PolDeck MD

I. GENERAL CHARACTRISTICS

a. Application

PolDeck MD is a roof sandwich panel with a core made of rigid polyurethane foam PU, with inner facing made of polyester, laminated resin, reinforced with fiberglass (GRP), installed with the use of self-drilling screws onto the support construction throught the whole panel's thickness. External cladding is metal, as in the standard TD roof panels, with 35 mm rib.

PolDeck MD is a panel to be used mainly in livestock buildings, where there is great concentration of ammonia or the need for warming the existing roof covering. **PolDeck MD** panel is suitable for use in horticulture, storage rooms, warehouses, barns, poultry houses, in buildings with pitched roof, at least 4° (7%) for continuous panels and 6° (10%) for panels joined alongside, with skylights, etc. Laminate / jut cladding can be cleaned with Karcher.

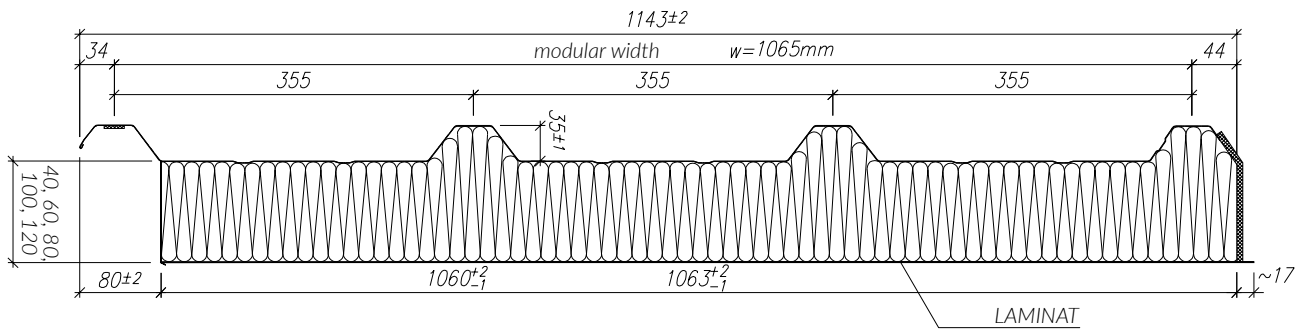
b. Characteristics

PolDeck MD panels are produced in non standard width 1060 mm, have good thermal insulation, tightness and easy assembly. Panels can be joined on the length with so called overlapping. In standard only as precut of internal clading; necessity of adding lengt of overlap to the final size of panel.

II. PHYSICAL PROPERTIES, TECHNICAL DATA

a. Dimensions

MODULAR WIDTH (COVERING AREA) [mm]:	1060
TOTAL WIDTH [mm]:	1160
AVAILABLE LENGTHS [mm]:	minimum: standard 2100, for MD40/75; 2800 for remaining thicknesses, shorter sections may be cut for an extra fee
	maksimum 14 000
AVAILABLE THICHNESSES (CORE/RIB) [mm]:	40/75; 60/95; 80/115; 100/135; 120/155
OVERLAPPING [mm]:	from 50-300 L-left and P-right

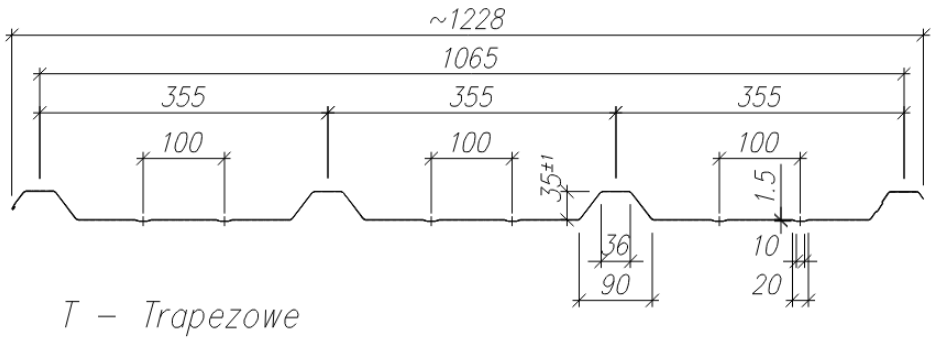


PolDeck MD

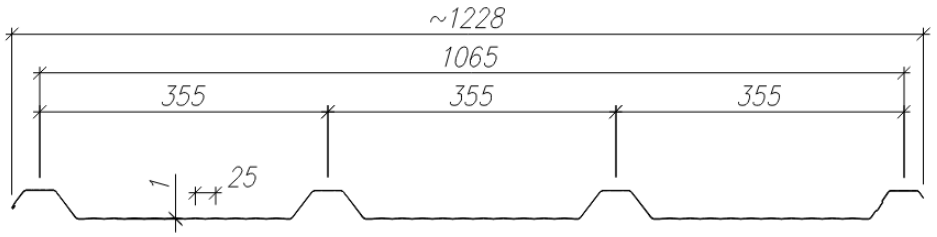
b. Outer facings profiling

Standard:

- Trapezoidal T35 or Trapezoidal-micro TM35



T – Trapezowe



TM – Trapezowe–Mikro

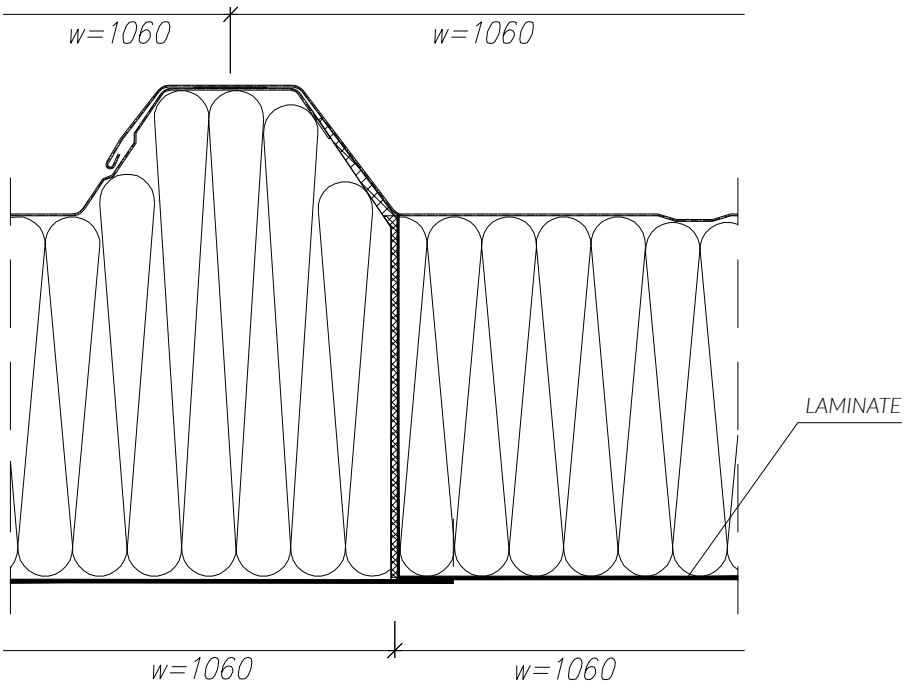
c. Inner facing profiling

Standard:

- Laminate (GRP)

d. Panel joint

An aluminum film is applied along one edge of the panel, along the second edge of the panel a polyurethaneseal reinforced with an aluminum film is applied.



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e. Mass

PANEL'S THICKNESS [mm]	MASS 1 m^2 [kg]
40/75	6,47
60/95	7,23
80/115	7,98
100/135	8,74
120/155	9,50

f. Facings

External facing: steel 0,5 mm
Internal facing: laminate

g. Core

Europan PU Roof System Core — rigid PU foam
Thickness 40, 60 mm: λ_D = 0,028 W/(m·K) in temp. +10°C including aging
Thickness 80, 100 mm: λ_D = 0,027 W/(m·K) in temp. +10°C including aging
Thickness 120 mm: λ_D = 0,026 W/(m·K) in temp. +10°C including aging

h. Thermo insulation

PANEL'S THICKNESS [mm]	Thermal transmittance coefficient U_{ds} [W/(m²·K)]
40/75	0,62
60/95	0,43
80/115	0,32
100/135	0,26
120/155	0,22

i. Acoustic parameters

Not tested

j. Tightness

AIR PERMEABILITY:	≤ 1,5 $m^3/m^2/h$ at 50 Pa pressure difference
WATERPROOF:	Class B at 600 Pa pressure
WATER PERMEABILITY:	Impermeable

k. Fire resistance

Not tested

l. Reaction to fire

Not tested

m. Fire spreading rate / Fire resistance of the roof to outside fire

NRO / $B_{Roof(t1)}$

n. Durability

Met for all color groups- for facing

o. Corrosive tests

Possible to use in environments C1, C2, C3 inside and outside of a building for standard galvanic surfaces Z225 and for organic SP 25.

p. Loads

Load charts have been prepared for all PolDeck MD panels fastened directly onto a support constructoon with the use of self-drilling screws that go throughout the panel. The self-drilling screws' characteristic load capacity is 2,2 kN/pc

q. Dimension tolerance

THICKNESS:	± 2 mm for thickness 40 -100 mm; ± 2% for thickness 120 mm
FLATNESS:	L=0,6/1,0/1,5 mm for L=200/400/ > 700 mm
LENGTH:	L=±5/10 mm for lengths ≤ 3 000 / > 3 000 mm
MODULAR WIDTH:	W3 = ± 2 mm
RECTANGULARITY:	≤ 0,6%*modular width = 6,36 mm
RECTILINEARITY:	1,0 mm/m, max 5,0 mm
LONGITUDINAL BENDS:	2,0 m/m, max 10 mm
CROSSWISE BENDS:	10 mm/m

III. ADDITIONAL INFORMATION

a. Documentation and certificates

Declaration of Performance Properties accordingly the National Technical Assessment ITB-KOT-2022/2197 edition 1

b. Resistant of laminate from the inside to chemicals and biological agents

AGENT	CONCENTRATION [%]	TEMP. [°]
Iron acetate	Any	90°
Ferrous acetate	Any	90°
Lead acetate	Any	90°
Sodium acetate	Any	90°

Acetone	10%	80°
Acetic acid	10%	90°
Acetic acid	25%	70°
Acetic acid	75°C	65°
Sulphonic benzene	100%	80°
Benzoic acid	100%	65°
Hydrocyanic acid	10%	70°
Citric acid	Any	45°
Hydrochloric acid (gas)	10%	150°
Hydrochloric acid (gas)	35%	70°
Hydrochloric acid (gas)	100%	25°
Hydrochloric acid (solution)	10%	90°
Hydrochloric acid (solution)	37%	65°
Chloroacetic acid	50%	60°
Chromic acid	10%	65°
Chromic acid	20%	45°
Fluoroboric acid	25%	60°
Fluoroboric acid (gas)	10%	90°
Hydrofluoric acid	20%	25°
Fluorosilicic acid	35%	Ambient
Formic acid	25%	25°
Phosphoric acid	80%	90°
Phthalic acid	Saturated	80°
Glycolic acid	35%	60°
Fatty acids	Any	90°
Chloric acid	50%	80°
Lactic acid	100%	90°
Maleic acid	40%	45°
Nitric acid	5%	65°
Nitric acid	60%	Ambient
Nitric acid	Vapors	80°
Oleic acid	Any	90°
Oxalic acid	100%	90°
Palmitic acid	100%	90°
Perchloric acid	10%	40°
Perchloric acid	30%	Ambient

Picric acid	10%	25°
Hydrogen sulfide	Any	90°
Sulphuric acid	10%	90°
Sulphuric acid	50%	80°
Sulphuric acid	70%	70°
Sulphuric acid	Any	45°
Stearic acid	100°	90°
Tannin	Any	90°
Tartaric acid	Any	90°
Toluenesulfonic acid	Any	100°
Water chloride	Saturated	40°
Distilled water	Any	100°
Hydrogen peroxide	30%	40°
Butyl water	Any	40°
Ethyl acid	Any	40°
Methyl alcohol	Any	40°
Ammonia	30%	40°
Sulphur dioxide	100%	30°
Gas	Any	80°
Potassium dichromate	Any	90°
Chlorine dioxide	Saturated	80°
Sodium bisulfate	Any	90°
Sodium bromide	Any	90°
Ammonium carbonate	100%	30°
Sodium carbonate	30%	70°
Potassium cyanide	Any	90°
Copper cyanide	Any	90°
Sodium citrate	Any	90°
Chlorine (wet and dry)	100%	30°
Calcium chloride	Any	80°
Ethyl chloride	100%	90°
Iron chloride	Any	90°
Ferrous chloride	Any	90°
Magnesium chloride	Any	90°
Mercuric chloride	Any	90°
Nickel chloride	Any	90°

Potassium chloride	Any	90°
Copper chloride	Any	90°
Sodium chloride	Any	90°
Sodium chloride	Any	70°
Zinc chloride	Any	90°
Detergents	100%	70°
Diethylene glycol	Any	90°
Dipropylene glycol	Any	90°
Ethylene glycol	100%	90°
Potassium ferrocyanide	Any	85°
Sodium ferrocyanide	Any	90°
Formaldehyde	44%	65°
Glycerine	Any	90°
Hydrogen sulfide	Any	90°
Calcium hydroxide	25%	70°
Potassium hydroxide	25%	70°
Sodium hydroxide	25%	70°
Sodium hydroxide	50%	Ambient
Sodium hypochlorate	10%	65°
Petroleum	Any	85°
Methyl ethyl ketone	20%	35°
Naphthalene	100%	40°
Ammonium nitrate	Any	90°
Silver nitrate	Any	90°
Iron nitrate	Any	90°
Ferrous nitrate	Any	90°
Magnesium nitrate	Any	90°
Nickel nitrate	Any	90°
Lead nitrate	Any	90°
Potassium nitrate	Any	90°
Copper nitrate	Any	90°
Sodium nitrate	Any	90°
Mineral oils	100%	100°
Linseed oil	100%	100°
olive oil	100%	100°
Propylene glycol	Any	90°

Aluminum sulfate	100%	40°
Ammonium sulfate	Any	80°
Iron sulfate	Any	90°
Ferrous sulfate	Any	90°
Magnesium sulfate	Any	90°
Nickel sulfate	Any	90°
Potassium sulfate	Any	90°
Copper sulfate	Any	90°
Sodium sulfate	Any	90°
Carbon tetrachloride	100%	Ambient
Sodium thiocyanate	Any	90°
Toluene	Any	75°