



**BUREAU  
VERITAS**

# TEST REPORT

**Technical Report:** (6622)243-0140

Aug 31,2022

Date Received: Apr 27,2022

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Date Modified: /

HU XUYUAN  
SHENZHEN JOABOA TECHNOLOGY CO.,LTD  
FLOOR 16th.No.2 NORTH AREA,EXCELLENCE CITY CENTRAL SQUARE,MEILIN,FUTIAN  
DIST,SHENZHEN,GUANGDONG,CHINA

Sample Description: Sample(s) received is/are stated to be:  
PVC GEOTEXTILE COMPOSITE GEOMEMBRANE

Color:	/	Style No(s):	PVC-L COMPOSITE,2.5MM
Order No.:	/	PO No.:	/
Model No.:	/	Batch No.:	/
Age Grade:	/	Product End Use:	/
Vendor:	/	Retest No.:	/
Manufacturer:	SUZHOU JOABOA TECHNOLOGY CO.,LTD	Supplier Reference:	/
Buyer:	/	Country of Origin:	CHINA
Test Period:	Apr 27,2022 to Aug 31,2022	Country of Destination:	/

## SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION
INDEX TEST	PASS

Remark:The results marked with “\*” are transferred from (6622)053-0817 dated on March 8,2022.



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**BVCPS (SHANGHAI) GENERAL CONTACT INFORMATION FOR THIS REPORT**

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**BUREAU VERITAS**

**CONSUMER PRODUCTS SERVICE DIVISION (SHANGHAI)**

**Laboratory Test location:**

**No. 368, Guangzhong Road, Zhuanqiao Town, Minhang, Shanghai.**

**No. 168, Guanghua Road, Zhuanqiao Town, Minhang, Shanghai.**

A handwritten signature in black ink, appearing to read 'Hyde Bao'.

Hyde Bao

PRODUCT LINE MANAGER(HARDLINE DIVISION)



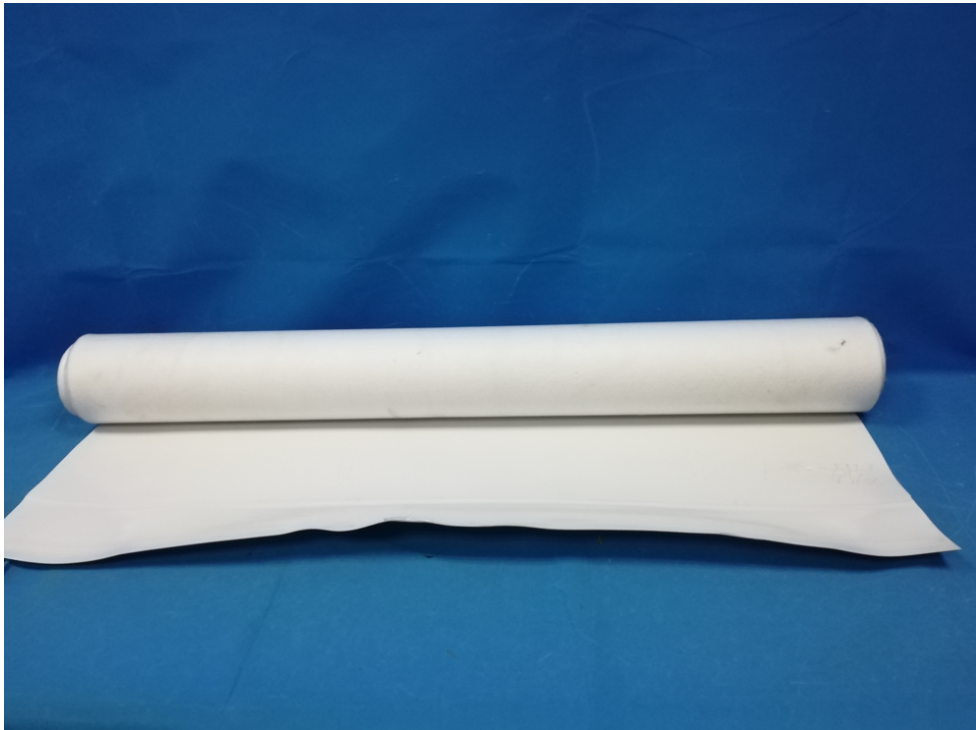
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**Photo of the Submitted Sample**



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**TEST RESULT**

Test Items		Standard Method	Permissible Limit	Test Results	Rating
*Thickness (Geomembrane only)		EN 1849/2	2.5 mm $\pm$ 5%	M 2.4mm	PASS
*Specific gravity (Geomembrane only)		EN ISO 1183/1 Method A	/	1.432 g/cm <sup>3</sup>	DATA
*Specific gravity (Geotextile only)		EN ISO 1183/1 Method A	1.25 g/cm <sup>3</sup> $\pm$ 3%	M 1.258 g/cm <sup>3</sup>	PASS
*Mass per unit area of geotextile		EN ISO 9864	500 g/m <sup>2</sup> $\pm$ 10%	M 512g/m <sup>2</sup>	PASS
*Peak Value at Geotextile break:	Strength	EN ISO 527/4 (test speed 100 mm/minute)	31.5 kN/m	M $\geq$ 28 kN/m	PASS
	Elongation		72.3%	M $\geq$ 65 %	PASS
*Peak Value at Geomembrane break:	Strength		28 kN/m	M $\geq$ 23 kN/m	PASS
	Elongation		246%	M $\geq$ 230 %	PASS
*Cohesion Strength between PVC and Geotextile (Peeling Test)		EN ISO 12316-2	$\geq$ 25 N/50mm and $\leq$ 37.50 N/50mm	M 28.7N/50mm	PASS
*Tear resistance (on nominal thickness of geomembrane)		EN ISO 34/1 (Specimen fig.2 Speed 50 mm/min)	$\geq$ 80 kN/m	M 93 kN/m	PASS
*Puncture resistance (PVC layer upwards) - (CBR)		EN ISO 12236	$\geq$ 4.5 kN	M 5.7 kN	PASS
*Low temperature flexibility		EN 495/5	Not failure at 30 °C	M Not failure at -30 °C	PASS
*Dimensional stability (6 hours at 80°C)		EN 1107/2	$\leq$ 2.5 %	M 0.98%	PASS
*Hydrostatic pressure resistance (72h at 10 bar)		EN 1928 Method B	Resistant	M Resistant	PASS



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Evaluation	Method	Requirement	Results(warp direction/Across direction)	Rating
Durability test	EN 14415 Method A	General appearance No blisters Thermal aging in water : (Maximum variation of weight after 56 days at 50°C, drying and reconditioning for 24 hours at 80°C)	M No blisters found	PASS
		Dimensional stability $\leq 2.5$ % Thermal aging in water : (Maximum variation of weight after 56 days at 50°C, drying and reconditioning for 24 hours at 80°C)	M 0.8%/1.2%	PASS
		Variation of tensile strength (L&T) $\pm 20\%$ Thermal aging in water : (Maximum variation of weight after 56 days at 50°C, drying and reconditioning for 24 hours at 80°C)	M -5.0%/-7.1%	PASS
		Variation of elongation at failure (L&T) $\pm 20\%$ Thermal aging in water : (Maximum variation of weight after 56 days at 50°C, drying and reconditioning for 24 hours at 80°C)	M -8.1%/-8.7%	PASS
Durability test	EN 12224	Weathering : UV resistance (3000 h - 350 MJ/m <sup>2</sup> ) Appearance only	M No cracks found	PASS
Dimensional stability	EN 14415 Method A CPSD-GB-01056-MTHD	Report the data.	25.3 cm/24.9 cm	DATA
Dimensional stability (Thermal aging in water)	EN 14415 Method A CPSD-GB-01056-MTHD	Report the data.	25.5 cm/25.2 cm	DATA
Tensile strength (L&T)	EN 14415 Method A Speed:100mm/min Report	Report the data.	28 Mpa/31 Mpa	DATA
Tensile strength (L&T) (Thermal aging in water)	EN 14415 Method A Speed:100mm/min	Report the data.	26.6 Mpa/28.8 Mpa	DATA
Elongation (L&T)	EN 14415 Method A Speed:100mm/min	Report the data.	246 %/253 %	DATA
Elongation (L&T) (Thermal aging in water)	EN 14415 Method A Speed:100mm/min	Report the data.	226 %/231 %	DATA



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Rating Key:

PASS Pass

DATA Data

Result Key:

M Meets

END