

04.30-PB 175/2011

# TEST CERTIFICATE

## Resistance of reusable sealing systems to chemicals, petrol, diesel and leak detector agents

The certifying body hereby certifies with reference to Test Report No. 175/2011 that reusable sealing systems with a valve of the type series

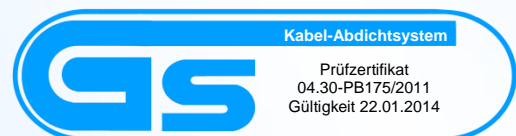
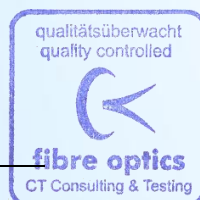
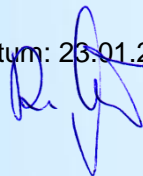
17.1 UA/V	L 80 - 250	20.1 ADE/V	L 25 - 150
17.2 UA-ADS-x	L 125 - 150	20.3 A-MR-x/V	L 125 - 150
18.1 UAGE/V	L 125 - 250	20.5 ADGE/V	I 50 - 150

manufactured by Wolf Kabeltechnik GmbH, of 70437 Stuttgart, Germany, fulfil the standards given below for the sealing of cables against temporary accumulations of chemical solutions, diesel, petrol and liquid leak detection agents, at a water pressure of  $\geq 0,1$  bar for 60 days.

- British Telecommunications pls  
Specification LN584 for cable duct sealing
- Deutsche Telekom TS 0307/96  
"Sealing for cable-configured ducts"
- DVGW Technical Regulations Test Specification VP601: March 2007  
"Gas and water house connections"
- FibreOptics CT Test specification FO17\_02 PG2 Test No. 1347 VW 10

Applicable Test Report: FO 07 Part 47 PB 175/2011  
Date of certification: 23.01.2012  
This certificate is valid until 22.01.2014

Datum: 23.01.2012



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Sealing system



Sealing element  
ADE/V and UA/V



Sealing clip (ADS)



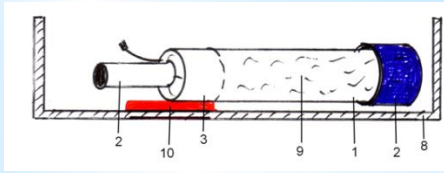
Sealing tape

Test specifications and requirements for the sealing system

Sealing properties	British Telecom LN 584	Deutsche Telekom TS 0307/96	DVGW VP601	Fibre Optics CT tested in acc. with FO 17-02 PG2 PG1 1347 V3 PG2 1347 V10
Chemical resistance 23°C ± 3°C				<ul style="list-style-type: none"> <li>Seal tightness ≥ 30 d/ 0,1 bar at 23°C ± 2°C</li> <li>The sealing system must be removed and reinstalled without damage to cables or ducts</li> </ul>
Petrol	30 d/ ≥ 0.1 bar	---	---	
Diesel	30 d/ ≥ 0.1 bar	---	---	
Vaseline/Petroleum	30 d/ ≥ 0.1 bar	---	---	
Paraffin	30 d/ ≥ 0.1 bar	---	---	
Leak detectors No. 3 BT M492c	30 d/ ≥ 0.1 bar	---	---	
Cable lubricating agent	30 d/ ≥ 0.1 bar	---	---	
1% Autorax CO G630 in water	30 d/ ≥ 0.1 bar	---	---	
pH2 (HCl)	---	30 d/ ≥ 0.1 bar	---	
P12 (NaOH)	---	30 d/ ≥ 0.1 bar	---	
Gas diffusion and water entry	≤ 0.5 bar	≤ 0.5 bar	≥ 0,1 bar	

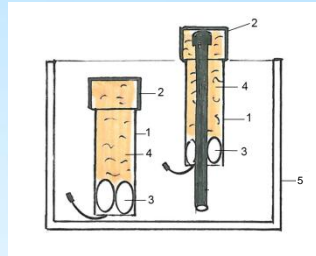
**Test setup Sealing tightness against liquid hazardous substances**

FO 17\_02 PG 1 Test No. 1347/ V3



- 1 Cable channel (pressure-resistant)
- 2 Cable / duct
- 3 Sealing element with valve
- 8 Containment tank
- 9 Hazardous substances (diesel, petrol, etc.) with the addition of:  
- green fluorescent colouring
- 10 Tightness inspection using LED Inspection Kit, product group WO 56 or by means of swelling material, product group WO46

FO 17\_02 PG2 Test No. 1347/ V10



- 1 Cable channel
- 2 Heat-shrink end cap
- 3 Sealing element with valve
- 4 Explosive hazardous substances, petrol, diesel, etc.
- 5 Collecting tank

**Test results Visual inspection of sealing tightness**

- Fire test on temporarily accumulating hazardous substances
- Effect on functionality and service life of the sealing system

Diesel



**Requirement:**

Seal must remain tight for 30 days

**Result:**

**Seal tightness against "diesel", 60 days: passed**

- visual inspection of hazardous substances and components
- diesel has low inflammability
- no damage to sealing element and sealing tapes
- Sealing system is reusable after refurbishment

Premium grade petrol



**Requirement:**

Seal must remain tight for 30 days

**Result:**

**Seal tightness against "petrol", 60 days: passed**

- visual inspection of hazardous substances and components
- premium grade petrol is highly inflammable
- no damage to sealing element, sealing tape film (LDPE) peeled slightly
- sealing system is reusable after refurbishment

## FO 7 Part 47 Test Report.: PB 175/ 2011

Resistance of reusable sealing systems  
to chemicals, petrol, diesel,  
leak detector agents

Product:	Reusable sealing elements made of laminated aluminium foil with a welded-on tyre-valve extension
Area of application:	Cable and cable duct sealing against gas diffusion and chemicals in underground and civil engineering construction (telecommunication facilities, tank installations etc.)
Client:	Wolf Kabeltechnik GmbH, Zazenhäuser Str. 52, 70437 Stuttgart, Germany
Test specifications:	<ul style="list-style-type: none"> <li>- FO 17-02 PG2 Test-Nr. 1347 Method 10 "Tightness of sealing elements" (static test)</li> <li>- British Telecommunications pls Specification LN 584 for duct sealing</li> <li>- Deutsche Telekom TS 0307/96 "Sealing for cable-configured ducts"</li> <li>- DVGW Technical Regulations Test Specification VP601: March 2007 "Gas and water house connections"</li> </ul>

Stuttgart, 23.01.2012

Fibre Optics CT GmbH  
Zazenhäuser Str. 52  
70437 Stuttgart

Project planning:  
Managing director

Mechanical and dynamic  
measuring technology:

Random inspection of testing and measuring processes  
carried out by TÜV SÜD Industrie Service GmbH on

31.10.2011  
09.11.2011

