

## Protan Protect 20



### Product Description:

Protan Protect is a protection sheet which is a homogenous, flexible membrane made of plasticised PVC-P.

### Application Areas:

Protan Protect is designed for functionality and versatility and can be used as a protection layer on top of the main PVC-P tunnel membrane during the construction of tunnels (for example "barrier system" tunnels) and other underground constructions.

### Characteristics / Benefits:

- Complies with EN 13967 and EN 13491 and meets all standard requirements.
- Certified according to ÖBV, SIA and ZTV-ING/Rili guidelines.
- Homogenous material.
- Not compatible with bitumen and must be protected against UV.
- The membrane is welded together using hot air which provides a homogenous joint.
- The membrane can be recycled and has a low carbon footprint.

### Product properties

Characteristic	Typical value	Unit	Test method
Nominal thickness	2.0 (±5%)	mm	EN 1849-2
Visible defects	Pass		EN 1850-2
Straightness and flatness	Pass		EN 1848-2
Tensile strength L/T	≥ 2500 /2200	N/50 mm	EN 12311-2 (A)
Elongation L/T	≥ 250/250	%	EN 12311-2 (A)
Tensile strength L/T	≥ 20/16	N/mm <sup>2</sup>	EN 12311-2 (B)
Elongation L/T	≥ 250/250	%	EN 12311-2 (B)
Modulus of elasticity L/T	<19/19	N/mm <sup>2</sup>	EN 12311-2 (B)
Resistance to tearing L/T	550/450	N	EN 12310-2
Foldability low temperature	-30 (no cracks)	°C	EN 495-5
Resistance to static puncture	≥ 3	kN	EN ISO 12236
Resistance to impact	≥ 1500	mm	EN 12691
Joint shear resistance	≥ 1800	N/50 mm	EN 12317-2
Joint peel resistance	≥ 600	N/50 mm	EN 12316-2
Resistance to oxidation	≤ 20	%	EN 14575
Resistance to root penetration	No penetration		CEN/TS 14416
Reaction to fire	Class E		EN 13501-1 DIN EN ISO 11925

## PRODUCT DATA SHEET

### Dimensions / packaging

<b>Width:</b>	2.15 m (-0.5% / +1%)	
<b>Length:</b>	According to order	
<b>Roll weight:</b>	According to order	
<b>Pallet:</b>	According to order	
<b>Thickness:</b>	2,0 mm	
<b>Colours:</b>	Topside: Black	Backside: Black

### Health, Environment & Safety

There is no requirement for a material safety data sheet according to EC-regulation 1907/2006, article 31. The product does not harm the environment when used as specified.

### Environment

Protan InfraPlan contains no substances which are listed on REACH/ ECHA's (European Chemicals Agency) candidate list. The membrane contains no priority environmental pollutants or other relevant substances in quantities considered to be hazardous to health and the environment.

### Storage

The membrane should be kept dry with the rolls placed on pallets and protected on site with tarpaulins or similar.

### Certification / Approvals

Certified according to ÖBV, SIA and ZTV-ING/Rili guidelines.



#### Protan Legal Notice

*The details provided in this document, especially the recommended application and utilisation for the products and their system accessories, are based on Protan's current knowledge and experience of the products when properly stored, handled and installed under normal conditions according to Protan's recommendations. A warranty in respect of merchantability or of fitness for a particular utilisation, nor any liability arising out of any legal relationship whatsoever, cannot be inferred either from this information, or from any written or verbal recommendations, due to the differences in materials, substrates and actual site conditions in practice. The user of the product is responsible for the product's suitability for the intended application. Protan reserves the right to change product specifications without notice. Additionally, Protan's current sales and delivery terms are valid and applicable for all orders. It is necessary for the user to always refer to the latest version of the relevant Product Data Sheet, which can be requested directly from Protan. All information provided, as well as technical and drawing data, complies with current technical standards and is based on Protan's knowledge and experience. In addition, national standards and regulations must be observed where appropriate.*