

# TECHNICAL DATA SHEET

## TM400-ST SERIES



<b>Product</b>	Smooth/textured (ST) geomembrane
<b>Composition</b>	High density polyethylene (HDPE)
<b>Main Function</b>	Impermeabilisation

Property	Test Method	Unit	Frequency <sup>(1)</sup>	Texel TM430-ST	Texel TM440-ST	Texel TM460-ST	Texel TM480-ST	Texel TM4-100-ST
<b>Physical</b>								
Nominal thickness	-	mm	-	0.75 (30 mils)	1.00 (40 mils)	1.50 (60 mils)	2.00 (80 mils)	2.50 (100 mils)
Thickness (min. avg.)	ASTM D5199	mm	Every roll	0.71	0.95	1.43	1.90	2.38
Lowest individual 8/10 values	ASTM D5594	mm	Every roll	0.68	0.90	1.35	1.80	2.25
Lowest individual 10/10 values	ASTM D5594	mm	Every roll	0.64	0.85	1.28	1.70	2.13
Asperity height (min. avg.)	ASTM D7466	mm	Every roll	0.4	0.4	0.4	0.4	0.4
Resin density	ASTM D1505	g/cc	1/batch	> 0.932				
Sheet density <sup>(2)</sup>	ASTM D792	g/cc	Every 10 rolls	≥ 0.940				
Carbon black content <sup>(3)</sup>	ASTM D4218	%	Every 2 rolls	2.0-3.0				
Carbon black dispersion	ASTM D5596	Category	Every 10 rolls	Cat. 1 / Cat. 2				
OIT -standard (avg.)	ASTM D3895	min	Formulation	100				
<b>Mechanical</b>								
Strength at yield <sup>(4)</sup>	ASTM D6693	kN/m	Every 2 rolls	6	15	23	31	39
Elongation at yield <sup>(4)</sup>	ASTM D6693	%	Every 2 rolls	12	13	23	13	13
Strength at break <sup>(4)</sup>	ASTM D6693	kN/m	Every 2 rolls	12	12	43	31	39
Elongation at break <sup>(4)</sup>	ASTM D6693	%	Every 2 rolls	150				
Tear resistance <sup>(4)</sup>	ASTM D1004	N	Every 5 rolls	100	135	200	265	335
Puncture resistance <sup>(4)</sup>	ASTM D4833	N	Every 5 rolls	300	400	535	675	800
Dimensional stability	ASTM D1204	%	Certified	±2	±2	±2	±2	±2
Stress crack resistance (SP-NCTL)	ASTM D5397	hr	1 /batch	500				
Oven aging - % retained 90 days HP-OIT <sup>(4)</sup>	ASTM D5721 ASTM D5885	%	Formulation	80				
UV resistance-% retained 1600h HP-OIT <sup>(4)</sup>	GRI -GM11 ASTM D5885	%	Formulation	50				
<b>Dimensions (may vary ± 1%)</b>								
Width X length	-	m	-	6.80 X 304.8	6.80 X 237.7	6.80 X 170.7	6.80 X 134.1	6.80 X 97.5

This technical information comes from the manufacturer and was transcribed by Texel. All values are nominal test results, except when specified.

1- Testing frequency based on standard roll dimensions and one batch is approximately 18,000 lbs (or one railcar). / 2- ASTM D1505 and ASTM D792 give the same results / 3- ASTM D1603 and ASTM D4218 give the same results / 4- Minimum average value on the basis of 5 specimens each direction (MD & TD)

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