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RN 62570888

## 1 Introduction

This classification report defines the classification assigned to product: Framed glass-backsheet PV module - glass thickness 3,2 mm, in accordance with the procedures given in the Standard HRN EN 13501-5:2016.

# CLASSIFICATION OF REACTION TO FIRE IN ACCORDANCE WITH HRN EN 13501-5:2016

**Client:** Solvis d.o.o., Ulica Vesne Parun 15, HR-42000 Varaždin

**Manufacturer:** Solvis d.o.o., Ulica Vesne Parun 15, HR-42000 Varaždin

**Classification made by:** INSTITUT IGH d.d.  
IGH Laboratory, Materials and Structures Department,  
Building Physics Laboratory,  
Janka Rakuše 1, HR-10000 Zagreb, Croatia

**Evidence number of notified body in NANDO base :** NB 2477

**Building product:** Framed glass-backsheet PV module - glass thickness 3,2 mm

**Classification Report No.:** EN-72570/044/25-077/25

**No. of copies:** 2

**Date of issue:** 2025-10-20

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## 2 Details for the classified product (data delivered by client)

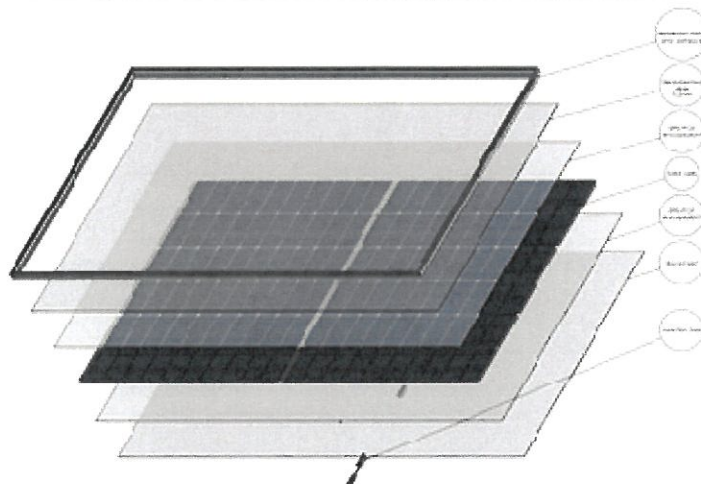
### 2.1 General information

Product Framed glass-backsheet PV module - glass thickness 3,2 mm is a photovoltaic module composed by anodized aluminum frame and a laminate composed by heat-treated glass, EPE/POE encapsulant, monocrystalline photovoltaic cells, composite polyester film, junction box and silicone adhesive, reaction to fire classification E in accordance with HRN EN 13501-1:2019.

### 2.2 Description of product

Framed glass-backsheet PV module - glass thickness 3,2 mm:

|                       |                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other characteristics | SVNNN-XXX E (Y) ZZZZZZ<br>SV – brand name (Solar Vision)<br>NNN – cell number in PV module<br>E - mono-Si cell<br>XXX – power of PV module depending of number and cell type<br>Y – mark F for black anodized aluminum frame, mark BC for black anodized aluminum frame and black backsheet, without mark is silver (natur) anodized aluminum frame<br>ZZZZZZ – cell type or dimension designation |
| Mass of layers        | Glass : 8 kg/m <sup>2</sup><br>Encapsulant : 0,48 kg/m <sup>2</sup><br>Cells : 0,34 kg/m <sup>2</sup><br>Encapsulant : 0,48 kg/m <sup>2</sup><br>Backsheet : 0,36 kg/m <sup>2</sup><br>Aluminum frame : 0,434 kg/m +/- 0,08 kg/m                                                                                                                                                                   |
| Thickness of layers   | Glass: 3,2 mm +/- 0,2 mm<br>Encapsulant+cells+encapsulant: 1,5 mm +/- 0,5 mm<br>Backsheet: 0,3 mm +/- 0,5%<br>Aluminum frame: 35 mm +/- 5 mm                                                                                                                                                                                                                                                       |
| Colour                | Cells: blue/black<br>Backsheet: white or black<br>Aluminum frame: silver (natur) or black                                                                                                                                                                                                                                                                                                          |
| End use               | BAPV (Buiding attached PV module)                                                                                                                                                                                                                                                                                                                                                                  |



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### 3 Reports and results for classification

#### 3.1 Test reports

| Laboratory name                                                                                                                                       | Client name                                            | Test report                                            | Test method             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|-------------------------|
| Institut IGH d.d.<br>IGH Laboratory, Materials and Structures Department,<br>Building Physics Laboratory,<br>Janka Rakuše 1, HR-10000 Zagreb, Croatia | Solvis d.o.o., Ulica Vesne Parun 15, HR-42000 Varaždin | Report No.:<br>72570/044/25-075/25<br>dated 2025-10-17 | HRS CEN/TS<br>1187:2012 |

#### 3.2 Test results

##### Test requirements:

- test specimen dimensions 1,134 m x 1,909 m,
- four test samples, of which two tests in the middle of the panel (sample type 1) and one test each of the vertical (sample type 2) and horizontal (sample type 3) panel joints, including the connection components on the underside of the panel.

Test pitch: 15°.

Supporting deck: standard supporting trapezoidal profiled steel deck.

| Parameter                                          | Criterion for class<br>B <sub>ROOF</sub> (t1) | Test results on specimen |               |               |               | Compliance with parameters (yes/no) |
|----------------------------------------------------|-----------------------------------------------|--------------------------|---------------|---------------|---------------|-------------------------------------|
|                                                    |                                               | 1<br>(type 1)            | 2<br>(type 2) | 3<br>(type 3) | 4<br>(type 1) |                                     |
| Internal fire spread upwards                       | < 0,700 m                                     | 0,000 m                  | 0,000 m       | 0,000 m       | 0,600 m       | yes                                 |
| External fire spread upwards                       | < 0,700 m                                     | 0,000 m                  | 0,000 m       | 0,000 m       | 0,000 m       | yes                                 |
| Internal fire spread downwards                     | < 0,600 m                                     | 0,000 m                  | 0,000 m       | 0,000 m       | 0,000 m       | yes                                 |
| External fire spread downwards                     | < 0,600 m                                     | 0,000 m                  | 0,000 m       | 0,000 m       | 0,000 m       | yes                                 |
| Maximum burned length internal                     | < 0,800 m                                     | 0,000 m                  | 0,000 m       | 0,000 m       | 0,600 m       | yes                                 |
| Maximum burned length external                     | < 0,800 m                                     | 0,000 m                  | 0,000 m       | 0,000 m       | 0,000 m       | yes                                 |
| Burning, droplets/debris falling from exposed side | no                                            | no                       | no            | no            | no            | yes                                 |
| Burning, glowing particles penetrating the roof    | no                                            | no                       | no            | no            | no            | yes                                 |
| Single through opening                             | < 25 mm <sup>2</sup>                          | /                        | /             | /             | /             | yes                                 |
| Sum of all through openings                        | < 4500 mm <sup>2</sup>                        | /                        | /             | /             | /             | yes                                 |
| Lateral fire spread                                | < edges (0,25 m)                              | 0,000 m                  | 0,000 m       | 0,000 m       | 0,000 m       | yes                                 |
| Internal glowing combustion                        | no                                            | no                       | no            | no            | no            | yes                                 |
| Radius of fire spread (horizontal roof)            | < 0,200 m                                     | /                        | /             | /             | /             | /                                   |



## 4 Classification and field of application

### 4.1 Reference

This classification has been carried out in accordance with HRN EN 13501-5:2016.

### 4.2 Classification

Product, Framed glass-backsheet PV module - glass thickness 3,2 mm, manufacturer Solvis d.o.o., Ulica Vesne Parun 15, HR-42000 Varaždin, applied to standard supporting trapezoidal profiled steel deck, in relation to its reaction to external fire performance is classified: **B<sub>ROOF</sub> (t1)**.

**Classification of external fire performance of roofs/roof coverings: B<sub>ROOF</sub> (t1)**

### 4.3 Field of application

This classification is valid for Framed glass-backsheet PV module - glass thickness 3,2 mm, composition and installation method as described in this document and Test report No.. 72570/044/25-075/25 for

- roof pitch up to 20°,
- roofs on all trapezoidal profiled not perforated steel deck and on continuous non combustible board of minimum 10 mm thickness without gaps.

Annotation: The manufacturer is obligated to state in its documentation and declaration of properties the area of application of the given classification of the reaction to fire of the product

## 5 Limitations

Time limitation: without limitation with requirement that the dated editions of the standards to which this classification refers are valid.

This Classification document does not represent type approval or certification of the product..

The Test Laboratory did not participate in the product test sampling procedure.

CLASSIFICATION PERFORMED BY:

APPROVED BY:

Tomislav Vuić, univ. spec. aedif.

dr. sc. Mladen Bezjak, dipl. ing. stroj.

