

# Unifilo\*

## continuous filament mat

\*Registered trademark

Reinforcements Europe

U801 U812 U813 U814  
U816 U817 U822 U850  
U852 U851 U809

### Standard Product Data Sheet

Unifilo is an E-glass continuous strand mat of random orientation in multiple layers and held together by a binder.

- **U801 :**
  - For parts produced by foaming polyurethane, at low density
  - For complex parts moulded at low pressure
- **U812 U813 U814 U816 U817 and U822 :**
  - For moulding by injection (RTM, vacuum, SRIM), by compression (wet, hot or cold).
  - (Compatibles with UP, UP(V), EP, PU resins)
- **U850 U852 U851 :**
  - To use with filled resins
  - For moulding by injection (vacuum or low pressure), by compression (wet, hot or cold).
  - (Compatible with UP, UP(V), EP, PU resins)
- **U809 :**
  - Especially suited for Poly Urethane foam reinforcement and widely used in LNG carrier thermal insulation.

### Properties Identification

Example : U850 450 - 138

U : Continuous strand mat (Unifilo)  
850 : SG Vetrotex product classification code  
450 : Nominal weight per unit area (g/m<sup>2</sup>)  
138 : Roll width (cm)

### Properties

- **All Unifilo of this series** have an easy and even resin flow thanks to a low binder solubility
- **U801, U812, U813, U814, U816, U817, U822** with a rising binder rate and rigidity, can either be used depending on the decreasing complexity of the part to be moulded
- **U850 U851 U852** is especially designed with a higher porosity for moulding with filled resins
- **U809** is especially suited for Poly Urethane foam reinforcement and widely used in LNG carrier thermal insulation.



## Technical characteristics (nominal values)

Ref.	Basic size	Binder Type	Solubility in styrene	Linear weight of basic strands(tex)	Loss on Ignition (%)	Moisture (%)
				Iso 1889	Iso 1887	Iso 3344
U801	Silane	Polyester	High	25	1.6	< 0.15
U812	Silane	Polyester	High	25	2.2	< 0.15
U822	Silane	Polyester	High	25	2.0	< 0.15
U813	Silane	Polyester	Medium	25	3.5	< 0.15
U814	Silane	Polyester	Medium	25	4	< 0.15
U816	Silane	Polyester	Low	25	6	< 0.15
U850	Silane	Polyester	Low	25/50	6	< 0.15
U852	Silane	Polyester	High	25/50	2.5	< 0.15
U851	Silane	Polyester	High	25/50	1.25	< 0.15
U809	Silane	Polyester	High	25	0.9	< 0.15
U817	Silane	Polyester	Low	25	7	< 0.15

## Visual characteristics

### Possible defects of appearance:

- Type A: big filaments (coarse strands)
- Type B: cluster of glass fibre
- Type C: water spots
- Type D: binder spots, dirt and foreign matters (diameter inferior to 30 mm)
- Type E: hole

### Maximum number of defects allowed:

Each area of 100 sqm of a roll of Unifilo may contain at most 5 of the defects listed above.

## Products available (standard ref.)

Roll width (cm)	Stand weights (g/m <sup>2</sup> )	Approximate dimensions of full* roll, 138 cm wide								
		Diameter (cm)	nominal length (m)							
			U801	U812 U822	U813 U814	U816 U817	U850	U851	U852	U809
50 / 300	110	55			400					
	150					335				
	225		250	250	250	225	230		265	
	300		200	200	190	194	135		155	
	450		130	130	125	120	135	140	155	130
	600		90	90	90	84	100	105	115	90
	900		55	65	63	57	55	67	63	
		nominal weight (kg)								
50 / 300	110	55			60					
	150					70				
	225		84	84	78	74	84		97	
	300		84	84	78	74	84		97	
	450		84	84	78	74	84	85	97	84
	600		84	84	78	74	84	85	97	84
	900		84	84	78	74	84	85	97	

- by « full roll », is understood a roll having a guaranteed length of at least 90% of the value indicated above

## Applications

- Automotive,
- Trucks
- Marine
- Wind energy

## Packaging (standard ref.)

- Each roll of Unifilo is wound onto a cardboard tube of 0.7 kg/m and internal diameter 103 mm, then individually wrapped with a transparent stretch film.
- Pallet type :
  - For rolls with a width  $\leq$  205 cm, a standard pallet is used (vertical rolls)
  - For rolls with a width  $>$  205 cm, a wooden crate is used (horizontal rolls).
- Protection type :
  - Standard pallet = cardboard base and cover ; fully wrapped in stretch film
  - Wooden crate = each roll packaged in a polyethylene bag.

Roll diameter (cm)	Roll width H (cm)	Number of rolls per pallet	Pallet dimensions length x width x height	Pallet net* weight (kg)				
				U801 U812 U822	U813 U814	U816 U817	U850 U851 U852	U809
55	50 to 65	12	114 x 114 (3 H + 15)	438	406	386	438	344
	66 to 105	8	114 x 114 (2 H + 15)	390	362	343	390	306
	106 to 205	4	114 x 114 (H + 15)	336	312	296	336	264
52	206 to 276	8	H x 109 x 216	1100	1100	1100	1100	1100
	277 to 300	6	H x 109 x 176	880	880	880	880	880

## Labelling

Each roll carries an information label with product reference.

Each pallet carries also an information label with : product reference, gross and net weights, the number of rolls on the pallet and their net weight.

## Storage

Unifilo mat must be stored in its original packaging in a place avoiding humidity and heat.

The best conditions are a temperature between 15 and 35°C and a relative humidity level between 35 and 85%.

If the product is stored at low temperature (below 15°C), it is advisable to condition the mat in the workshop for at least 24 hours before use, to prevent condensation.

Static stacking of the pallets is possible one plus one (1/1), but it is recommended to use a plywood plate between the two pallets in order not to damage the lower pallet.



## Modifications

This specification may be subject to change and a check should be made to ensure that the information is still current.

## SG Vetrotex Disclaimer

It is the customer's responsibility to satisfy himself that the Product is suitable for its intended use, taking into account the other components used and the fabrication process. SG Vetrotex commercial service is willing to give advice to the customer about the Product, subject to the customer acknowledging that SG Vetrotex will not be held liable for the advice in any way whatsoever. If it is established that the Product is unsuitable for its intended use and the customer has, nonetheless, continued to use the Product for that use, he does so at his own risk. SG Vetrotex will not accept any claim notified more than 6 months after sale of the Product. In any event, SG Vetrotex's liability is limited to the price of the Products and SG Vetrotex does not accept liability for any indirect or consequential loss or loss of profit. SG Vetrotex does not limit its liability for death or personal injury caused by its negligence.

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