

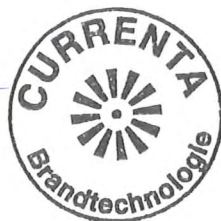
3. September 2009

Test report	09/0868e
Test standard	EN 60695-11-10 : 2004 Fire hazard testing — Part 11-10: Test flames – 50 W horizontal and vertical flame test methods (IEC 60695-11-10:1999 + A1:2003); German version EN 60695-11-10:1999 + A1:2003
Classification standard	EN 60695-11-10 : 2004 Fire hazard testing — Part 11-10: Test flames – 50 W horizontal and vertical flame test methods (IEC 60695-11-10:1999 + A1:2003); German version EN 60695-11-10:1999 + A1:2003
Client	3M Deutschland GmbH Mr. Gravermann Carl-Schurz-Straße 1 41453 Neuss, Germany
Material	Scotchcast 1402FR
Nominal thickness	3.0 mm

Test result

During the tests on 2009-08-31 the requirements of classes V-0 were fulfilled:


Frank Volkenborn
(Vice Head of Fire Testing)




Günter Strompen
(Customer Support Fire Testing)



The Fire Technology laboratory of Currenta is accredited according to EN ISO/IEC 17025 generally for fire testing. The Fire Technology is notified by Federal Railway Authorities "Eisenbahnbundesamt (EBA)", "Eisenbahn-Cert (EBC) for European Railway Systems and for French Railway systems from L'agence de certification ferroviaire (CERTIFER).

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.



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Client's material description¹:

Trade name	Scotchcast 1402FR
Product description	Electrical Resin
Manufacturer	3M Deutschland GmbH
Data sheet no.	Remark 1
Safety data sheet no.	Remark 1
Thickness [mm]	3
Area related mass [kg/m ²]	Remark 1
Density [kg/m ³]	Remark 1
Composition [%]	Remark 1
Colour	Braun
Appearance	Remark 1
Flame-retardant treatment	Remark 1
Homogenous product	Remark 1
Field of application, maybe withdrawing	Vergussmasse für Kabelgarnituren
Standard handling	Remark 1
Standard backing	Remark 1
Surface to be tested?	Remark 1

Measurements:

File-No.	L90899
Delivery date	20.08.2009
Date of test	24.08.2009, 31.08.2009
Conditioning	1. 48 h / 23 °C / 50 % r. h. 2. 168 h hot-air cabinet at 70±1 °C / 4 h dehydrator
Dimensions [mm]	125 x 13
Thickness [mm]	3.0
Area related mass [kg/m ²]	4.62
Colour	Beige
Appearance of surface	staves
Tested surface	The specimens are symmetric
Operator	Mahi Hakiki
Test equipment no.	L-B411-P0022

¹ Remark 1: The customer hasn't provide this information

Remark 2: The customer is unable to provide this information

Test results:

Conditioning: > 48 h / 23°C / 50 % r. F.										
	Lead test					Additional test				
Test No.	1	2	3	4	5	6	7	8	9	10
t ₁ – After flame time (s)	0.8	0.8	0.8	0.8	0.8					
t ₂ - After flame time (s)	1.3	1.9	1.2	1.2	1.0					
t _f – Total after flame time (s)	10.6									
t ₃ - After glow time (s)	0	0	0	0	0					
t ₂ + t ₃ (s)	1.3	1.9	1.2	1.2	1.0					
Total consumption of specimen	No	No	No	No	No					
Cotton indicator ignite	No	No	No	No	No					
Category	V 0									

Conditioning: 168 h / 70 °C and 4 h ambient temperature in dehydrator										
	Lead test					Additional test				
Test No.	1	2	3	4	5	6	7	8	9	10
t ₁ – After flame time (s)	0.9	0.9	0.8	0.8	0.8					
t ₂ - After flame time (s)	1.0	1.5	1.1	1.9	0.9					
t _f – Total after flame time (s)	10.6									
t ₃ - After glow time (s)	0	0	0	0	0					
t ₂ + t ₃ (s)	1.0	1.5	1.1	1.9	0.9					
Total consumption of specimen	No	No	No	No	No					
Cotton indicator ignite	No	No	No	No	No					
Category	V 0									

Total Category	V 0
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Observations: flame height 50 mm

Remarks:

Classification:

Criteria	Category		
	V-0	V-1	V-2
After flame time for each individual specimen (t ₁ or t ₂)	≤ 10 s	≤ 30 s	≤ 30 s
Total after flame time for any condition set (t _f plus t ₂ for the 5 specimens)	≤ 50 s	≤ 250 s	≤ 250 s
After flame plus afterglow time for each individual specimen after the second flame application (t ₂ plus t ₃)	≤ 30 s	≤ 60 s	≤ 60 s
After flame or afterglow of any specimen up to the holding clamp	No	No	No
Cotton indicator ignited by flaming particles or drops	No	No	Yes