Bauaufsichtlich anerkannte Prüf-, Überwachungs- und Zertifizierungsstelle Prüfstelle für Feuerlöschmittel und -geräte DIN EN ISO/IEC 17025: D-PL-17819-01-00; DIN EN 45011: D-ZE-17819-01-00 DIN EN ISO/IEC 17020: D-IS-17819-01-00 ZLS-GS-0066 Notified Body no. 0767



Test Report

No. 20140087/01

1. Issue

Client:

gabo Systemtechnik GmbH

Am Schaidweg 7 94559 Niederwinkling

Producer:

gabo Systemtechnik GmbH

Am Schaidweg 7 94559 Niederwinkling

Order of:

08th January 2014

Incoming Date:

14th January 2014

Content of Order:

Tests on electric and optical fibre cables under fire conditions -Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame according to IEC

60332-1-2: 2004

Test material:

Protective pipe for cable, speed•pipe®-indoor 4x0.75;

Diameter: 4.0 mm, Color: white

Sampling:

MPA Dresden GmbH was not involved in any selection or sampling

procedure.

This test report contains 2 pages.

In case of doubt the German version of test report no. 20140087/01 is valid.

Publications of test reports also in the form of extracts and references to tests for advertising need in every case the written agreement of the test institute. Every page of these test report is stamped with the official seal of the test institute.

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Kind of Test

Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame according to IEC 60332-1-2:2004

2 **Description of Test Sample**

The protective pipe for cable, speed pipe ®-indoor 4x0.75; Diameter: 4.0 mm, Color: white, was delivered by the client to the MPA Dresden GmbH.

3 **Test procedure**

One test sample of the cable with a length of 600 mm was produced by employees of the test institute. The test sample was straightened and conditioned at (23 ± 5) °C for not less than 16 h at a relative humidity of (50 ± 20) %.

For the mechanical stabilization was in the protective pipe for cables a steel wire with 2 mm diameter inserted.

The test sample was attached in the test chamber according to IEC 60332-1-1 and burned with a flame. The test sample was located in accordance with IEC 60332-1-2. The applying of the flame corresponded to aforementioned standard. The temperature inside the test chamber was 18°C at the beginning of the test. The test rig stands in a testing hall so that external wind speed can be neglected. All other requirements of the above mentioned test standard was fulfilled.

The test flame was applied for 60 seconds.

The test was carried out at 21st January 2014.

4 Evaluation of the test

After the flame application time the burner was turned off. The burning has ceased after a time of 9 seconds after the completion of the test flame period. Afterwards the test sample was taken from the test rig. There were damages at the test sample.

The extent from the lower edge of the top support to the onset of the damage has reached a distance of 402 mm. The recommended minimum of 50 mm as described in Annex A of IEC 60332-1-2 was surpassed.

The maximum damage downwards measured from the lower edge of the top support was 514 mm. The recommended limit of 540 mm according Annex A of IEC 60332-1-2 was not exceeded.

Test Results

The protective pipe for cable, speed pipe lindoor 4x0.75; Diameter: 4.0 mm, Color: white, has passed the test according to IEC 60332-1-2: 2004.

Special Comments

This test report is only valid for the described material (see clause 2). A sample was taken.

Freiberg, 07th February 2014

Qualified Engineer

Manager of the field of fire prevention

perwachen Dresden

Dipl.-Ing. Neubert

Test Engineer