



TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Technical and Test Institute for Construction Prague
Akreditovaná zkušební laboratoř, Autorizovaná osoba, Notifikovaná osoba, Oznamovaný subjekt, Subjekt pro technické posuzování, Certifikační orgán, Inspekční orgán / Accredited Testing Laboratory, Authorized Body, Notified Body, Technical Assessment Body, Certification Body, Inspection Body. Prosecká 811/76a, 190 00 Praha 9 - Prosek, Czech Republic

Authorized Body 204
empowered by the Decision of COSMT No. 5/2017 of 31/1/2017
Branch Office 0600 – Brno

issues
in compliance with Act No. 22/1997 Sb. on Technical Requirements for Products and on Amendments to Some Acts as amended and Section 2 and 3 of Government Decree No. 163/2002 Sb., as amended by Government Decree No. 312/2005 Sb. and by the Government Decree No. 215/2016 Coll.

TECHNICAL APPROVAL

No. 060-044717

Product name:

Composite mesh made of basalt fibre reinforced polymer rods

type / variant:

diameter of rods 2,2 and 3 mm, mesh size 50 x 50 and 100 x 100 mm

Importer:

ORLIMEX CZ, s.r.o.

INo: 25930915
Address: č.p. 50, 569 67 Osík

Manufacturer: **GALEN LLC**
INo: --
Address: 52 K.Marks street, Cheboksary, Chuvash Republic
Russia 428000

Plant: **GALEN LLC**
Address: 52 K.Marks street, Cheboksary, Chuvash Republic
Russia 428000

Order No: Z060170014

The Authorized Body 204 confirms by this Technical Approval the technical characteristics of the product, their levels and procedures of determination in relation to the essential requirements specified in Annex No. 1 to the Government Decree No. 163/2002 Sb. as amended by the Government Decree No. 312/2005 Sb. and by the Government Decree No. 215/2016 Coll.

The technical Approval is a technical specification intended for assessing of conformity of the mentioned product.

Number of pages of the Technical Approval, including the title page: 3

This Technical Approval is compiled by:


Ing. Marek Sopko
Chief Assessor

This Approval is valid until: March 31, 2020

Person responsible for correctness of this Approval:

Brno, March 20, 2017


Ing. Jozef Pöbiš
Head of the Authorized Body 204



Note: This Technical Approval shall not be reproduced other than as a complete without a written consent of the Head Manager of the Authorized Body 204.

1. Information of the product and its intended use

Composite mesh consists of basalt fibre reinforced polymer rods with diameter 2,2 and 3 mm. The rods are placed in two directions perpendicular to each other and fixed at the intersections by special material. The meshes are supplied in the form of sheets or reeled on a disc.

The meshes are particularly used for structural reinforcement of concrete constructions (walls, boards) and a flooring to prevent a formation of shrinkage cracks situated in humid and corrosive environment (sewage plants, silage troughs, chemical, food processing and agricultural operations).

The meshes can be used for other purposes like gypsum and anhydrite floors, asphalt concrete structures, a reinforcement of slopes and an embankment.

2. Determination of observed characteristic and methods of verification

Tab. 1:

No.	Characteristic	Test method	No. of samples		Required (R) / declared value (D)
			T	S	
1	Tensile strength Elongation	ISO 10406-1, cl. 6	10	5	D: $f_{u,c}$: min. 1250 MPa D: ε_u : 1,6 % - 5,6 %
2	Modulus of elasticity	ISO 10406-1, cl. 6.4.4	10	5	D: E : min. 37 GPa
3	Connection of rods strength	ČSN EN ISO 15630-2	5	5	D: min. 100 N
4	Alkali resistance	ISO 10406-1, cl. 11	5	5	D: $R_{ef} \geq 25$ %
5	Nominal diameter of rod	ISO 10406-1, cl. 5	3	3	D: tolerance -5 % / +10 % *)
6	Dimensional accuracy of mesh	ČSN 42 0139	3	3	D: tolerance ± 5 %
7	Content of fibres	ČSN EN ISO 1172	2	2	D: min. 75 %
8	Cadmium content	Methodology No. 100611-01	1	1	D: max. 0,01 %

Note: T – verification of product conformity (§ 7), S – surveillance over certified product (only § 5 or § 10)

*) Rupture by tensile shall be at \varnothing 2,2 min. 5000 N, at \varnothing 3,0 min. 9600 N.

3. Factory production control assessment

General requirement of manufacturing control system are listed in Annex No. 3 to Government Decree No. 163/2002 Sb. as amended by Government Decree No. 312/2005 Sb. and by the Government Decree No. 215/2016 Coll and they are specify in the Tab.2.

Tab. 2: Requirements for product control of the importer

Number	Field of control management system	Specific requirements
1	Control and testing	The importer has designed procedures for product control enabling to put on the market only products corresponding to technical specifications. Product control is performed in compliance with these procedures. Staff performing the control fulfil determined qualification requirements and the applicant keeps records of it. The importer properly keeps and stores records proving that the product was controlled and tested. Further keeps record of product complaint. The importer has specified measuring instruments subjected to verification or calibration for product testing, keep records of their evidence, is very particular about their state and his measuring instruments are verified and calibrated.
2	Storage areas and handling devices	The importer disposes of necessary areas for storing a handling with products including storage device and is very particular about its right state.
3	Technical specifications	The importer has detailed description of technical product's characteristics and defined intended use of it in construction.
4	Directions for use of product	The importer has adequate directions for use and maintenance of product in Czech language.



4. Data proposed by the applicant

- Application for performance of activity of Authorized Body 204, dated 30.1.2017
- Technical data sheet Composite mesh
- Composite materials for civil engineering presentation

5. List of applied technical instructions, standards and other data

- Act No. 22/1997 Sb. on Technical Requirements for Products and on Amendments to Some Acts
- Government Decree No. 163/2002 Sb., on the Technical requirements for selected construction products, as amended by Government Decree No. 312/2005 Sb. and the Government Decree No. 215/2016 Coll.
- ISO 10406-1 Fibre-reinforced polymer (FRP) reinforcement of concrete – Test methods – Part 1: FRP bars and grids
- ČSN EN ISO 15630-2 Steel for the reinforcement and prestressing of concrete - Test methods - Part 2: Welded fabric
- ČSN 42 0139 Steel for the reinforcement of concrete - Weldable ribbed and plained reinforcing steel
- ČSN EN ISO 1172 Textile-glass-reinforced plastics - Prepregs, moulding compounds and laminates - Determination of the textile-glass and mineral-filler content - Calcination methods
- Methodology No. 100611-01 Determination of metals in the sample: AAS – flame
- Technical direction 01.02.c Glass or carbon or their combination reinforced polymer rods
- Technical direction 01.02.a Welded meshes made of rebar and plain rod

6. Verification tests

No verification tests have been performed in order to compile this Technical Approval.

7. Specific requirements for evaluation of conformity

- The product is classified as product group No. 01, item 2, pursuant to Annex 2 to Government Decree No. 163/2002 Sb. as amended and it is specified to verify conformity by the producer pursuant to § 5 thereof. The importer shall check the products in accordance with the requirements of § 5 cl. 1 c) thereof.
- Surveillance of the certified product will be performed once every 12 months

