





Number: GZHT91168230

Date: Jan 16, 2023

Applicant: RUIAN BOAN-NON METALLIC MATERIAL

> TECHNOLOGY CO.,LTD NO.1 DAOHANG ROAD,

ECONOMIC DEVELOPMENT ZONE, RUIAN CITY, ZHEJIANG CHINA

Attn: XUE DI KE

Sample Description:

Six (6) pieces of submitted samples said to be Blue Logo BOAN Non-Metallic Insert Plates.

Standard EN ISO 22568-4:2021

Date Received/Date Test Started: Jan 10, 2023

Date Final Information Confirmed/ --/--

Date Payment Received:

Test Result Please Refer To Attached Page(S).

Should you have any query on this report, you may contact at <a href="mailto:gzfootwear@intertek.com">gzfootwear@intertek.com</a>

Authorized By:

For Intertek Testing Services Shenzhen Ltd.

Guangzhou Branch

**Guiliang Dong** 

Senior Lab Manager

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EC / carolilcai

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Tests Conducted (As Requested By The Applicant)



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1 Flexing Resistance (Non-Metallic Perforation Resistant Inserts) (EN ISO 22568-4:2021, 5.2)

Specimen	Results	Requirement	Pass/Fail
Specimen 1	No Visible Signs Of Cracking, Disintegration Or Delamination After 1 $ imes$ 10 $^6$ Flexion Cycles.	*	Pass
Specimen 2	No Visible Signs Of Cracking, Disintegration Or Delamination After 1 $ imes$ 10 $^6$ Flexion Cycles.	*	Pass
Specimen 3	No Visible Signs Of Cracking, Disintegration Or Delamination After 1 $ imes$ 10 $^6$ Flexion Cycles.	*	Pass
Specimen 4	No Visible Signs Of Cracking, Disintegration Or Delamination After 1 $ imes$ 10 $^6$ Flexion Cycles.	*	Pass
Specimen 5	No Visible Signs Of Cracking, Disintegration Or Delamination After 1 $ imes$ 10 $^6$ Flexion Cycles.	*	Pass
Specimen 6	No Visible Signs Of Cracking, Disintegration Or Delamination After 1 $ imes$ 10 $^6$ Flexion Cycles.	*	Pass

Remark: \* = The Non-Metallic Perforation Resistant Insert Shall Exhibit No Visible Signs Of Cracking, Disintegration Or Delamination After Having Been Subjected To 1  $\times$  10<sup>6</sup> Flexion Cycles.

Resistance To Perforation (Non-Metallic Perforation Resistant Inserts) (EN ISO 22568-4:2021, 5.1.1, **Method PL And Annex A**, Diameter Of Test Nail:  $(4.5\pm0.05)$  mm, Speed:  $(10\pm3)$  mm/min. Conditioning: At Least 24 h At  $(23\pm2)^{\circ}$ C And  $(50\pm5)^{\circ}$ M R.H.)

Perforation Point	Results	Requirement	Pass/Fail
Point 1	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass

Remark: \* = The Opposite Surface Of The Test Piece Shall Not Be Perforated And No Separation Between The Layers Of The Test Piece Occurs Up To The Required Force Of 1100 N.

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Resistance To Perforation After Fuel Oil Treatment (Non-Metallic Perforation Resistant Inserts) (EN ISO 22568-4:2021, 5.3.5, **Method PL And Annex A,** Speed:  $(10\pm3)$  mm/min, Conditioning Before Testing:  $(23\pm2)^{\circ}$  For 24 h)

Fuel Oil Tre	eatment: 2,2,4-Trim	ethylpentane: (23±2)℃ For 24 Hours		
	Perforation Point	Results	Requirement	Pass/Fail
Sample 1	Point 1	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Perforation Point	Doculto	Doguiroment	Dace/Eail
Sample 2	Point 1	Results  The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	Requirement *	Pass/Fail Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass

The Opposite Surface Of The Test Piece Shall Not Be Perforated And No Separation Between Remark: The Layers Of The Test Piece Occurs Up To The Required Force Of 1100 N.

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Resistance To Perforation After High Temperature Treatment (Non-Metallic Perforation Resistant Inserts) 4 (EN ISO 22568-4:2021, 5.3.2, **Method PL And Annex A**, Speed:  $(10\pm3)$  mm/min)

High Temperature Treatment: $60\pm2^\circ\mathbb{C}$ For 4 Hours, Then $45\pm2^\circ\mathbb{C}$ For Another 18 Hours				
Sample 1	Perforation Point	Results	Requirement	Pass/Fail
	Point 1	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Perforation Point	Results	Doguiromont	Pass/Fail
Sample 2	Point 1	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	Requirement *	Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass

The Opposite Surface Of The Test Piece Shall Not Be Perforated And No Separation Between Remark: The Layers Of The Test Piece Occurs Up To The Required Force Of 1100 N.

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Resistance To Perforation After Alkali Sweat Treatment (Non-Metallic Perforation Resistant Inserts) 5 (EN ISO 22568-4:2021, 5.3.4 & ISO 105-E04:2013, 4.3, **Method PL And Annex A**, Speed:  $(10\pm3)$  mm/min, Conditioning Before Testing:  $(23\pm2)^{\circ}$  For 24 h)

Alkali Swea	t Treatment: pH 8.0	0 Alkali Sweat Solution: (23±2)°C For 24 Hours		
	Perforation Point	Results	Requirement	Pass/Fail
Sample 1	Point 1	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Doufountion Doint	Dogulko	Doguiromont	Docc/Foil
Sample 2	Perforation Point Point 1	Results  The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	Requirement *	Pass/Fail Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation	*	Pass
		Between The Layers Of The Test Piece Occurs Before 1100 N. The Opposite Surface Of The Test Piece Was Not		

The Opposite Surface Of The Test Piece Shall Not Be Perforated And No Separation Between Remark: The Layers Of The Test Piece Occurs Up To The Required Force Of 1100 N.

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6 Resistance To Perforation After Acid Sweat Treatment (Non-Metallic Perforation Resistant Inserts) (EN ISO 22568-4:2021, 5.3.3 & ISO 105-E04:2013, 4.4, **Method PL And Annex A**, Speed:  $(10\pm3)$  mm/min, Conditioning Before Testing:  $(23\pm2)^{\circ}$  For 24 h)

Acid Sweat	Treatment: pH 5.5	Acid Sweat Solution: $(23\pm2)^{\circ}$ For 24 Hours		
Sample 1	Perforation Point	Results	Requirement	Pass/Fail
	Point 1	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	l	D #		D /E !!
	Perforation Point	Results	Requirement	Pass/Fail
Sample 2	Point 1	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 2	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 3	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation Between The Layers Of The Test Piece Occurs Before 1100 N.	*	Pass
	Point 4	The Opposite Surface Of The Test Piece Was Not Perforated Up To 1100 N & No Separation	*	Pass

The Opposite Surface Of The Test Piece Shall Not Be Perforated And No Separation Between Remark: The Layers Of The Test Piece Occurs Up To The Required Force Of 1100 N.

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End Of Report

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## Remark'

- 1. As Requested by the Applicant, For Details Refer to Attached Page (s).
- 2. All the tested item are tested under the standard condition.
- 3. The report is valid with commission test only for the test samples in the case of delivering samples by clients.

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