



Report No. TC.19.01.000080

Date of Issue 01/11/2019

Applicant: NINGGUO BST THERMAL PRODUCTS CO., LTD

Applicant address: 58# 2-101, FENGHUANGCITY, NINGGUO CITY, ANHUI PROVINCE, CHINA

Description of the test subject:

Sample	Description	Photo
001	Product Name: SILICONE FIBERGLASS FIRE SLEEVE Composition: SILICONE, FIBERGLASS Color: RED	

Receipt Date of Sample: 01/03/2019

Date of Testing: From 01/03/2019 to 01/11/2019

Sample submitted: The sample(s) was (were) submitted by applicant and identified.

Conclusion:

Test Items			Classification		
No.	Items	Standard			
1	Testing of materials, small components and component sections for rail vehicles – Determination of burning behaviour using a gas burner.	DIN 5510-2:2009 DIN 54837:2007	S4	SR2	ST2

Note: (1) General Terms & Conditions as mentioned overleaf,(2)The results relate only to the items tested,(3)The test report shall not be reproduced except in full without the written approval of the company. (4) Samples are tested as received.



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Test Results

**DIN 5510-2:2009 Preventive Fire Protection in Railway Vehicles - Part 2: Fire Behaviour and Fire Side Effects of Materials and Parts; Classification, Requirements and Test Methods**

**1. DIN 54837:2007 Testing of materials, small components and component sections for rail vehicles – Determination of burning behaviour using a gas burner**

1.1 Sample details

Specimen size	40mm x 500 mm , 5PCS
Thickness	About 3 mm
Conditioning	T :23± 2°C H :50±5% >48 h

1.2 Test results

		Specimen No.					Average
		1	2	3	4	5	
Flaming at	(s)	32	28	32	30	29	30
Afterflame	(s)	0	0	0	0	0	0
Glowing	Occur (s)	--	--	--	--	--	--
	Afterglow (s)	--	--	--	--	--	--
Flame Height	Maximum (cm)	28	26	28	28	27	27
	Reached at (s)	56	72	64	81	65	68
Drop away of parts	Drop Away (Yes/No)	No	No	No	No	No	--
	Burning time (s)	--	--	--	--	--	--
Smoke Density	Maximum (%)	9.55	4.94	7.62	7.81	6.24	7.23
	At Time (s)	186	187	165	189	186	183
	Integral (%xmin)	9.73	2.89	5.63	4.62	5.71	5.72
Charred Length	(cm)	11	13	12	11	11	12
Extinguished	(s)	180	180	180	180	180	180
Burn through	(Yes/No)	No	No	No	No	No	--
Melting	(Yes/No)	No	No	No	No	No	--

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Test method	Parameter	Results
DIN 54837	Damaged Length (cm)	12
	Afterflame (s)	0
	Smoke (%xmin)	5.72
	Drops	No

<b>Classification</b>	<b>S4</b>	<b>SR2</b>	<b>ST2</b>
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**Requirements according to DIN 5510-2:2009**

Burning Class		Smoke class		Dripping Class	
Class	Requirements	Class	Requirements	Class	Requirements
S1	Test according to DIN 53438-2/3 required	--	--	--	--
S2	Damaged length ≤ 30 cm	Not reached SR1	Int. > 100 %xmin	ST1	Burning / falling drops, afterflame of drops > 20 s
S3	Damaged length ≤ 25 cm, afterflame ≤ 100 s, (No individual value ≥ 120s)	SR1	Int. ≤ 100 %xmin	ST2	No dripping / No falling drops
S4	Damaged length ≤ 20 cm, afterflame ≤ 10s,	SR2	Int. ≤ 50 %xmin		
S5	Damaged length = 0 cm Afterflame = 0s				

**Statement:** The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential smoke and toxicity hazard of the product in use.

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Changzhou Jinbiao Railway Transportation Technical Service Co., Ltd.

Drafted by:

Lynn liu

Approved by:

Shen hui

-End of Report-

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