

Test Report No.: 8828 / 30767

Date: 31.01.2011

BASF SE  
Brandschutztechnik  
G-KTF/EG - A521  
D-67056 Ludwigshafen

**Test according to**

**DIN 5510 Part 2 : 2009-05**

**Preventive fire protection in railway vehicles - Part 2: Fire behaviour and fire side effects of materials and parts; Classification, requirements and test methods**

**Test according to DIN 54837 : 2007-12 Testing of materials, small components and component sections for rail vehicles - Determination of burning behaviour using a gas burner**

**Client:**

Henkel AG & Co. KGaA Heidelberg  
Standort Heidelberg  
Henkel-Teroson-Strasse 57

69123 Heidelberg

The results refer exclusively to the tested samples.

As an accredited Test Laboratory, the BASF SE Fire Safety Technology Test Centre is authorized to conduct fire tests in accordance with DIN EN ISO/IEC 17025 : 2005.

DAR-Register-No.: DGA-PL-6430.06



DGA-PL-6430.06

ID number EBA (German Rail): EBA – 012 / 07 / 10 –

# BASF – Fire Safety Technology

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Receipt of order: 10.06.2010  
Receipt of samples: 28.12.2010  
Date of test: 20.01.2011

## 1. Material: (Information supplied by client)

Terostat 8900 LV

Colour: Black

Field of application: Direct Glazing

## 2. Summary of results and classification:


Length of damaged area	11,2 cm	Combustibility	S4
Afterflame time	0 s		
Integral of smoke development	1 %•min	Smoke development class	SR2
Falling debris	no burning droplets / debris	Dripping class	ST2

### Remarks:

Note: This report is valid for 3 years according to DIN 5510-2 (2009:05), if not differently regulated by the responsible authority.

Any conclusions we draw about the fire safety of the materials we test are based exclusively on the results of the test under the conditions described.  
The extent to which such conclusions can be applied to non-tested material under non-standard conditions is the sole responsibility of the customer and is done so at his own risk.

BASF Fire Safety Technology

  
Dr. Henn  
Head of Laboratory

Ludwigshafen, 31.01.2011

  
Kaiser  
Technician

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### 3. Material:

#### Information supplied by client

Terostat 8900 LV

#### Additional details from test laboratory

Adhesive in aluminium profile

### 4. Samples:

#### Sample size (determined by BASF test laboratory):

Length:	500*	[mm]	Weight:	---	[g]
Width:	10,0*	[mm]	Weight per unit area:		[kg/m <sup>2</sup> ]
Thickness:	5,0*	[mm]	Density:		[kg/m <sup>3</sup> ]
Outer diameter:		[mm]	Remarks:	*Dimension of adhesive	
Inner Diameter:		[mm]			

#### Pre-conditioning:

	Conditions	Duration days
Client: (Information supplied by client)		
Test Laboratory:	Standard 23/50-1 DIN 50014	23

#### Sample preparation:

Exposed surface: Adhesive

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## 5. Test results:

Test apparatus: DIN 50 050	Sample:	1	2	3	4	5	Avg.
Ignition	at [min:s]	0:09	0:08	0:09	0:08	0:08	0:08
	Afterflame time [s]	0	0	0	0	0	0
Glowing	at [min:s]	0:34	1:04	0:36	0:20	0:26	0:36
	Afterglow time [s]	29	10	10	17	23	18
Flame height	Maximum [cm]	20	20	20	20	20	20
	at [min:s]	1:19	0:38	0:47	0:52	1:05	0:56
Falling debris	at [min:s]	---	---	---	---	---	
	Burning duration [s]	---	---	---	---	---	---
Smoke density	Maximum (%)	1	1	1	1	1	1
	at [min:s]	3:05	3:05	3:05	3:05	3:07	3:05
Integral of smoke development	[% *min]	1	1	1	1	1	1
Max. length of damaged area	[cm]	12	11	11	11	11	11,2
Termination by extinguishing at	[min:s]	---	---	---	---	---	
Burning or melting through the sample	[yes/no]	no	no	no	no	no	

### Observations:

## 6. Test equipment:

Test apparatus	PK 0011
Sliding gauge	MB 0036
Balance	MW 0003
Light measurement system	ML 0003
Data acquisition	MC 0007
Burner nozzle	BN 0002
Mass flow meter	MG 0045

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### 7. Requirements:

Standard	Criteria	Classification
DIN 5510 Part 2	<b>Combustibility class</b>	
	Length of damaged area: $\leq 30$ cm Afterflame time: Burning to the end of test and extinguishing allowed	S2
	Length of damaged area: $\leq 25$ cm Afterflame time: $\leq 100$ s (no single value $\geq 120$ s)	S3
	Length of damaged area: $\leq 20$ cm Afterflame time: $\leq 10$ s	S4
	Length of damaged area: 0 cm Afterflame time: 0 s	S5
	<b>Smoke development class</b>	
	Integral of smoke development: $> 100$ %•min	SR1 not achieved
	Integral of smoke development: $\leq 100$ %•min	SR1
	Integral of smoke development: $\leq 50$ %•min	SR2
	<b>Dripping class</b>	
	Burning droplets / debris	ST1
	No burning droplets / debris *	ST2

\* A classification as ST2 can also be achieved in case of burning droplets/debris, provided that the average time of afterburning is  $\leq 20$  seconds

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### 8. Pictures:

