

Technical Specification of TPO-P-18

Tianda TPO is a leading player in the field of polymer waterproofing membranes, domestically and globally. As a specialized manufacturer of TPO waterproofing membranes, we cater to the rising demand for building insulation in roof waterproofing while ensuring leak prevention and extended durability.

Our company stands out as a new-age enterprise, integrating research, development, production, sales, and technical services, with a focus on polymer waterproofing materials. Our flagship products include thermoplastic polyolefin (TPO) waterproofing membranes, PVC waterproofing membranes, HDPE waterproofing membranes, and high elastic waterproofing membranes. Committed to uniform quality standards, our products hold multiple certifications, underscoring our dedication to building a new era of energy-efficient and eco-friendly waterproofing solutions.

With over 14 years of pioneering experience in steel structure roofs, our products have been extensively used in green waterproofing projects across automotive factory buildings, industrial facilities, civil structures, public buildings, garage roofs, civil defense engineering, subway stations, comprehensive pipe galleries, and more.

Our TPO waterproofing materials meet the stringent requirements of sustainable building materials and energy efficiency regulations, both domestically and internationally. Tianda specializes in adapting globally proven waterproofing and insulation systems to local needs, thereby enhancing construction quality and efficiency across all roof waterproofing endeavors.

PRODUCT DESCRIPTION



The TPO (Thermoplastic Polyolefin) membrane is a rapidly expanding roofing system globally. Its consistent superiority over other materials lies in its simplicity of installation, durability, top-notch performance, competitive pricing, and environmental friendliness. Furthermore, it stands alone as the only system that offers simultaneous protection from water and heat, making it a preferred choice in roofing solutions.

APPLICATION AREAS



A: Roofing waterproofing membrane –suitable for low slope applications (new construction or renovation)

- Factory shed (prefabricated building) metal roof
- Metro station
- Airport
- TRAIN STATION
- Bus station
- Shopping mall
- Hospital
- Bus station
- Schools and colleges
- Resorts and sanatoriums with pitched roofs

B: Green roof and podium

- Apartment podium floor
- balcony
- open terrace
- roof garden
- sloping roof

C: Building underground waterproofing system

Tianda Waterproof Building Materials Co., Ltd

In the Tianda Waterproof Industrial Park at the northeast corner of the intersection of Jingshisan Road and S308 Provincial Road in the Economic Development Zone of Xinxiang City, Henan Province, China

Tel & WhatsApp: +8618337315757

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- Basement, ground floor, underground garage, tunnel gallery

PRODUCT FEATURES

- Environmentally friendly, chlorine-free and pollution-free.
- Excellent aging resistance.
- High breaking strength, high tear strength, impact resistance and puncture resistance. Excellent wind resistance.
- Resistant to low temperature, no cracks when bent at -40°C.
- Smooth surface, high reflectivity, energy-saving and pollution-resistant.
- Hot air welding is safe, reliable, strong and durable.
- Resistant to the growth of algae, mold and other microorganisms, and resistant to heat aging.
- Strong acid and alkali corrosion resistance, suitable for areas with high acid and alkali. No open flame construction, high safety.

SPECIFICATION

- Nominal length: 20 m.
- Nominal width: 2.0 m.
- Thickness: 1.8 mm
- Weight: ±68 kg





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Xinxiang Lifilte Filter Corp., LTD

DATABASE

产品名称: Product Name:	高分子复合防水卷材 TPO waterproof membrane		规格型号 Model	1.8mm P (2*20m)	
序号No.	检验项目 Item		标准要求 Specification	检验结果 Test data	
1	中间胎基上面树脂层厚度 Thickness of resin layer on the intermediate tire base		≥0.40mm	0.83mm	
2	最大拉力 Maximum pulling force	纵向Vertical	≥250 N/cm	379 N/cm	
		横向Horizontal	≥250 N/cm	362 N/cm	
	拉伸生产率 Elongation at Break	纵向Vertical	≥15%	17%	
		横向Horizontal	≥15%	22%	
3	热处理尺寸变化率 Heat treatment size change rate	纵向Vertical	≤0.5%	0.20%	
		横向Horizontal	≤0.5%	0.30%	
4	低温弯折性 Low temperature bending property		零下40°C无裂纹 No cracks at minus 40 ° C	零下40°C无裂纹 No cracks at minus 40 ° C	
5	不透水性Water Absorption		0.3MPa, 2h 不透水 0.3MPa, 2-hour impermeable	0.3MPa, 2h 不透水 0.3MPa, 2-hour impermeable	
6	抗冲击性能 Impact resistance		0.5Kg·m 不渗水 0.5Kg·m Waterproof	0.5Kg·m 不渗水 0.5Kg·m Waterproof	
7	抗静态荷载 Static load resistance		20Kg 不渗水 20Kg Waterproof	20Kg 不渗水 20Kg Waterproof	
8	接缝剥离强度 Seam strength		≥3.0 N/mm	10.7 N/mm	
9	梯形撕裂强度 Trapezoidal tear strength	纵向Vertical	≥450 N	652 N	
		横向Horizontal	≥450 N	545 N	
10	吸水率 Water absorption (70℃-168h)		≤4.0%	1.40%	
11	热老化 (115℃*672h) Heat aging (115℃*672h)	最大拉力保持率 Maximum tensile force retention rate	纵向Vertical	≥90%	99%
			横向Horizontal	≥90%	99%
		最大拉力时生产率保持率 Productivity retention rate at maximum tension	纵向Vertical	≥90%	100%
			横向Horizontal	≥90%	97%
	老化后的低温弯折性 Low temperature flexural properties after aging		零下40°C无裂纹 No cracks at -40 ° C	零下40°C无裂纹 No cracks at -40 ° C	
12	热老化 (135℃*672h) Heat aging (135℃*672h)	外观 Exterior	无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes	无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes	
		最大拉力保持率 Maximum tensile force retention rate	纵向Vertical	≥90%	97%
			横向Horizontal	≥90%	98%
		最大拉力时生产率保持率 Productivity retention rate at maximum tension	纵向Vertical	≥90%	95%
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13	耐化学性 Chemical resistance (NaCl)	外观 Exterior		无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes	无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes
		最大拉力保持率 Maximum tensile force retention rate	纵向Vertical	≥90%	98%
			横向Horizontal	≥90%	99%
		最大拉力时生产率保持率 Elongation retention rate at maximum tension	纵向Vertical	≥90%	100%
			横向Horizontal	≥90%	90%
老化后的低温弯折性 Low temperature flexural properties after aging		零下40°C无裂纹 No cracks at -40 ° C		零下40°C无裂纹 No cracks at -40 ° C	
14	耐化学性 Chemical resistance [饱和 saturation Ca(OH)2]	外观 Exterior		无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes	无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes
		最大拉力保持率 Maximum tensile force retention rate	纵向Vertical	≥90%	≥97%
			横向Horizontal	≥90%	≥98%
		最大拉力时生产率保持率 Elongation retention rate at maximum tension	纵向Vertical	≥90%	≥100%
			横向Horizontal	≥90%	≥95%
老化后的低温弯折性 Low temperature flexural properties after aging		零下40°C无裂纹 No cracks at -40 ° C		零下40°C无裂纹 No cracks at -40 ° C	
15	耐化学性 Chemical resistance (H2SO4)	外观 Exterior		无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes	无气泡、裂纹、分层、粘和孔洞 No bubbles, cracks, delamination, bonding and holes
		最大拉力保持率 Maximum tensile force retention rate	纵向Vertical	≥90%	94%
			横向Horizontal	≥90%	95%
		最大拉力时生产率保持率 Elongation retention rate at maximum tension	纵向Vertical	≥90%	94%
			横向Horizontal	≥90%	91%
老化后的低温弯折性 Low temperature flexural properties after aging		零下40°C无裂纹 No cracks at -40 ° C		零下40°C无裂纹 No cracks at -40 ° C	

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