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## European Technical Assessment

**ETA 17/0751  
of 18/09/2017**

### *I General Part*

**Technical Assessment Body issuing the  
ETA:**

Technical and Test Institute for Construction  
Prague

**Trade name of the construction product**

**EUREKO® CPS;  
EUREKO® DDS II;  
EUREKO® DDU II;  
EUREKO® DDN II**

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

**Flat and profiled (with a pattern) plastic  
roofing sheets made of recycled material  
for fully supported discontinuous  
roofing**

**Manufacturer**

REGRA PLAST spol. s r.o.  
č.p. 197, 440 01 Obora  
Czech Republic

**Manufacturing plant**

REGRA PLAST spol. s r.o.  
č.p. 197, 440 01 Obora  
Czech Republic

**This European Technical Assessment  
contains**

9 pages including 1 annex which forms 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 No. 220069-00-0402 for flat and  
profiled (with a pattern) plastic roofing  
sheets made of recycled material for fully  
supported discontinuous roofing

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## II Specific part

### 1 Technical description of the product (definition of the product)

This European Technical Assessment applies to the flat and profiled (with a pattern) plastic roofing sheets made of recycled material for fully supported discontinuous roofing **EUREKO® CPS, EUREKO® DDS II, EUREKO® DDU II, EUREKO® DDN II**.

Product is specified for the minimal roof slope at least 25° up to 80°. The plastic roofing sheets (PRSs) shall be always underlaid by a waterproofing membrane. Type of the waterproofing membrane shall correspond to the composition of the roof deck. Installation shall be performed according to the manufacturer's instructions.

The PRSs are made of recycled plastics.

As for the material composition they are based on copolymer PE/PP, talc and pigments.

The PRSs can be produced in more shapes and can be flat or profiled (with a pattern). The PRSs can imitate appearance of the natural materials because of the pattern.

Table No. 1: Declared dimensions, weight and tolerances

Type of PRS	Length [mm]	Width [mm]	Thickness(depth) [mm]	Weight [g]
<b>EUREKO® CPS</b>	(317.6±4)	(422.4±5)	(4.0 ±1)	(300±30)
<b>EUREKO® DDS II</b>	(517.5±6)	(155.2±5)	(26.3±3)/(2±0.2)*	(333±40)
<b>EUREKO® DDU II</b>	(613.1±6)	(106.5±5)	(26.3±3)/(2±0.2)*	(250±20)
<b>EUREKO® DDN II</b>	(614.2±6)	(108.1±5)	(23.5±3)/(2±0.2)*	(210±20)

Note: \*The PRS is profiled and has got substantially higher thickness(depth) in the location of profile than out of location of the profile where is only unregular pattern of the sheet. For more details see the drawings in Annex No. 1.

Figure No. 1: EUREKO® CPS

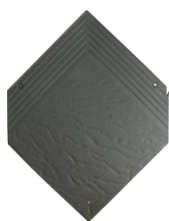


Figure No. 2: EUREKO® DDS II



Figure No. 3: EUREKO® DDU II



Figure No. 4: EUREKO® DDN II



The PRSs are fixed by use of nails and wind rivets according to the manufacturer's instructions. All mounting and fixing details shall be executed according to the manufacturer's installation manual.

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

### **2.1 Intended use**

PRSs are not load-bearing and are used for discontinuous covering of the sloping and high-pitched roofs. PRSs are fastened in the place of prepared holes or in the place recommended by the manufacturer. They are fixed against uplifting by bending down of the wind rivets at the bottom of sheet. Minimal dilatation joint shall be determined according to the manufacturer's installation instructions.

### **2.2 Working life/durability**

The assessment methods included or referred to in the used EAD have been written based on the manufacturer's request to take into account a working life of the discontinuous plastic roofing sheets for the intended use of 25 years when installed in the works /provided that the discontinuous plastic roofing is subject to appropriate installation. These provisions are based upon the current state of the art and the available knowledge and experience.

When assessing the product the intended use as foreseen by the manufacturer shall be taken into account. The real working life may be, in normal use conditions, considerably longer without major degradation affecting the basic requirements for works<sup>1</sup>.

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 when drafting this EAD nor by the Technical Assessment Body issuing an ETA based on this EAD, but are regarded only as a means for expressing the expected economically reasonable working life of the product.

Note: <sup>1</sup>The real working life of a product incorporated in a specific works depends on the environmental conditions to which that works is subject, as well as on the particular conditions of the design, execution, use and maintenance of that works. Therefore, it cannot be excluded that in certain cases the real working life of the product may also be shorter than referred to above.

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

The assessment of the PRSs was carried out in compliance with the EAD 220069-00-0402.

#### 3.1 The characteristics of the PRSs

Table No. 2: Characteristics of the PRSs

No	Essential characteristic and method of verification/assessment	Expression of product performance
<b>Essential Requirement 1: Mechanical resistance and stability</b>		
No specific requirements		
<b>Essential Requirement 2: Safety in case of fire</b>		
1	<b>External fire performance</b> (Cl. 2.2.1 of EAD 220069-00-0402)	$F_{\text{roof}}$
2	<b>Reaction to fire</b> (Cl. 2.2.2 of EAD 220069-00-0402)	class E
<b>Essential Requirement 3: Hygiene, health and environment</b>		
3	<b>Content, emission and/or release of dangerous substances*)</b> (Cl. 2.2.3 of EAD 220069-00-0402)	content of cadmium $\leq 0.01$ % per weight $< 1$ mg/kg
<b>Essential Requirement 4: Safety and accessibility in use</b>		
4	<b>Hard body impact resistance</b> (Cl. 2.2.4 of EAD 220069-00-0402)	$E = 10$ J
5	<b>Tensile strength and elongation</b> (Cl. 2.2.5 of EAD 220069-00-0402)	$\sigma_{t,c} \geq 15$ MPa $\varepsilon_t \geq 3$ %
6	<b>Dimensions</b> (Cl. 2.2.6 of EAD 220069-00-0402) -length -width -thickness -deviation of flatness	see Annex No. 1 see Annex No. 1 see Annex No. 1 No performance assessed
7	<b>Weight</b> (Cl. 2.2.7 of EAD 220069-00-0402)	see Annex No. 1
8	<b>Flexural strength</b> (Cl. 2.2.8 of EAD 220069-00-0402)	$\sigma_{fM,c} \geq 22$ MPa
9	<b>Pull-through resistance</b> (Cl. 2.2.9 of EAD 220069-00-0402)	No performance assessed
10	<b>Tear resistance</b> (Cl. 2.2.10 of EAD 220069-00-0402)	$F_{s,c} \geq 620$ N
11	<b>UV stability</b> (Cl. 2.2.11 of EAD 220069-00-0402)	No performance assessed

No	Essential characteristic and method of verification/assessment	Expression of product performance
12	<b>Resistance to heat</b> (Cl. 2.2.12 of EAD 220069-00-0402) -change of length -change of width -change of thickness -deviation of flatness -residual proportion of characteristic value of flexural strength after heat -characteristic value of tear resistance after heat	$\Delta_{el} \leq \pm 0.2 / \%$ $\Delta_{eb} \leq \pm 0.2 / \%$ $\Delta_{ed} \leq \pm 0.1 / \%$ No performance assessed $\sigma_{fM,c,h} \geq 22 \text{ MPa}$ No performance assessed
13	<b>Resistance to low temperature</b> (Cl. 2.2.13 of EAD 220069-00-0402) -hard body impact resistance at the temperature $(-20 \pm 2)^\circ\text{C}$ -coefficient of freeze/thaw resistance $KM_{f25}$ for characteristic value of flexural strength	$E = 10 \text{ J}$ $\geq 85 \%$
14	<b>Resistance to water penetration</b> (Cl. 2.2.14 of EAD 220069-00-0402)	No performance assessed

Notes: \*)

*In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope ( e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products directive, these requirements need also to be complied with, when and where they apply.*

*Category S/W2: Product with no direct contact to but possible impact on soil-, ground- and surface water*

*Category S/W2 is applicable for products which can be leached by rain and could release dangerous substances which can have an impact on soil and water.*

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

### 4.1 AVCP System

According to the European Commission Decision 1998/436/EC amended by European Commission Decision 2001/596/EC, the **AVCP system 3** applies to the PRSs:

- for uses subject to regulations on reaction to fire and depending on the class of reaction to fire according to Regulation (EU) No. 2016/364
- with regard to other application
- with regard to content, emission and/or release of dangerous substances

According to the European Commission Decision 1998/436/EC amended by European Commission Decision 2001/596/EC, the **AVCP system 4** applies to the PRSs with regard to external fire performance of roof.

(further described in clause 1.4 of Annex V, to Regulation (EU) No 305/2011)

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

In order to help the Notified Body to make an evaluation of conformity, the Technical Assessment Body issuing the ETA shall supply the information detailed below. This information shall initially be prepared or collected by the Technical Assessment Body

and shall be agreed with the manufacturer. The following gives guidance on the type of information required:

1) The ETA

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.

2) Basic manufacturing process

The basic manufacturing process is described in sufficient detail to support the proposed FPC methods.

3) Product and materials specifications

The manufacturer's documentation includes:

- detailed drawings (possibly including manufacturing tolerances),
- incoming (raw) materials specifications and declarations,
- references to European and/or international standards,
- technical data sheets.

4) Control Plan (as a part of FPC)

The manufacturer and the Technical and Testing Institute for Construction Prague-branch Prague have agreed a control plan which is deposited with the Technical and Testing Institute for Construction Prague – branch Prague in documentation which accompanies the ETA. The control plan specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacture on properties that cannot be inspected at a later stage and for checks on the final product.

Products not manufactured by the manufacturer of the kit shall also be tested according to the control plan. It must be demonstrated to the Technical Assessment Body(TAB) that the FPC system contains elements securing that the manufacturer of the kit takes products conforming to the control plan from his supplier(s).

Issued in Prague on 18.09.2017

By

Ing. Mária Schaan

Head of the Technical Assessment Body

Annexes:

Annex No. 1: Drawings of PRSs with regard to their dimensions

### Annex No. 1: Drawings of PRSs with regard to their dimensions

Figure No. 1: Drawing of EUREKO® CPS

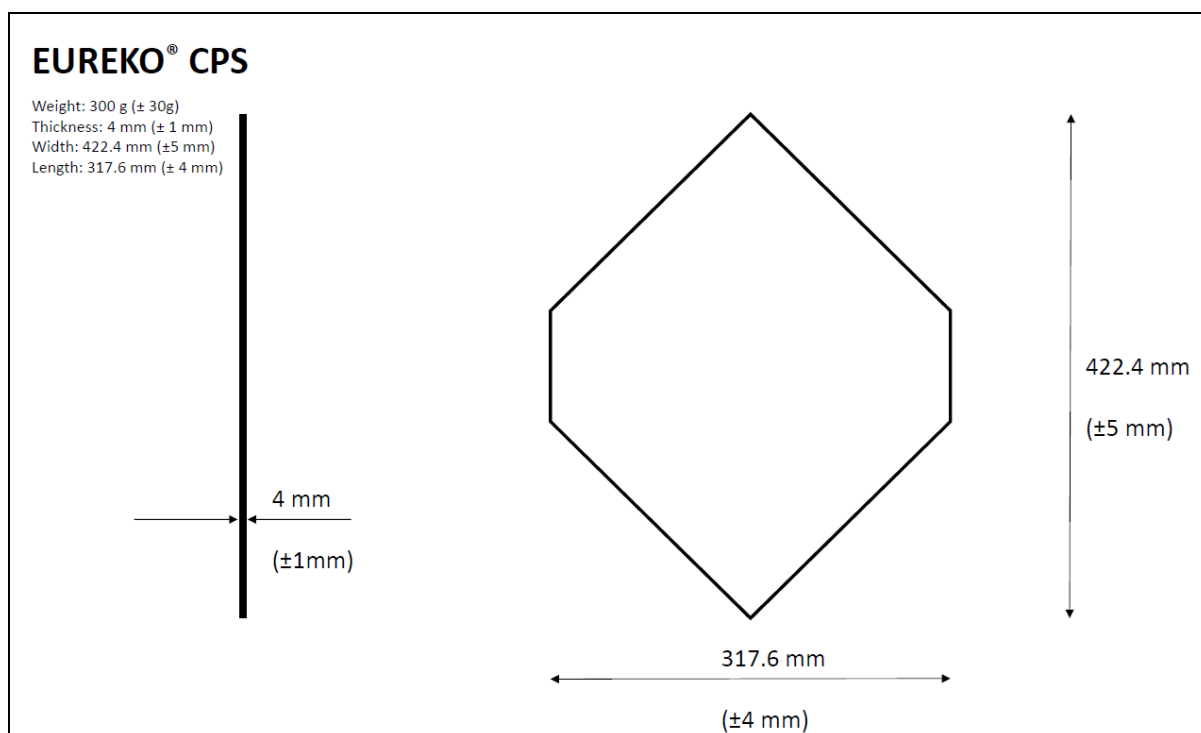


Figure No. 2: Drawing of EUREKO® DDS II

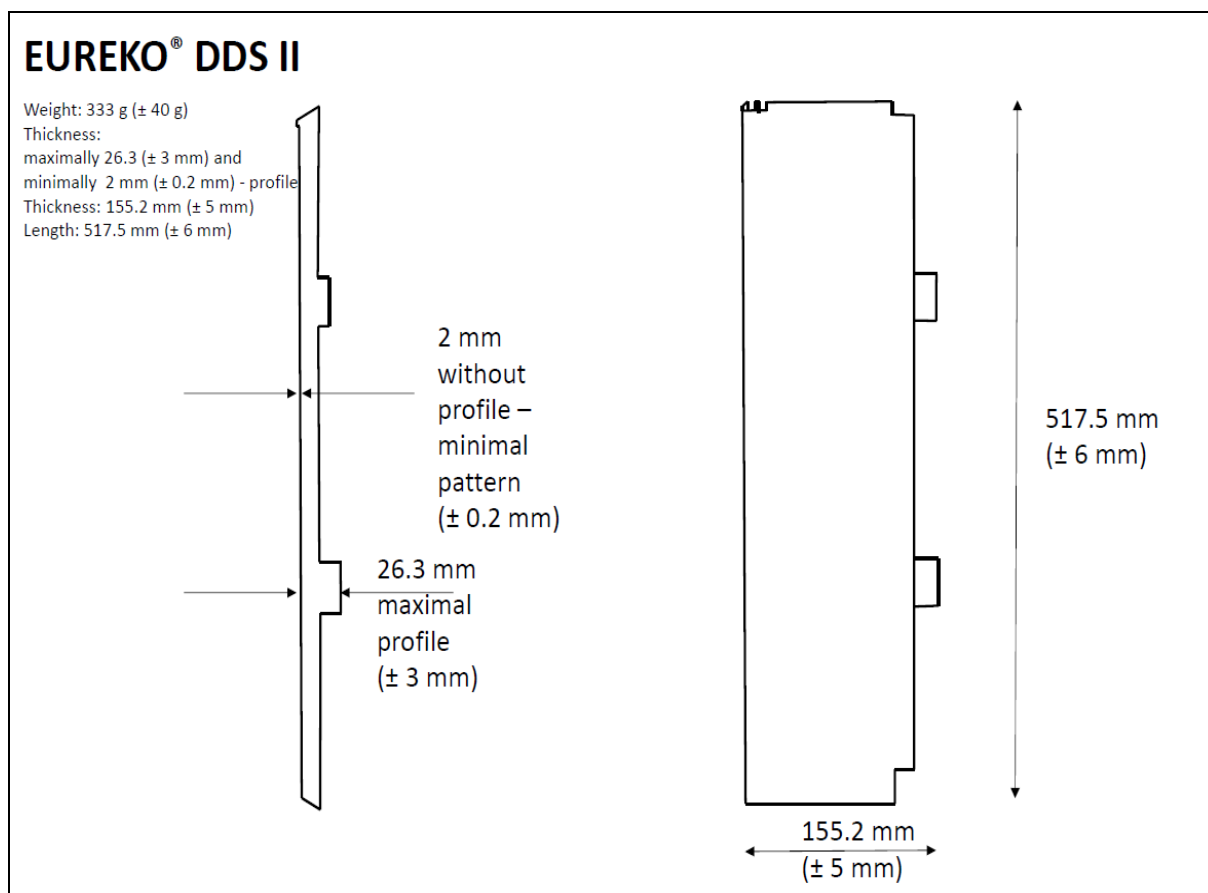




Figure No. 3: Drawing of EUREKO® DDU II

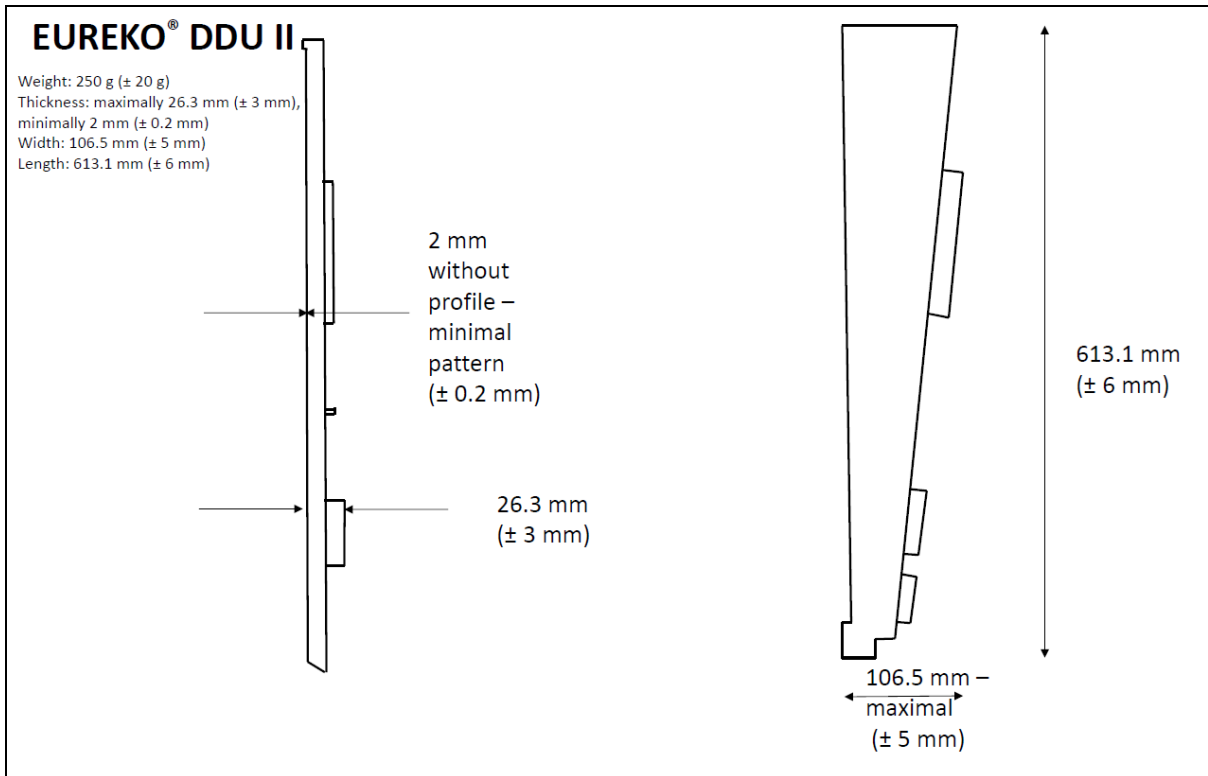


Figure No. 4: Drawing of EUREKO® DDN II

