



® **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

# CERTIFICATE

No. 010-036892

*It has been stated that for structural product:*

**MEGALUX® - Individual rooflights of plastics, upstands**

*manufactured by:*

**Van Deudekom Plastics B.V.**

**Oceanenweg 9, 1047 BA Amsterdam, The Netherlands**

**Company ID: NL007678642B01**

*Specification of product:*

- rooflights with light-transmitting cupolas without edge profile, daylight size 1,2 m x 1,2 m
- rooflights with light-transmitting panels and light-transmitting cupolas, daylight size 1,2 m x 1,2 m
- sloping upstands (PVC, GF-UP)
- **Light-transmitting cupolas** – from one to four skins (PMMA, PC), ISO-DOME (PC4/multiwall PC10/PMMA 3)  
Materials: - PMMA (polymethylmethacrylate) sheets – thickness 2 mm, 3 mm, 4 mm ( $\lambda = 0,18 \text{ W/m.K}$ )  
- PC (polycarbonate) sheets – thickness 2 mm, 3 mm, 4 mm ( $\lambda = 0,20 \text{ W/m.K}$ )  
- ISO-DOME (3-layered cupola: PC 4 mm / multiwall PC/ 10 mm / PMMA 3 mm)  
Types of PMMA: Marcryl® FS Acrylic (solid PMMA sheets), manufacturer: Brett Martin Ltd, UK  
Barlo® XT (extruded PMMA sheets), manufacturer: Barlo Plastics Europe / Quinn Group, Belgium  
Acrylon® XT (extruded PMMA sheets), manufacturer: QUINN Plastics, Slovakia  
Types of PC: Marlon® FSX (solid PC sheets), manufacturer: Brett Martin Ltd, UK  
Barlo® PC (solid PC sheets), manufacturer: Barlo Plastics Europe / Quinn Group, Belgium  
Types of multiwall: Marlon® ST Longlife 10mm fourwall, manufacturer: Brett Martin Ltd, UK  
Makrolon® multi UV 4/10 – 6 (UV protect), manufacturer: Bayer / Covestro AG, Germany  
Barlo® SPC (multiwall PC sheets), manufacturer: Barlo Plastics / Quinn Group, Belgium  
PoliCarb® (multiwall PC sheets), manufacturer: Dott. Gallina S.r.l., Italy
- **Light-transmitting panels** – 1) Flat multiwall PC 10/32; 2) Insulating glass HR++ - THERM S3A, th. 29 mm;  
the panels are always covered by the light-transmitting cupolas – from one to four skins  
Materials: - Flat multiwall PC 10/32 – tenwall, th. 32 mm.....U = 1,14 W/m<sup>2</sup>.K  
- Insulating glass HR++ - THERM S3A, th. 29 mm.....U = 1,1 W/m<sup>2</sup>.K  
Type of multiwall PC 10/32: Marlon® ST Longlife 32mm Tenwall, manufacturer: Brett Martin Ltd, UK  
Makrolon® multi 5M/32-20, manufacturer: Bayer / Covestro AG, Germany  
Type of glazing: Pilkington Insulight™ Therm S3A 6\*-15-44.2, neutral, laminated,  
manufacturer: Pilkington Glass / Pilkington Group LTD, UK
- **Edge profile** – bicameral PVC profile – material PVC, type normal Manufacturer: Van Deudekom plastics B.V.
- **Upstand (sloping)** - PVC (cellular system) - E15, E30  
- GF-UP (Polyester) - H15, E15, E30, E50

*Technical and Testing Institute for Constructions Prague, Accredited testing laboratory No. 1018.3 (Testing department Praha) carried out determination of thermal transmittance of rooflight by calculation according to ČSN EN 1873:2014+A1:2016, Annex D.*

Obtained values are stated in the Test Report No. 010-036891 from 31<sup>st</sup> August 2016 and in Annex (1 page) of this Certificate.

Stamp of the TZÚS Praha, s.p.  
Prague, 31<sup>st</sup> August 2016



Ing. Iveta Jiroutová  
Manager of branch Prague  
Technical and Test Institute for Constructions Prague



**Annex of the certificate No. 010- 036892**

**Product:**

**MEGALUX® - Individual rooflights of plastics, upstands**

Characteristics	Obtained values in accordance with EN 1873:2014+A1:2016, Annex D
<p><b>Thermal transmittance of rooflights</b></p> <p><b>a) with light-transmitting cupolas</b></p> <ul style="list-style-type: none"><li>- 1 x PC</li><li>- 2 x PC</li><li>- 3 x PC</li><li>- 4 x PC</li><li>- ISO-DOME</li></ul> <p><b>b) with light-transmitting panels (glazing) and cupolas</b></p> <ul style="list-style-type: none"><li>- glazing (1.1) + 1 x PC</li><li>- glazing (1.1) + 2 x PC</li><li>- glazing (1.1) + 3 x PC</li><li>- glazing (1.1) + 4 x PC</li><li>- glazing (1.1) + ISO-DOME</li></ul> <p><b>c) with light-transmitting panels (multiwall PC) and cupolas</b></p> <ul style="list-style-type: none"><li>- PC 10/32 + 1 x PC</li><li>- PC 10/32 + 2 x PC</li><li>- PC 10/32 + 3 x PC</li><li>- PC 10/32 + 4 x PC</li><li>- PC 10/32 + ISO-DOME</li></ul>	<p><math>U_r = 5,7 \text{ W/m}^2\text{K}</math> <math>U_r = 3,5 \text{ W/m}^2\text{K}</math> <math>U_r = 2,6 \text{ W/m}^2\text{K}</math> <math>U_r = 2,1 \text{ W/m}^2\text{K}</math> <math>U_r = 1,8 \text{ W/m}^2\text{K}</math></p> <p><math>U_r = 1,2 \text{ W/m}^2\text{K}</math> <math>U_r = 0,95 \text{ W/m}^2\text{K}</math> <math>U_r = 0,85 \text{ W/m}^2\text{K}</math> <math>U_r = 0,77 \text{ W/m}^2\text{K}</math> <math>U_r = 0,76 \text{ W/m}^2\text{K}</math></p> <p><math>U_r = 0,86 \text{ W/m}^2\text{K}</math> <math>U_r = 0,76 \text{ W/m}^2\text{K}</math> <math>U_r = 0,69 \text{ W/m}^2\text{K}</math> <math>U_r = 0,63 \text{ W/m}^2\text{K}</math> <math>U_r = 0,62 \text{ W/m}^2\text{K}</math></p>
<p><b>Thermal transmittance of sloping upstands</b></p> <p><b>a) PVC (diagonally divided compartments)</b></p> <ul style="list-style-type: none"><li>- PVC E15 (height 160 mm, th. ca. 25 mm) – filling air</li><li>- PVC E30 (height 300 mm, th. ca. 35 mm) – filling air</li><li>- PVC E30 (height 300 mm, th. ca. 35 mm) – filling EPS foam</li></ul> <p><b>b) GF-UP (Polyester)</b></p> <ul style="list-style-type: none"><li>- POL H15 (height 150 mm, PUR th. 10 mm)</li><li>- POL E15 (height 150 mm, PUR th. 20 mm)</li><li>- POL E15/6 (height 150 mm, PUR th. 60 mm)</li><li>- POL E15/8 (height 150 mm, PUR th. 80 mm)</li><li>- POL E30 (height 300 mm, PUR th. 20 mm)</li><li>- POL E30/6 (height 300 mm, PUR th. 60 mm)</li><li>- POL E30/8 (height 300 mm, PUR th. 80 mm)</li><li>- POL E50 (height 500 mm, PUR th. 20 mm)</li><li>- POL E50/6 (height 500 mm, PUR th. 60 mm)</li><li>- POL E50/8 (height 500 mm, PUR th. 80 mm)</li></ul>	<p><math>U_{up} = 2,9 \text{ W/m}^2\text{K}</math> <math>U_{up} = 2,3 \text{ W/m}^2\text{K}</math> <math>U_{up} = 1,1 \text{ W/m}^2\text{K}</math></p> <p><math>U_{up} = 2,3 \text{ W/m}^2\text{K}</math> <math>U_{up} = 1,3 \text{ W/m}^2\text{K}</math> <math>U_{up} = 0,87 \text{ W/m}^2\text{K}</math> <math>U_{up} = 0,83 \text{ W/m}^2\text{K}</math> <math>U_{up} = 1,1 \text{ W/m}^2\text{K}</math> <math>U_{up} = 0,59 \text{ W/m}^2\text{K}</math> <math>U_{up} = 0,53 \text{ W/m}^2\text{K}</math> <math>U_{up} = 1,0 \text{ W/m}^2\text{K}</math> <math>U_{up} = 0,48 \text{ W/m}^2\text{K}</math> <math>U_{up} = 0,41 \text{ W/m}^2\text{K}</math></p>

