

CONFORMITY OF PRODUCT

TME GeoTech Geotextile + Membrane Composite



Purpose of Usage

Geotextile + membrane composites are widely used in civil and environmental engineering projects where both waterproofing and protection are required. Typical applications include landfill lining systems, water reservoirs, tunnels, canals, ponds, and underground structures. The composite structure ensures effective containment while protecting the membrane from mechanical damage during installation and service life

Application Locations

This composite material consists of a geomembrane layer bonded with one or more geotextile layers. The geomembrane provides excellent impermeability against liquids and gases, while the geotextile layers offer mechanical protection, filtration, and drainage capabilities. It exhibits high tensile strength, puncture resistance, and durability under harsh environmental conditions. The material is resistant to chemicals, UV exposure, and biological degradation, ensuring long-term performance.

Technical index of short fiber needle punched nonwoven compound geomembrane								
No	Project	Unit weight g/m ²						
		400	500	600	700	800	900	1000
1	Thickness of Membrane mm	0.25-0.35			0.3-0.5			
2	Breaking strength kn/m	5.0	7.5	10	12	14	16	18
3	Elongation at break %	30-100						
4	CBR mullen Burst Strength KN≥	1.1	1.5	1.9	2.2	2.5	2.8	3.0
5	Tear strength KN≥	0.15	0.25	0.32	0.40	0.48	0.56	0.62
6	Pell Strength N/cm≥	6						
7	Hydraulic pressure	As table 2						
8	Vertical permeability coefficient/ (cm/s)	(1.0-9.9)×10 ⁻¹¹ ~13						

Item		Thickness of geomembrane(mm)							
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.0
Hydraulic pressure MPa≥	Geotextile+Geomembrane	0.4	0.5	0.6	0.8	1.0	1.2	1.4	1.6
	Geotextile+Geomembrane+ Geotextile	0.5	0.6	0.8	1.0	1.2	1.4	1.6	1.8

Product Features

The main advantage of geotextile + membrane composites is the integration of multiple functions into a single product, reducing installation time and labor costs. It enhances the protection of the membrane against punctures and stresses, thereby extending service life. The composite structure improves overall system reliability, provides better interface friction, and ensures efficient performance in sealing and protection applications.