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## European Technical Assessment

**ETA-24/0891  
of 23.12.2024**

*English version prepared by ZAG*

### GENERAL PART

**Technical Assessment Body issuing the  
European Technical Assessment:**

**ZAG**

**Trade name of the construction  
product**

**SEISMOLINK**

**Product family to which the construction  
product belongs**

**PAC 20: STRUCTURAL METALLIC  
PRODUCTS AND ANCILLARIES  
Fibre rope with end connectors**

**Manufacturer**

**SPEKTRAL d.o.o.  
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**Manufacturing plant(s)**

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**This European Technical Assessment  
contains**

**9 pages including 5 Annexes which form an  
integral part of this assessment**

**This European Technical Assessment is  
issued in accordance with Regulation (EU) No  
305/2011, based on**

**EAD 200379-00-0602 - Fibre ropes with  
end connectors**

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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## SPECIFIC PARTS

### 1. TECHNICAL DESCRIPTION OF THE PRODUCT

The SEISMOLINK is a prefabricated fibre rope with end connectors (sockets) in which the rope is anchored by its end portions. The end connectors are resin filled sockets of stainless steel or zinc coated carbon steel. The rope is composed of braided strands of high modulus polyethylene (HMPE) fibres according to EN ISO 10325.

This ETA refers to three types of product, defined as following:

Type of product	Type of rope	Type of socket
R6	R6	T6
R8	R8	T8
R10	R10	T10

Properties of ropes are specified in Table A.1, Annex A1. Types of sockets are listed in Table A.2, Annex A2, and are selected according to the application. Drawing of the sockets with the essential dimensions is given in the Annex A3. Socketing medium is the resin listed in Table A.3, Annex A3.

The material values, dimensions and tolerances of the components indicated in the Annexes shall correspond to the indications laid down in the technical documentation to this European Technical Assessment<sup>1</sup>.

### 2. SPECIFICATION OF THE INTENDED USE IN ACCORDANCE WITH THE APPLICABLE EUROPEAN ASSESSMENT DOCUMENT (hereinafter EAD)

The SEISMOLINK is installed between a non-structural element (e.g. façade panel, electrical/mechanical installation element, equipment) and the primary or secondary structural element of the building via anchors and special fastening elements.

The main function of the SEISMOLINK is the protection of the non-structural elements from collapsing on earthquake. The product is used as a back-up system in addition to traditionally used connections which are already present in the building. The product is intended to be activated only upon a failure of the primary connections. Impact forces generated between the product and a moving object during the activation are evaluated in accordance with EN 1991-1-7, C.2.1.

The SEISMOLINK made of galvanised carbon steel sockets may be used for indoor and outdoor applications with a corrosion category class C1 in accordance with Table B1 and Table B2 in EN 1993-1-3 and EN ISO 12944 2. The SEISMOLINK made of galvanised stainless steel

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<sup>1</sup> *The technical documentation comprises all information of the holder of this ETA necessary for the production, installation and maintenance of the SEISMOLINK. The part to be treated confidentially is deposited at ZAG and, as far as this is relevant to the tasks of the notified bodies involved in the procedure of assessment and verification of the constancy of performance, shall be handed over to the notified body.*

sockets may be used for indoor and outdoor applications with a corrosion category class of C1, C2, C3 or C4.

The product is intended to be used in the temperature range -30°C to +45°C without special assessment.

Concerning product packaging, transport and storage it is the responsibility of the manufacturer to undertake the appropriate measures and to advise his clients on the transport and storage, as he considers necessary to reach the declared performances.

The information about installation is provided with the technical documentation from the Manufacturer and it is assumed that the product will be installed according to it or (in absence of such instructions) according to the usual practice of the building professionals.

The specifications and conditions given by the manufacturer are summarized in Annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the SESIMOLINK of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### **3. PERFORMANCE OF THE PRODUCT AND REFERENCES TO THE METHODS USED FOR ITS ASSESSMENT**

The tests for performance assessment of the SEISMOLINK were carried out in compliance with EAD 200379-00-0602 according to the test methods reported herein, as well for what concerns sampling and testing provisions.

#### **3.1 SAFETY IN CASE OF FIRE (BWR 2)**

<b>Essential characteristic</b>	<b>Performance</b>
Reaction to fire	Class E

#### **3.2 SAFETY AND ACCESSIBILITY IN USE (BWR 4)**

<b>Essential characteristic</b>	<b>Performance</b>
Breaking strength	See Annexes C
Stiffness	See Annexes C
Alkali resistance	No Performance Assessed

### **4. ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE**

In accordance with the European Assessment Document EAD 200379-00-0602, the applicable European legal act is: **Decision 1998/214/EC**.

The AVCP system to be applied is: **2+**.

In addition, with regard to reaction to fire for the products, the applicable European Legal Acts is: Decision **1998/214/EC**, amended by **2001/596/EC**. According to the reaction to fire classes reported in Section 3.2, the AVCP system is **3**.

## **5. TECHNICAL DETAILS NECESSARY FOR THE IMPLEMENTATION OF THE AVCP SYSTEM, AS PROVIDED FOR IN THE APPLICABLE EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the Control Plan deposited at ZAG.

For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing must be agreed between ZAG and the Notified Body.

Issued in Ljubljana on 23. 12. 2024

Signed by:

Franc Capuder, M.Sc.

Head of Service of TAB

**ROPE**

**Table A1: Properties of fibre rope**

R6		
GEOMETRICAL AND PHYSICAL PROPERTIES		
Property	Unit	Value
Diameter	mm	6
Weight	g per1 mm	23
Breaking Strength	kN	43
Working stretch	%	< 1
Material	-	coated Dyneema® SK78
Construction	-	12-plaited, heat-set and coated

R8		
GEOMETRICAL AND PHYSICAL PROPERTIES		
Property	Unit	Value
Diameter	mm	8
Weight	g per1 mm	35
Breaking Strength	kN	53
Working stretch	%	< 1
Material	-	coated Dyneema® SK78
Construction	-	12-plaited, heat-set and coated

R10		
GEOMETRICAL AND PHYSICAL PROPERTIES		
Property	Unit	Value
Diameter	mm	10
Weight	g per1 mm	60
Breaking Strength	kN	90
Working stretch	%	< 1
Material	-	coated Dyneema® SK78
Construction	-	12-plaited, heat-set and coated



<b>SEISMOLINK</b>	<b>Annex A1 of ETA-24/0891</b>
Product Description – Fibre rope	

## SOCKET

**Table A2: Socket material**

T6, T8 and T10
<b>Socket made of zinc-coated steel</b>
$f_u \geq 530 \text{ N/mm}^2$ , $f_y \geq 220 \text{ N/mm}^2$ Rupture elongation ( $l_0 = 5d$ ) > 8% ductile Electroplated zinc coated $\geq 5 \mu\text{m}$ Hot dip gavanized $\geq 45 \mu\text{m}$
<b>Socket made of stainless steel</b>
$f_u \geq 530 \text{ N/mm}^2$ , $f_y \geq 220 \text{ N/mm}^2$ Rupture elongation ( $l_0 = 5d$ ) > 8% ductile High corrosion resistant steel according to EN 10088-1:2014

## SOCKETING MEDIUM

**Table A3: Socketing medium material**

Resin
<b>Sikadur®-52 Type N:</b> two part, solvent-free, low viscosity injection-liquids, based on high strength epoxy resins according to EN 1504-5:2004

<b>SEISMOLINK</b>	<b>Annex A2 of ETA-24/0891</b>
Product Description – Socket material and type of resin	

## INTENDED USE AND INSTALLATION INSTRUCTIONS

The SEISMOLINK has two end-terminations with external threads, by which it is connected to the structural element on one side and to the non-structural element on the other side (Figure 1). Various connecting elements can be used to facilitate the anchoring of the end-terminations to the structural or nonstructural element. These connecting elements should be properly designed according to applicable technical standards (Eurocodes) and appropriate calculation models.

During installation it is essential to follow the requirements or assumptions from the project documentation and the manufacturer's recommendations. All potential points where the rope may be damaged by contact with sharp objects or edges of other connecting elements must be prevented or protected.

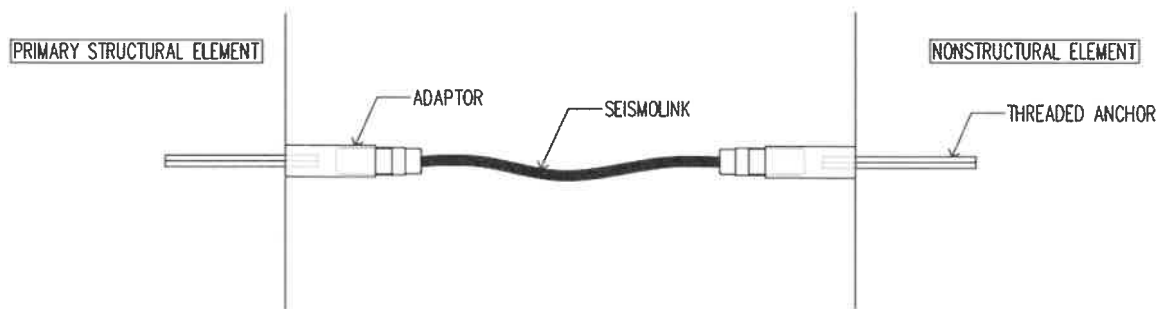


Figure 1: General installation scheme of the SEISMOLINK

<b>SEISMOLINK</b>		<b>Annex B</b> of <b>ETA-24/0891</b>
Intended Use - Installation instructions		

**Table C1: Mechanical properties of the SEISMOLINK**

Product	Mechanical properties	
	Breaking strength	Stiffness*
	$R_{t,k}$ [kN]	$k_t$ [kN/m]
R6	19.9	1496
R8	40.5	2264
R10	69.7	2985

Note: \*Stiffness of the SEISMOLINK was assessed for the product with the rope of length  $L_{tot} = 0.5$  m.

<b>SEISMOLINK</b>	<b>Annex C of ETA-24/0891</b>
Performances - Mechanical properties	