

ANALYTICAL REPORT FOR PVC MEMBRANE

Sample ID	160426077-1	Page No.	Page 1 of 7
Date of Booking	26/04/16	Effective Date	06/06/16

CIN No: U74220DL1998PLC09269

**ADDITIONAL REPORT
FOR
PVC MEMBRANE**

Test Report Issued to
TechnoNICOL India Private Limited
102 Joy Villa, Jawahar Nagar, Road No.4
Goregaon, Mumbai 400104



SPECTRO ANALYTICAL LABS LTD.
E-41, Okhla Industrial Area Phase-II,
New-Delhi-11020

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Resistance to Acid and Alkaline test

(a) 28 days at 23°C in Ca(OH)₂ + 7 days at (23 ± 2)°C and (50 ± 5) % RH

Lengthwise

S.No.	Thickness (mm)	Width (mm)	Load (N)	Tensile Strength (N/mm ²)	Elongation at break (%)
1	1.99	5.82	222.3	19.2	360
2	1.99	5.78	214.2	18.6	380
3	1.99	5.85	208.4	17.9	360
4	1.98	5.94	222.3	18.9	356
5	1.97	5.93	223.1	19.1	364
Average	1.98	5.86	218.1	18.7	364

Transverse

S.No.	Thickness (mm)	Width (mm)	Load (N)	Tensile Strength (N/mm ²)	Elongation at break (%)
1	1.96	5.90	224.3	19.4	366
2	1.98	5.91	223.5	19.1	372
3	1.97	5.86	218.2	18.9	356
4	1.98	5.89	216.9	18.6	356
5	1.96	5.88	216.7	18.8	360
Average	1.97	5.89	219.9	18.9	362

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(b) 28 days at 23°C in H₂SO₃ + 7 days at (23 ± 2)°C and (50 ± 5) % RH

Lengthwise

S.No.	Thickness (mm)	Width (mm)	Load (N)	Tensile Strength (N/mm ²)	Elongation at break (%)
1	1.91	5.82	210.1	18.9	372
2	1.93	5.86	217.1	19.2	360
3	1.98	5.90	216.1	18.5	356
4	1.95	5.88	224.7	19.6	356
5	1.96	5.89	225.1	19.5	360
Average	1.95	5.87	216.8	19.1	360

Transverse

S.No.	Thickness (mm)	Width (mm)	Load (N)	Tensile Strength (N/mm ²)	Elongation at break (%)
1	1.95	5.98	206.4	17.7	366
2	1.98	5.91	208.3	17.8	366
3	1.99	5.89	199.3	17.0	360
4	1.96	5.99	206.6	17.6	356
5	1.98	5.95	199.1	16.9	360
Average	1.97	5.94	203.9	17.4	362

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(c) 28 days at 23°C in NaCl + 7 days at (23 ± 2)°C and (50 ± 5) % RH

Lengthwise

S.No.	Thickness (mm)	Width (mm)	Load (N)	Tensile Strength (N/mm ²)	Elongation at break (%)
1	1.99	5.82	222.3	19.2	332
2	1.99	5.78	214.2	18.6	380
3	2.01	5.84	218.1	18.6	340
4	1.97	5.88	204.2	19.1	332
5	1.96	5.90	217.4	18.8	340
Average	1.98	5.84	215.2	18.8	345

Transverse

S.No.	Thickness (mm)	Width (mm)	Load (N)	Tensile Strength (N/mm ²)	Elongation at break (%)
1	1.97	5.85	202.8	17.6	332
2	1.96	5.82	203.1	17.8	348
3	1.99	5.89	213.3	18.2	340
4	1.96	5.97	204.8	17.5	340
5	1.99	5.95	222.6	18.8	348
Average	1.97	5.9	209.3	17.9	342

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Resistance to Acid and Alkaline Test

	Change in Tensile Strength, %		Change in Elongation at break, %	
	Lengthwise	Transverse	Lengthwise	Transverse
At 28 days at 23°C in Ca(OH) ₂ + 7 days at (23 ± 2)°C and (50 ± 5) % RH	-1.1	9.8	3.4	0.5
At 28 days at 23°C in H ₂ SO ₃ + 7 days at (23 ± 2)°C and (50 ± 5) % RH	1.1	1.1	-2.3	0.5
At 28 days at 23°C in NaCl + 7 days at (23 ± 2)°C and (50 ± 5) % RH	-0.5	4.1	-2.0	-5.0

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Classification from reaction to fire test

As per EN 13501-1

EN 13501-1 refers to ISO 11925-2 for Class E

Class- E Specification

Class	Test Method	Classification criteria (For flooring)
E _n	ISO 11925-2	F _s ≤ 150mm within 20 sec.

Total No. of specimen	3+3
Size of specimen	250 mm x 90 mm
Gauge mark	150 mm
Flame height	20 mm
Flame time	15 sec. (the total test duration is 20sec.)

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Observed Results

Parameter	Direction - A			Direction - B			Average
	Sample-1	Sample-2	Sample-3	Sample-1	Sample-2	Sample-3	
Occurance of ignition	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time to ignition after removal of flame, sec.	2	3	2	3	4	3	3
Whether flame reaches 150 mm	No	No	No	No	No	No	No
Spread flame (Fs) , mm	30	34	28	38	42	45	36
Occurance of ignition of filter paper	No	No	No	No	No	No	No
Physical observation	No dripping, glowing, melting & blistering observed after the test.						---

Classification criteria- $F_s \leq 150$ mm within 20 sec.

Remark- The sample conforms to Class -E_n as per EN 13501-1.

Analyst

----- End of test Report -----

Authorized Signatory

