Technical Data Sheet
TDS-04-17

Nylofor® 3D Super

1 Scope

This technical data sheet specifies the properties for Nylofor® 3D Super panels made out of galvanised steel wires, welded and subsequently polyester coated.
The panels have round horizontal wires and vertical "V-shaped" ones, see figure 1 and 2.
The vertical wires have a barb at one side of the panel.
The V-shapes are bent before polyester coating.

Figure 1 and 2: Nylofor® 3D Super Panel

Nylofor® 3D Super

1.1 Normative references

- ISO 16120-2: Non-alloy steel wire rod for conversion to wire – Part 2 : specific requirements for general purpose wire rod.
- EN 1179: Zinc and zinc alloys – primary zinc.
- EN 10223-7: Steel wire and wire products for fences - Part 7: Steel wire welded panels for fencing.
- ISO 9227: Corrosion tests in artificial atmospheres; salt spray tests.
- ISO 11507: Paints and varnishes – Exposure of coatings to artificial weathering – Exposure to fluorescent UV lamps and water.

1.2 Definitions

- Nominal wire diameter: The diameter in mm to designate the wire.
- Real wire diameter: The average value of the minimal and the maximal diameter, measured in the same section of a straight piece of wire, by means of a micrometer accurate to 0,01 mm.
- Mesh sizes: The distance measured between the centres of two neighbouring wires.
- Line wires: The wires running in the longitudinal direction of the mesh.
- Cross wires: The wires running in the traverse direction of the mesh.

Nylofor® 3D Super

2 Raw Materials

2.1 Wire rod

See table 1.

Table 1: Chemical composition	
Element	%
C	≤ 0,10
Si	≤ 0,30
Mn	≤ 0,70
P	< 0,035
S	< 0,035

The designation of the wire rod is based on grade C9D – ISO 16120-2.

2.2 Zinc (Zinc used for galvanisation bath)

Minimum 99,95% of pure zinc is used for galvanising, in accordance with Z3 of EN 1179.

2.3 Polyester

The polyester is free of lead and Cadmium.

3 Properties

3.1 Wire diameter and tolerances

See table 2:

Table 2: Wire diameters and tolerances				
	Horizontal wire (mm)		Vertical wire (mm)	
	Core wire	Polyester coated	Core wire	Polyester coated
Nylofor® 3D Super	7,50 ± 0,05	8,0 ± 0,35	4,65 ± 0,05	5,0 ± 0,20

3.2 Tensile strength of the wire

Vertical wires and horizontal wires: Min. 500 N/mm².

3.3 Mesh sizes and tolerances

Mesh spacing is measured between the centres of two neighbouring wires:

Distance between the horizontal wires: 200 mm, tolerance ± 4 mm.
Distance between the vertical wires: 50 mm, tolerance ± 3 mm.

The tolerances are in accordance with EN 10223-7.

3.4 Welding strength

Weld shear strength is tested on four welds selected at random from one transverse wire of the panel.

The minimum average weld shear strength value meets the required 50% of the breaking strength of the wire as per EN 10223-7.

3.5 Barbs

Nylofor® 3D Super panels have a barb of 30 mm ± 2 mm at the topside of the panel. (See figure 1.)

3.6 Overhangs

Overhangs: Maximum 3 mm.

3.7 Dimensions of the V-shapes

Number of V-shapes: See table 3.
Dimension of the V-shapes: See technical drawing, available on request

3.8 Dimensions of the Panel

Width: 2500 mm ± 3 mm.
Height: See table 3 and figure 3. Tolerance on the height: ± 3 mm.

Table 3: Dimensions of the panel

Overall height of the panel (mm)	Number of horizontal wires	Number of V-shapes
1030	8	2
1630	12	3
2030	15	4
2430	17	4
3030	20	4

Technical Data Sheet TDS-04-17
Nylofor® 3D Super

Figure 3: Dimensions of the panel

4 Coating

4.1 Metallic coating

The wires are galvanised and the min. zinc weight for the horizontal and vertical wires is 30 g/m².

4.2 Polyester coating

Thickness:

The total layer is minimum 100 µm thick.
The polyester thickness – as well as the coated wire diameter dimension – is the average of 10 measurements done over 1 panel.

In corrosive environments, higher minimum coating thickness is recommended.
Typical value is 150 µm (Always in agreement between buyer and seller).

Colour:

Standard colour is green RAL 6005.
Other colours are available and can be found in the technical data sheet TDS-99-03. (Polyester coating)
Non standard colours: On request.

Adhesion of the polyester:

Make a scratch in the longitudinal direction of the wire, by means of a hard metal pointed graving tool, penetrating through the metal. The length of the scratch will be about 50 mm.
The coating shall not be able to be lifted from the metal by more than 5 mm.

Resistance of the polyester to salt spray

Make a scratch in the longitudinal direction of the wire, by means of a hard metal pointed graving tool, penetrating through the metal. The length of the scribe will be about 50 mm.
Test in accordance with ISO 9227.
There shall be, after 1000 h salt spray, no corrosion beneath the polyester or loss of adhesion in excess of 10 mm from the scratch.

Resistance against UV: In accordance with ISO 11507.

After 1000 h QUV and after washing with pure water, the colour difference, expressed as ΔE^* is maximum 3.
Loss of gloss: After 1000 hours max. 50 % of the original one, measured after being washed with pure water.

5 Form of delivery

The Nylofor® 3D Super panels are packed on a wooden pallet, protected by UV resistible stretch foil.

An identification label with the Sapcode, product description, width and height of the panel, mesh sizes, number of panels, and color shall be put on each side of the pallet.

Number of panels per pallet, weight and sizes: See table 4.

Table 4 : Form of delivery for Nylofor® 3D super panels

Overall height of the panel (mm)	Number of panels per pallet	Weight of the panel (kg)	Sizes of the forwarding unit L x W x H (cm)	Sapcode RAL 6005
1030	40	13,9	252 x 105 x 67	7061482
1630	40	21,5	253 x 163 x 68	7032314
2030	40	26,9	253 x 203 x 68	7032315
2430	30	32,2	253 x 247 x 48	7032316

Panel height 3030 mm is available as CSO on request (CSO = Customer specific order)