COMPANY INFORMATION

Shandong Tianhai new material engineering Co., Ltd was founded in the year of 2002. We devote ourselves to geosynthetics industry about 14 years. We concentrated on the production, researching, application and marketing in this area. The company covers an area of more than 70000 square meters, Fixed assets of 120 million yuan, More than 320 employees, 16 advanced production lines. We are the member unit of China Geosynthetics Engineering Association, China Construction Water-proof Association, China Plastic Processing Industry Association,



Water-proof drain board

Part one: Description of waterproof drainage board

Drainage materials

- 1, Tianhai drainage board is produced from HDPE with high impact resistance and pressure resistance, can resist long-term high pressure, and will not generate deformation.
- 2,The long-term pressure resistance not only can resist weight of concrete bottom plate and its load, but also can bear unavoidable outside pressure and impact force during construction, for example, vehicle, worker stepping, concrete pouring impact force, etc.
- 3, Drainage protection board integrates waterproof and drainage, solves relation between waterproof and drainage successfully, and is better and more reliable than traditional stone pottery particle drainage and other filter layers both in drainage function and economic benefit.

4,It can keep bottom plate no deformation for long term, so original drainage quantity can be kept. Application of filter layer earthwork fabric on bottom plate is to ensure drainage channel isn't blocked by foreign object, for example, backfilling particle or concrete.

5,It is widely used in waterproof and drainage of roof garden, outdoor garage top plate



Part Two: The Specification of waterproof drainage board

Sheet material could be HDPE, thickness from 0.6mm to 1.5 mm, dimple height: 6mm,8mm,12mm,16mm,20mm, width from 2m to 3m, composite layer is non woven geotextile, length could be made according to client's request.

Number	Item Name					1.0/12mm		
1	Unit Weight g/m² ≥	650	700	800	1000	1200	1400	2000
2	Max Tensile Strength N/10cm ≥	350	450	550	600	600	600	/
3	Compressive Load KPa ≥	200	300	300	300	300	300	350
4	Elongation at Crack %	25	25	30	40	40	40	
5	Longitudinal Flow Capacity cm³/cm s ≥	5.60	5.60	7.20	7.20	10.0	12.5	21.5
6	Puncture Strength N ≥	300	320	350	400	400	400	/

Number	Item Name							
1	Material Type	HDPE	HDPE	HDPE	HDPE	HDPE	HDPE	HDPE
2	HDPE Average Thickness (mm)≥	0.50	0.70	0.80	1.00	1.20	1.50	1.8
3	Weight (g/m2)≥	650	850	1000	1200	1250	1350	2000
4	Sheet Thickness (mm)	6mm,8m	m,10mm	6mm,8mm,10mm,12mm,20mm				
5	Roll (Width x Length)	3mX20m	3mX20m	3mX20m	3mX20m	3mX15m	3mX15m	

<u>TH-12</u>



Shandong Tianhai New Materials Engineering Co., Ltd.

test report

Product Name	drainage board	Specifications Model		12mm dimple height							
Sampling Spot Workshop		Product Batch Number		TH-12							
Testing property Delivery Inspection			Date of Testi	ng	4th. June. 2017						
Number	Testing Item	Unit		National Standard	Testing Result	Single Assessment	Remark				
1	Neat edge, no visib	mechanical	Qualified								
2	Each board should not has more than one joints, the length of the shorter part should not be less than 2000 mm, the joints Qualified should be cut neatly and lengthened 300 mm										
3	dimple height		mm		12.00	12. 00	Qualified				
	Tensile strength	MD				366	Qualified				
4	when elongation is	CD	N/100mm		≥350	358	Qualified				
_	Maximum tensile	MD		> 000	>	777	Qualified				
5	strength	CD	N/100mm		≥600	777	Qualified				
	Elongation at break	MD		≥25	52	Qualified					
6		CD	%		52	Qualified					
_		MD				115	Qualified				
7	Tear resistance	CD	N		≥100	118	Qualified				
8	Maximum strength compression ratio is	kPa		≥150	247	Qualified					
o o	Ultimate compress	No break			Qualified						
9	Flexibility at 1	'No break at -10℃				Qualified					
_	JC/T2112-2012										
Comprehensive	Qualified product										
	dentition browns.										

Inspector: 胡颖颖 Reviewer: 周广庆

Shandong Tianhai New Materials Engineering Co., Ltd.

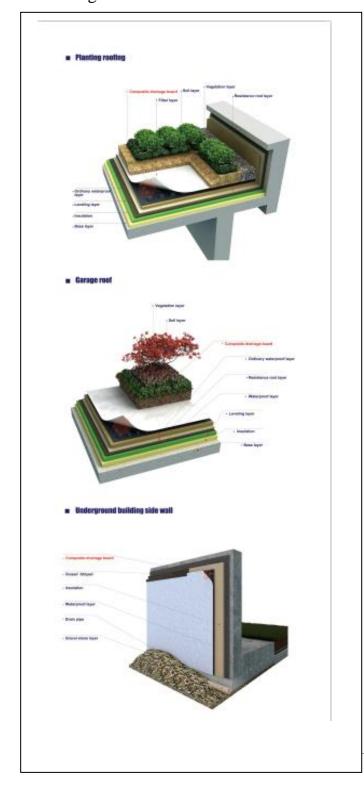
test report

			Specifications							
Product Name	drainage board		Model	201	m height	1.0mm thicness				
		Product								
Sampling Spot	Workshop		Batch							
	•	Number		T	H-20					
		Date of								
Testing property	Delivery Inspection	Testing 4th.			June. 2017					
	test content									
			National	Testing	Single _					
Number	Testing Item		Unit	Standard	Result	Assessment	Remark			
1	Neat edge, no visibl	chanical	Qualified							
	Each board should not									
2	shorter part should i	Qualified								
	be cut									
3	height		mm	20. 0	20.00	Qualified				
	Tensile strength	MD		≥350	366	Qualified				
4	when elongation is 10%	CD	N/100mm		358	Qualified				
_	Maximum tensile	MD		≥600	856	Qualified				
5	strength	CD	N/100mm		856	Qualified				
	Elongation at break	MD	%	≥25	77	Qualified				
6		CD			77	Qualified				
7	T	MD	N	>100	115	Qualified				
7	Tear resistance	CD		≥100	118	Qualified				
	Maximum strength compression ratio is	kPa	≥150	152	Qualified					
8	Ultimate compression		No break			Qualified				
	phenomenon		110) NI COV	Quaiiileu					
9	Flexibility at 1	No break at −10°C			Qualified					
, and the second	temperature	110 016		Quannou						
Comprehensive evaluation	JC/T2112-2012									
	Qualified product									
Inspector	超频频 Poviower: 图广庄									

Inspector: 胡颖颖 Reviewer: 周广庆

Part Three: The Application of drainage board

- 1. Waterproofing and drainage: form a channel, which water and gas can go through
- 2. Sound insulation and vibration isolation
- 3. Chemical resistance ,resist to plant' root
- 4. Easy for construction
- 5.Long lifetime





The Packaging of HDPE geomembrane

Export package or as customers' requests

Certification

ISO9001:2000 International Quality System Certification,

ISO14001:2004 Environment Management System Certification GB/T28001:2001 Vocational Health and Safety System Certification. Besides, our company has successfully passed on-site check on production license, and has gained "National Industrial Product Production License" and water-proof qualification. We have been the member of Chinese Technical Association on Geosynthetics and have been recognized as a "Provincial-level Enterprise Abiding by The Contract, Keeping Promise" for several successive years and so on.

HONORARY CERTIFICATE



Contact us:

Shandong Tianhai New Materials Engineering Co., Ltd

Tel: 0086-531 67895178 Fax:0086-531-88596016

Email: 18663765425@163.com

Skype: graceweiyihong_1

Link in: graceweiyihong@sina.com

Fackbook: graceweiyihong@yahoo.com.hk

OO: 3277224744

Whatsapp & Mob:0086-18663765425

Web: www.sdthjt.com / www.sdtianhai.en.alibaba.com