 g/m <sup>2</sup>

### Fields of Application

For waterproofing any structure for the collection, storage or transport of water such as:

- Canals
- Retention basins
- Artificial lakes
- Irrigation basins
- Fire fighting ponds
- Dam

### Substrate

KÖSTER TPO Aqua Geo has very low requirements on the substrate. Various application methods can be implemented according to the project requirements.

The geometry and the size of the canal are crucial to determine the installation method. Long and straight sections should be installed longitudinally, curves should be installed transversal.

### Loose laid under Ballast

The ground is compacted and created the canal shape. A geotextile of min 600 g/m<sup>2</sup> must be placed on the prepared sub grade. The membrane is laid transversally on the canal bed and walls. The section of the membrane on the canal bed is protected with a 2000 g/m<sup>2</sup> geotextile protection layer so that the cover ballast system can be placed with heavy machinery.

### Longitudinal placement and mechanical fastening

The membrane is mechanically fixed to the concrete using stainless steel bolt anchors over the overlapping welded seams section. The mechanical metal fixing is carried out longitudinal over the welded seams every 4,20 m (2 x 2,10 m wide membrane). The transversal mechanical fixing is done every 8 to 10 meters, depending on the expected water flow. The membrane is secured using 60 x 6 mm stainless steel flat profiles. The seal is secured with a 60 x 3 mm rubber gasket and a stainless steel anti-vibration tooth-lock washer. The fasteners should be a minimum 10 mm concrete screws.

### Application

The geomembranes should be unrolled without tension. The overlapping is 6 to 8 cm for the double welding machine. Double welding systems such as the Leister Twinny provide a 2 x 15 mm seam width.

The seams are tested with an air pressure needle system.

Each membrane has a longitudinal 10 cm wide non-fleece backed strip for welding. Butted ends are overwelded with KÖSTER TPO U 2.0.

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

Use KÖSTER TPO Cleaner for preparing the seam area of KÖSTER TPO Aqua Geo membranes in case of heavy soiling or after weathering.

### Packaging

RT 825 210 F 2.5 mm x 2.10 m x 20 m

### Storage

Store rolls vertically.

### Safety

Observe all local, state, and governmental safety regulations when installing the membranes.

### Related products

The information contained in this technical data sheet is based on the results of our research and on our practical experience in the field. All given test data are average values which have been obtained under defined conditions. The proper and thereby effective and successful application of our products is not subject to our control. The installer is responsible for the correct application under consideration of the specific conditions of the construction site and for the final results of the construction process. This may require adjustments to the recommendations given here for standard cases. Specifications made by our employees or representatives which exceed the specifications contained in this technical guideline require written confirmation. The valid standards for testing and installation, technical guidelines, and acknowledged rules of technology have to be adhered to at all times. The warranty can and is therefore only applied to the quality of our products within the scope of our terms and conditions, not however, for their effective and successful application. This guideline has been technically revised; all previous versions are invalid.

# KÖSTER

## Waterproofing Systems

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

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