CURRENTA GmbH & Co. OHG
SER ANT Brandtechnologie
CHEMPARK, Building B411
51368 Leverkusen, Germany

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-Sraße 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)

CURRENTA Brandtechnologie

Günter Stromper
(Customer Support Fire Testing)

Deutscher Akkreditierungs Rat
DAR
DAC-PL-0001-94-20-02

ilac-MRA
DACH
DAC-PL-0001-94-20-02

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.

Client's material description[1]:

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**

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