

**BS EN ISO 11925-2:  
2002**

**Ignitability Of Building  
Products Subjected To  
Direct Impingement Of  
Flame**

**WF Report Number:**

**161320**

**Date:**

**2<sup>nd</sup> March 2007**

**Test Sponsor:**

**NanTong Super  
Composite Material  
Company Limited**



**0249**

**Bodycote warringtonfire Test  
Report No. 161320**

**BS EN ISO 11925-2: 2002**

**Reaction To Fire Tests - Ignitability  
Of Building Products Subjected To  
Direct Impingement Of Flame –  
Part 2: Single-flame Source Test**

**Sponsored By**

**NANTONG SUPER COMPOSITE  
MATERIAL COMPANY LIMITED  
NO. 188 MIANJI ROAD  
TANZHHA  
NANTONG 226002  
CHINA**



<b>CONTENTS</b>	<b>PAGE NO.</b>
<b>TEST DETAILS</b> .....	<b>4</b>
<b>DESCRIPTION OF TEST SPECIMENS</b> .....	<b>5</b>
<b>TEST RESULTS</b> .....	<b>7</b>
<b>SIGNATORIES</b> .....	<b>8</b>
<b>Table 1</b> .....	<b>9</b>
<b>Table 2</b> .....	<b>9</b>

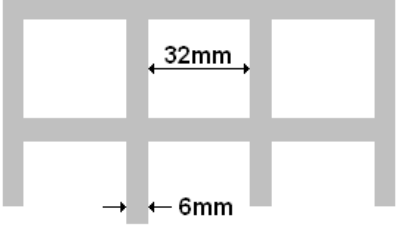
## Test Details

---

<b>Purpose of test</b>	<p>To determine the performance of specimens of a product when they are subjected to the conditions of the test specified in BS EN ISO 11925-2:2002 "Reaction to Fire tests - Ignitability Of Building Products Subjected to Direct Impingement of Flame – Part 2: Single Flame Source Test".</p> <p>The test was performed in accordance with the procedure specified in BS EN ISO 11925-2:2002 Reaction to Fire Tests - Ignitability of Building Products subjected to direct impingement of flame – Part 2: Single Flame Source Test, and this report should be read in conjunction with that BS EN ISO Standard.</p>
<b>Scope of test</b>	BS EN ISO 11925-2 specifies a method of test for determining the ignitability of building products by direct small flame impingement under zero impressed irradiance using specimens tested in a vertical orientation.
<b>Fire test study group/EGOLF</b>	Certain aspects of some fire test specifications are open to different interpretations. The Fire Test Study Group and EGOLF have identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.
<b>Instruction to test</b>	The test was conducted on the 27 <sup>th</sup> January 2007 at the request of NanTong Super Composite Material Company Limited, the sponsor of the test.
<b>Provision of test specimens</b>	The specimens of grating were supplied by the sponsor of the test. <b>Bodycote warringtonfire</b> was not involved in any selection or sampling procedure. <b>Bodycote warringtonfire</b> supplied the particleboard substrate.
<b>Conditioning of specimens</b>	<p>The specimens were received on the 19<sup>th</sup> January 2007.</p> <p>Prior to test the specimens were stored for eight days in a standard atmosphere as defined in BS EN 13238:2001 Conditioning Procedures and General Rules for selection of substrates until constant mass was achieved.</p>
<b>Substrate</b>	The specimens were tested over an 18mm thick non flame retardant grade particleboard substrate.
<b>Flame application time</b>	The flame was applied for fifteen seconds

## Description of Test Specimens

The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

General description		A flame retardant grade, fibre reinforced resin grating	
Product reference		"SUPERFRP-IFR"	
Thickness		15mm	
Weight per unit area		12.0 kg/m <sup>2</sup>	
Colour reference		"Grey"	
Name of manufacturer		NanTong Super Composite Material Co., Ltd.	
Diagram of grating		 <p style="text-align: center;">Note: Not to scale</p>	
Fibre reinforced resin grating	Resin	Generic type	Isophthalic polyester resin
		Product reference	"SUPERFRP-IFR"
		Name of manufacturer	<b>See Note 1 Below</b>
		Composition details	<b>See Note 2 Below</b>
		Trade name of flame retardant	<b>See Note 1 Below</b>
		Generic type of flame retardant	<b>See Note 1 Below</b>
		Amount of flame retardant (%)	<b>See Note 2 Below</b>
	Reinforce-ment	Generic type	Fibre glass
		Product reference	"100% Fibergalss"
		Name of manufacturer	<b>See Note 1 Below</b>
		Composition details	100% no- alkaline fiberglass
		Configuration of reinforcement	Randomly dispersed throughout the product
		Flame retardant details	<b>See Note 1 Below</b>
	Percentage reinforcement (by weight)		<b>See Note 1 Below</b>
Resin to reinforcement ratio (by weight)		<b>See Note 1 Below</b>	
Substrate	Product reference	Particle Board	
	Overall thickness	18mm	
	Density	680±50 Kg/m <sup>3</sup>	
	Flame retardant details	No Flame retardant present	
Brief description of manufacturing process of fibre reinforce resin grating		Moulded product. The sponsor did not provide any further information relating to the manufacturing process	

**Note 1 – The sponsor was unwilling to provide this information**

**Note 2 – The sponsor of the test has provided this information but at the specific request of the sponsor, these details have been omitted from the report and are instead held on the confidential file relating to this investigation**

**The description of the specimens given above is not as complete as would normally be the case for descriptions included in Bodycote warringtonfire test reports, and the description does not fully comply with the requirements of the standard. In all other respects, however, the tests were conducted fully in accordance with the requirements of the standard and the test results are valid.**

## Test Results

---

### Number of specimens tested

Six specimens were tested, each of which were subjected to surface exposure to flame with one of two identical faces exposed.

Six specimens were tested, each of which were subjected to edge exposure to flame with one of two identical faces exposed.

### Applicability of test results

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 fire hazard of the product in use.

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product which is supplied or used is fully represented by the specimens which were tested.

The test results for the individual specimens, together with observations made during the test and comments on any difficulties encountered during the test are given in Tables 1 and 2.

**On each set of six specimens which were tested, the flame tip did not reach a distance of 150mm before the end of the test.**

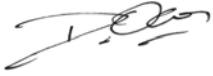
### Validity


The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.


This report may only be reproduced in full. Extracts or abridgements shall not be published without permission of **Bodycote warringtonfire**.

## Signatories

---


Responsible Officer D. J. Owen *


Approved I. Moore * Laboratory Supervisor


Authorised C. Dean * Operations Manager

\* For and on behalf of **Bodycote warringtonfire**.

Report Issued: 2 <sup>nd</sup> March 2007
---

This version of the report has been produced from a .pdf format electronic file that has been provided by **Bodycote warringtonfire** to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of **Bodycote warringtonfire**. The original signed paper version of this report, which includes signatures in blue ink, is the sole authentic version. Only original paper versions of this report bear authentic signatures of the responsible **Bodycote warringtonfire** staff.

**Table 1****Test Flame Application Position - Surface Of One Of Two Identical Faces**

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	YES	DID NOT REACH	20	NONE	NONE	10	5
2	YES	DID NOT REACH	20	NONE	NONE	10	5
3	YES	DID NOT REACH	20	NONE	NONE	10	5
4	YES	DID NOT REACH	20	NONE	NONE	10	5
5	YES	DID NOT REACH	20	NONE	NONE	10	5
6	YES	DID NOT REACH	20	NONE	NONE	10	5

**Table 2****Test Flame Application Position - Edge Of One Of Two Identical Faces**

Specimen No.	Ignition Yes/No	Time from start of test for flame tip to reach 150mm (seconds)	Extent of Flame Spread (mm)	Flaming Debris	Glowing	Extent of Damaged Area (mm)	
						Height	Width
1	YES	DID NOT REACH	20	NONE	NONE	10	5
2	YES	DID NOT REACH	20	NONE	NONE	10	5
3	YES	DID NOT REACH	20	NONE	NONE	10	5
4	YES	DID NOT REACH	20	NONE	NONE	10	5
5	YES	DID NOT REACH	20	NONE	NONE	10	5
6	YES	DID NOT REACH	20	NONE	NONE	10	5

Commercial in confidence



Bodycote warringtonfire Testing • Holmesfield Road • Warrington • Cheshire • WA1 2DS • United Kingdom  
Tel: +44 (0) 1925 655 116 • Fax: +44 (0) 1925 655 419 • Email: [Info@warringtonfire.net](mailto:Info@warringtonfire.net) • Website: [www.warringtonfire.net](http://www.warringtonfire.net)

