

QUALITY CERTIFICATES RIVESTOP

Patented mechanical system for an hermetic and watertight seal of formwork tie holes



1. LIST OF QUALITY & TEST CERTIFICATES

 WATERPROOFING			
Certificate type	Certifying entity	Based on standard/ Report n°	Results
Water-tightness pressure resistance	Applus: www.applus.com	Based on UNE EN 12390/-8 n. °: 31704071	Resistant – 5 bar
Water-tightness pressure resistance in RivePipe hole	VBE www.vbe.at	Based on UNE EN 12390-8:2009 n. °: VBE-P14977	Resistant – 5 bar
Water-tightness pressure resistance in conical hole 28-25mm	VBE www.vbe.at	Based on UNE EN 12390-8:2009 n. °: VBE-P14976	Resistant – 5 bar
Water-tightness pressure resistance in conical hole 18-22mm	VBE www.vbe.at	Based on UNE EN 12390-8:2009 n. °: VBE-P14976	Resistant – 5 bar
Water-tightness pressure resistance with 5 weeks simulation	VBE www.vbe.at	Based on UNE EN 12390-8:2009 n. °: VBE-P14802	Resistant – 5 bar
Water-tightness pressure resistance in conical hole 18-22mm	VBE www.vbe.at	Base on UNE EN 12390-8:2009 n. °: VBE-P14978	Resistant – 5 bar

 DURABILITY			
Certificate type	Certifying entity	Based on standard/ Report n°	Results
Water-tightness pressure test with ageing cycle (to simulate the passing of time) in water	Applus: www.applus.com	n. °: 17/31704072	Resistant – 5 bar Remains unchanged over time. No changes in the waterproofing properties over time.
Water-tightness pressure test with ageing cycle (to simulate the passing of time) in high temperatures	Applus: www.applus.com	n. °: 17/31704072	Resistant – 5 bar Effect on the ageing cycle at + 80°C
Water-tightness pressure test with ageing cycle (to simulate the passing of time) in low temperatures	Applus: www.applus.com	n. °: 17/31704072	Resistant – 5 bar Effect on the ageing cycle at - 20°C
Ozone resistance	CTR: www.ctrsa.com	Based on ISO 1431-1 n. °: 120716/4	Resistant

 FIRE RESISTANCE			
Certificate	Certifying entity	Based on standard/ Report n°	Result
Fire reaction	Applus: www.applus.com	Based on UNE 13501-1:2007 + A1:2010 n. °: 17/14690-1240	Classification: CLASS E

 ACOUSTIC RESISTANCE			
Certificate	Certifying entity	Based on standard/ Report n°	Result
Acoustic Insulation	Tecnia: www.tecnalia.com	Based on ISO 10140-2:2010 n. °: B2017-LACUS-IN-23	Value of acoustic insulation with Rivestop installed: is the same as of the original concrete wall without perforating holes.

 GAS RADON TIGHTNESS			
Certificate type	Certifying entity	Based on standard/ Report n°	Results
Determination of the Radon Diffusion Coefficient and Radon Diffusion Length	IAF- Radioökologie GmbH: https://iaf-dresden.de/en/home/	N° 18078-2 (EPDM)	Diffusion Coefficient: 1.10-10 m²/s Diffusion Length: 6.9mm

2. CHEMICAL COMPATIBILITY OF MATERIALS

 CHEMICAL RESISTANCE AND COMPATIBILITIES – based on UNE 13501-1:2007 + A1:2010		
Certificate	Based on standard/	Result
Waterproofing with simulation of accelerated ageing in acidic solution	Based on UNE 13501-1:2007 + A1:2010	Resistant – no leaks PH 4,0 - 4,3
Waterproofing with simulation of accelerated ageing in saline solution	Based on UNE 13501-1:2007 + A1:2010	Resistant – no leaks PH 13,2

The following table shows the chemical compatibility of the materials that compose RiveStop with different chemical substances:

CHEMICAL COMPATIBILITY TABLE OF RIVESTOP MATERIALS – Source: CIDETEC Lab – Report n°. GP- ITREV3				
CHEMICAL SUBSTANCES	STAINLESS STEEL 316	THERMOPLASTIC PA	ALUMINIUM	EPDM RUBBER
OZONE	Good	Good	Good	Good
UV - RAYS	Good	Good	Good	Good
HYDROGEN GAS	Good	Good	Good	Good
POTASSIUM NITRATE	Good	Good	Good	Good
FATS	Good	Good	Good	Good
LACTIC ACIDS	Good	Good	Good	Good
RAINWATER	Good	Good	Good	Good
SEAWATER	Good	Good	Regular	Good
SODIUM HYDROXIDE	Good	Good	Good	Good
AMMONIA BASED SOLUTIONS	Good	Good	Good	Good
DRINKING WATER	Good	Good	Good	Non-applicable, because there is no direct contact with the material
CELLULOSE OR BIOMASS	Good	No data	Good	Good
CARBOHYDRATES (BIOMASS)	Good	Good	Good	Good
PLASTER/GYPSUM: CALCIUM SULFATE BASED	Good	Good	Good	Good

· Other chemical substances compatibility, under request.

The recipients will not spread, disclose and/or transmit this information to third parties, provided that these acts are not necessary for the operation of the business, and as long as this is not damaging to CAUCHOS Y DERIVADOS JABE, S.L. and RIVESTOP SYSTEM, S.L.