



中国认可  
国际互认  
检测  
TESTING  
CNAS L4743

## Test Report

No. AJFS2004002749FF

Date: APR.26, 2020

Page 1 of 4

**DONGSUNG CHEMICAL CO., LTD.**

99, SINSAN-RO, SAHA-GU, BUSAN, 49421 KOREA

The following sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion. results apply to the sample as received.

**Sample Name:** VIXUM

**SGS Ref No.:** SHIN2004018666CM

**Manufacturer:** DONGSUNG CHEMICAL

**Material and Mark:** MELAMINE RESIN

**Product Specification:** MELAMINE FOAM

### Test Requested:

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, Clause 4.2.3 Flammability classes S2 to S5.

**Test Results:** -- See attached sheet --

**Classification:** In accordance with the class definitions given in DIN 5510-2:2009, the tested sample is classified as following:

**Burning Class: S4**

**Smoke Class: SR2**

**Dripping Class: ST2**

### Test Period:

Sample Receiving Date : APR.20, 2020

Test Performing Date : APR.20, 2020 TO APR.24, 2020

Signed for and on behalf of  
SGS-CSTC Co., Ltd. Anji Branch

Allen Zou  
Lab Manager

scan to see the report



AJFS2004002749FF



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Anji Branch Fire Technology Service

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn  
中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

**I. Specimen information**

Sample description	Foam
Color	Gray
Size of specimen	500mm×190mm
Exposed surface	One surface

**II. Conditioning**

Prior to testing, the sample was conditioned at least 48h to constant mass at a temperature of  $23 \pm 2$  °C, and a relative humidity of  $50 \pm 5$  %, and maintained in this condition until required for testing.

**III. Test results**
**1.1 Test method**

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

**1.2 Test results**

		Specimen No.					Average
		1	2	3	4	5	
Flaming at	(s)	3	2	2	2	2	2.2
Afterflame	(s)	0	0	0	0	0	0
Glowing	Occur (s)	-	-	-	-	-	-
	Afterglow (s)	-	-	-	-	-	-
Flame Height	Maximum (cm)	23	23	23	24	24	23.4
	Reached at (s)	7	8	6	7	9	7.4
Drop away of parts	Drop Away (Yes/No)	No	No	No	No	No	-
	Burning time (s)	-	-	-	-	-	-
Smoke Density	Maximum (%)	3.6	3.3	3.7	3.0	4.1	3.5
	At Time (s)	62	71	56	63	74	65.2
	Integral (%×min)	0.8	1.2	1.1	1.2	1.1	1.1
Length of destroyed area	(cm)	17	18	18	18	18	17.8
Extinguished	(s)	-	-	-	-	-	-
Burn through	(Yes/No)	Yes	Yes	Yes	Yes	Yes	-
Melting	(Yes/No)	No	No	No	No	No	-

To be continued...



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Inspection & Testing Services Co., Ltd.  
Anji Branch Fire Technology Service

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn  
中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

**Remark:** “-“Not applicable

**Observations during test:** None

The classification requirements specified in DIN 5510-2:2009 are given in Appendix 1.

**Appendix 1** Classification 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	Length of destroyed area ≤ 30 cm	Not reached SR1	Int. > 100 %xmin	ST1	Burning / falling drops, afterflame of drops>20 s
S3	Length of destroyed area ≤ 25 cm, Afterflame≤100 s (No individual value ≥ 120s)	SR1	Int. ≤ 100 %xmin	ST2	No dripping / No falling drops, afterflame of drops<20 s
S4	Length of destroyed area ≤ 20cm, afterflame≤10s	SR2	Int. ≤ 50 %xmin		
S5	Length of destroyed area = 0cm Afterflame = 0s				

**STATEMENTS:**

This declaration of conformity is only based on the result of this laboratory activity, the impact of the uncertainty of the results was not included.

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, smoke and toxicity hazard of the product in use.

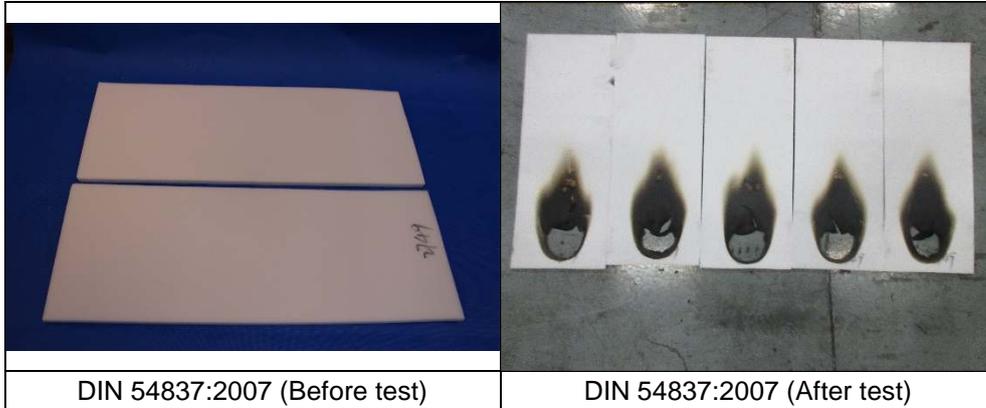
The test results relate only to the specimens of the product in the form in which were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any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

To be continued....



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
**Attention:**To check the authenticity of testing / inspection report & certificate, please contact us at telephone:(86-755) 8307 1443, or email: CN.Doccheck@sgs.com  
 No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn  
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

Photo Appendix:



SGS authenticate the photo on original report only

\*\*\*End of Report\*\*\*



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Shanghai Technical Services Co., Ltd.  
Anji Branch Fire Technology Service

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn  
中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com