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General report No. P60-13-8003en

Fire testing

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Order number: 60-13-0163 and 60-13-0188
Date: 27.01.2014
Test engineer: Mr. Schmidt
Dokumentation: SG

This report consists of 2 page(s).

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Delivery date specimen:	12./30.04.2013
Test date:	22.04. until 13.05.2013
Test specimen:	Sealing insert ¹⁾ ; Cable glands M16-M50 Order No.: KI 1012
Relevant specification:	Test methods for validation of requirement sets R23/24 acc. CEN TS 45545-2 (07/2009) „Railway applications – Fire protection of railway vehicles– Part 2: Requirements for fire behaviour of materials and components“ and testing of fire resistance in small fire furnace acc. DIN EN 1363-1 (1999-10)
Objective:	Material classification acc. CEN TS 45545-2 (07/2009) and assessment Chamber closure (E) based to DIN 13501-2 (2010-02) and CEN/TS 45545-3 term 6.5.3
Test results:	With the obtained results, the test objects fulfill the requirements R 23/R24 with Hazard Level HL 3 and the possible classification E30.
Notes:	The classifications are only valid in connection with the test reports, listed on page 2. Details can be found in the respective test reports. ¹⁾ The material specifications and the manufacturer / supplier are known to the testing laboratory.



Gert Schmidt
Head of Fire Lab

The results refer only to the specimens mentioned above.
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Summary of the test result

The presented material is considered as "nonlisted product" and therefore assuming an exposed area of $\leq 0.20 \text{ m}^2$ for in-vehicle use (inside) tested for R23 and for use outside the vehicle, R24 (Tab 5 CEN TS 45545-2).

Sealing insert¹⁾; 10mm

Test report No.	Test method	Parameter	Result	R23 HL	R24 HL
P60-13-3158-Rev-01	T12; NF X 70-100 -1 -2 *)	CItnlp without dimension	0,16	3	3
P60-13-4022-Rev-01	T10.03; EN ISO 5659-2	Ds max without dimension	110	3	3

Sealing insert¹⁾; 2,5mm

Test report No.	Test method	Parameter	Result	R23 HL	R24 HL
P60-13-5522-Rev-01	T01; EN ISO 4589-2	OI Vol. %	39,0	3	3
P60-13-3158-Rev-01	T12; NF X 70-100 -1 -2 *)	CItnlp without dimension	0,16	3	3
P60-13-4023-Rev-01	T10.03; EN ISO 5659-2	Ds max without dimension	103	3	3

Note: *)

The test method T12 to determine the smoke toxicity is mass-based, so the results in P60-13-3158-Rev- 01 are valid for both material thicknesses.

Results and evaluation of Fire resistance - DIN 13501-2 (2010-02); CEN/TS 45545-3, term. 6.5.3

Cable glands M16 to M50

Test report No.	Test method	Mounting position	Result Period of time in min	Possible classification
P60-13-6002	DIN EN 1363-1 (1999-10)	vertical	44	E30
P60-13-6003	DIN EN 1363-1 (1999-10)	horizontal	41	E30

¹⁾ The material specifications and the manufacturer / supplier are known to the testing laboratory.

Sign
Test engineer:

