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European Technical Assessment ETA-23/0604 of 12.09.2023

General Part

Technical Assessment Body issuing the European Technical Assessment: ITC Division CSI – Centre of Civil Engineering	
Trade names of the construction product	**Block Art**
Product family to which the construction product belongs	Flat plastic roofing sheets made of recycled plastic for fully supported discontinuous roofing and external cladding
Holder of the assessment	**NÁSTROJÁRNA VINKLER s.r.o.** Poličská 1689, 539 01 Hlinsko, Czech Republic
Manufacturing plant(s)	**NÁSTROJÁRNA VINKLER s.r.o.** Poličská 1689, 539 01 Hlinsko, Czech Republic
This European Technical Assessment contains	9 pages including 2 Annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 220010-01-0402 Flat plastic roofing sheets made of recycled plastic for self-supporting and/or fully supported discontinuous roofing and/or external cladding

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Specific part

1. Technical description of the product

1.1. Definition of the construction product

This European technical assessment applies to the flat plastic roofing sheet for fully supported discontinuous roofing and external cladding made from recycled plastic coming from automotive industry with the designation Block Art. The product is specified for the minimal roof slope at least 25° up to 90°. An underlay as flexible sheet for waterproofing according to EN 13859-1 is required as an integral part of installation procedures. The product is a small-format flat plastic roofing.
As for the composition the product is composed of PP copolymer including additives as talc, UV stabilizer etc. No fire retardants are included in the product.
Weight: 0,317 ± 0,010 kg
Dimensions:
Length: 340±4 mm
Width: 340 ±4 mm
Thickness: 9±1 mm
Note: Tolerances are given because the dimensions may vary due to the temperature changes.
The detail drawing of the product is given in Annex No.1 to the ETA.
The product does not include wind rivet.
Fixing of the product:
Nails or flat head screws made of Fe/Zn, Cu or stainless steel can be used for fixing. If nails are used, we recommend using convex nails. The maximum diameter of the anchoring material shall not exceed 3 mm, the length should be chosen with regard to the formwork.
Only flat-headed nails can be used for additional fixing in the drainage groove, the screw head would lift the individual sheets.
In the case of fixing in another location, the hole must be pre-drilled. It is assumed that the product will be installed according to the manufacturer´s instructions and according to the usual practice of building professionals.

The ETA is issued for the abovementioned product on the basis of agreed data/information, deposited with the Technical Assessment Body – ITC, which identifies the product that have been assessed.
Any changes of the product/manufacturing process which could result in this deposited data/information being incorrect, shall be notified to the ITC before the changes are introduced. ITC will decide whether or not such changes affect the European Technical Assessment (ETA) and consequently the CE marking on the basis of the ETA and if so whether any further assessment or any amendments of the ETA, are required.

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

2. Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

2.1. Intended use

The product is used for discontinuous covering the sloped and high-pitched roofs and cladding on external walls. Flat plastic roofing sheet is nailed in the place of prepared holes or in the place recommended by the manufacturer to planking, laths or grid support. The product is intended for use(s) in conjunction with underlay according to EN 13859-1.

The product is not a load-bearing component. It is to be fixed to a full-surface base construction on roofs (planking) or to a laths or grids on walls.

2.2. Working life/Durability

The provisions made in this European Technical Assessment are based on an assumed working life of the product for 25 years when installed in the works provided that the product is subject to appropriate installation. These provisions are based upon the current state of the art and the available knowledge and experience.
The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor by EOTA nor by the Technical Assessment Body issuing an ETA, but are regarded only as a means of expressing the expected economically reasonable working life of the product.

3. Performance of the product and references to the methods used for its assessment

The essential characteristics of the product and methods of verification were carried out in compliance with the EAD concerning “Flat plastic roofing sheets made of recycled plastic for self-supporting and/or fully supported discontinuous roofing and/or external cladding”

Table No. 1

No	Essential characteristic and method of verification and assessment	Expression of product performance
Basic Works Requirement 2: Safety in case of fire		
1	Reaction to fire (Cl. 2.2.1 of EAD 220010-01-0402)	Class E
2	External fire performance of roofs (Cl. 2.2.2 of EAD 220010-01-0402)	No performance assessed
Basic Works Requirement 3: Hygiene, health and the environment		
3	Content, emission an/or release of dangerous substances (Cl. 2.2.3 of EAD 220010-01-0402)	No performance assessed
Basic Works Requirement 4: Safety and accessibility in use		
4	Hard body impact resistance (Cl. 2.2.4 of EAD 220010-01-0402) - fully supported and at (20±5)°C - fully supported and at (-20±1)°C	 E = 10 N*m E = 10 N*m
5	Tensile strength and elongation (Cl. 2.2.5 of EAD 220010-01-0402)	See Annex No. 2
6	Dimensions (Cl. 2.2.6 of EAD 220010-01-0402) - Length, width, thickness - Deviation of flatness	 l [mm], b [mm], d [mm] See Annex 2 $S_{max} \leq 0.2$ mm
7	Weight (Cl. 2.2.7 of EAD 220010-01-0402)	See Annex No. 2
8	Flexural strength (Cl. 2.2.8 of EAD 220010-01-0402)	See Annex No. 2
9	Pull - through resistance (Cl. 2.2.9 of EAD 220010-01-0402)	No performance assessed
10	Tear resistance under the shear load (Cl. 2.2.10 of EAD 220010-01-0402)	No performance assessed
11	UV stability (Cl. 2.2.11 of EAD 220010-01-0402)	No performance assessed
12	Resistance to heat (Cl. 2.2.12 of EAD 220010-01-0402)	No performance assessed
13	Resistance to low temperature (Cl. 2.2.13 of EAD 220010-01-0402)	No performance assessed
14	Resistance to water penetration (Cl. 2.2.14 of EAD 220010-01-0402)	No performance assessed
15	Vicat softening temperature (VST) (Cl. 2.2.15 of EAD 220010-01-0402)	No performance assessed

No	Essential characteristic and method of verification and assessment	Expression of product performance
16	Resistance to point load (Cl. 2.2.16 of EAD 220010-01-0402)	See Annex No. 2

4. Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

4.1. AVCP system

According to the European Commission 1998/436/EC, amended by European Commission decision 2001/596/EC, the **AVCP system 3** (further described in Annex V to Regulation (EU) No 305/2011 as amended) applies.

5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details of the actions to be undertaken by the manufacturer in relation to the FPC are laid down in the “Control plan” which specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacturing process on characteristics that cannot be inspected at a later stage and for checks on the final product. Manufacturer and ITC – Division CSI have agreed a Control Plan which is deposited with ITC- Division CSI in documentation which accompanies the ETA.

All elements, requirements and provisions adopted by the manufacturer should be documented in a systematic manner in the form of written policies and procedures.
Basic manufacturing process is described in sufficient details to support the proposed FPC methods.
Manufacturer’s documentation includes:
- detailed description of the product,
- incoming´s (raw) materials specifications and declarations,
- references to European and/or international standards.

Where confidentiality of information is required, this ETA makes reference to the manufacturer’s technical documentation which contains such information.
The records shall be kept at least for ten years and presented to ITC – Division CSI on request.
In cases where the provisions of the European Technical Assessment and its Control Plan are no longer fulfilled, the ITC – Division CSI should withdraw the ETA without any delay.

Issued in Prague,12.09.2023

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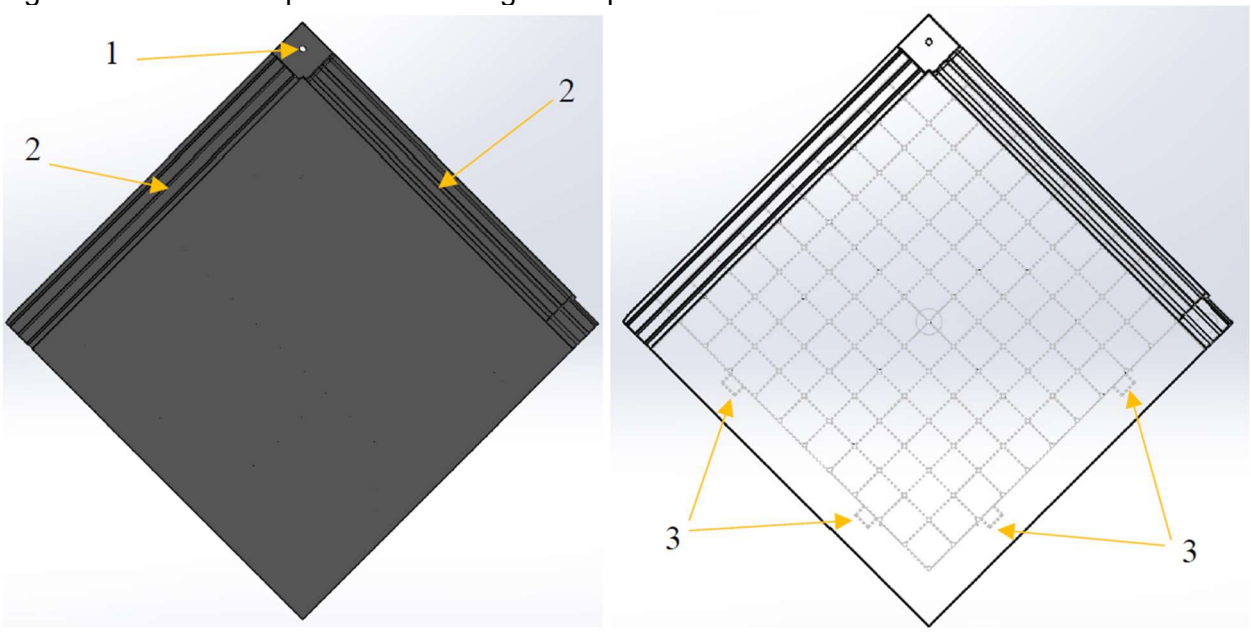
Assessor	Technical Director

Annexes

Annex No. 1: Drawing of the product
Annex No. 2: Performance of the product with regard to its dimensions, weight, flexural strength and point load

Annex No. 1: Drawing of the product

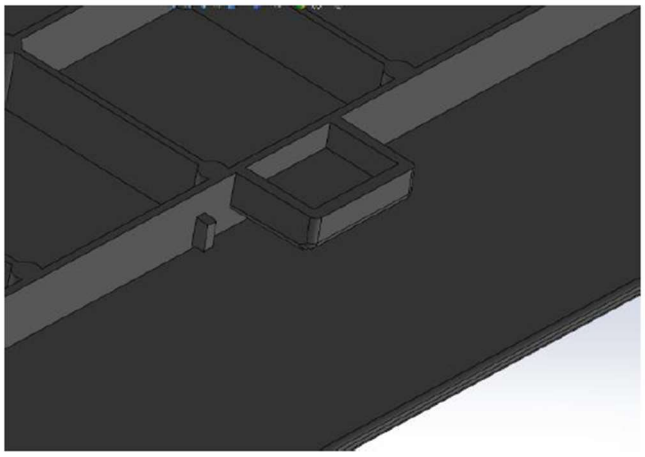
Figure No. 1.1: Description and drawing of the product Block Art



Legend to the Figure No. 1.1:

1	Fixing opening
2	Section with drainage grooves
3	Rear part of the sheet – locks between sheets and dilatational area

Figure No. 1.2: Detail of lock and dilatational are



Annex No. 2: Performance of the product with regard to its dimensions, weight, tensile properties, flexural strength and point load

Table 2.1: Two - sided confidence interval of mean value at the confidence level 95% according to ISO 2602

Two-sided confidence interval	Length l [mm]	Width b [mm]	Thickness d [mm]	Weight [mm]
	339-339	339-339	9.02-9.11	0.317-0.318

Note: ISO 2602, Cl. 6.2

Table 2.2: Median according to ISO 3534-1

Median	Length l [mm]	Width b [mm]	Thickness d [mm]
	339	339	9.07

Note: ISO 3534-1, Cl. 1.13

Table 2.3: Characteristic values

Characteristic value	Result
Tensile strength in direction A $\sigma_{t,c}$ [N/mm²]	13.5
Tensile strength in direction B $\sigma_{t,c}$ [N/mm²]	13.5
Flexural strength in direction A $\sigma_{fM,c}$ [N/mm²]	22.3
Flexural strength in direction B $\sigma_{fM,c}$ [N/mm²]	22.5
Resistance to point load $F_{max,c}$ [N] t_a= 9.04 mm	106

Note: 95 % quartile on confidence level 75% for Vx as unknown according to EN 1990, Annex D, Cl. 7.2

Figure No. 2.1: Marking of direction A and B

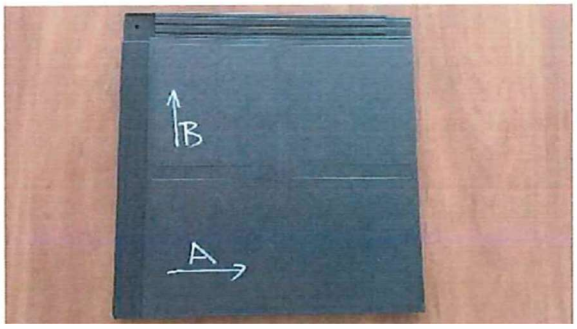


Table 2.4: Bottom limit value of one-sided confidence interval of mean value of elongation at the confidence level 95%

Bottom limit value of one-sided confidence interval	Result
Elongation Ɛ in direction A [%]	5.3
Elongation Ɛ in direction B [%]	4.2