



## Research & Development



### Product Specification

S.No.	Properties		UOM	Product Quality : Toilet									
				2 Ply	2 Ply	2 Ply	1 Ply	2 Ply	2 Ply	3 Ply	2 Ply	3 Ply	
1	No of Ply												
2	Substance (1 Ply)		g/m <sup>2</sup>	14 ± 0.5	15 ± 0.5	16 ± 0.6	17 ± 0.6	17 ± 0.6	18 ± 0.6	18 ± 0.6	19 ± 0.6	22 ± 0.7	
3	Thickness (1 PLY)		Micron	91 ± 10	98 ± 10	104 ± 10	111 ± 10	111 ± 10	117 ± 10	117 ± 10	124 ± 10	143 ± 10	
4	*Bulk		CC/gm	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	
5	*Dry Tensile Strength	MD	gf/25mm	500 ± 50	550 ± 50	625 ± 50	355 ± 50	700 ± 50	750 ± 50	1025 ± 50	760 ± 50	1200 ± 50	
		CD	gf/25mm	230 ± 25	260 ± 25	298 ± 25	160 ± 25	320 ± 25	350 ± 25	475 ± 25	370 ± 25	570 ± 25	
6	MDT/CDT RATIO			2.2 ± 0.2	2.1 ± 0.2	2.2 ± 0.2	2.2 ± 0.2	2.2 ± 0.2	2.2 ± 0.2	2.2 ± 0.2	2.1 ± 0.2	2.1 ± 0.2	
7	Stretch	MD	%	17 ± 2	17 ± 2	16 ± 2	16 ± 2	16 ± 2	16 ± 2	16 ± 2	16 ± 2	16 ± 2	
8	*Wet Tensile Strength	MD	gf/50mm	-	-	-	-	-	-	-	-	-	
9	Wet / Dry Tensile		%	-	-	-	-	-	-	-	-	-	
10	*ISO Brightness(Frank, PTI )		% ISO	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	
11	Moisture		-	5.0 ± 0.5	5.0 ± 0.5	5.0 ± 0.5	5.0 ± 0.5	5.0 ± 0.5	5.0 ± 0.5	5.0 ± 0.5	5.0 ± 0.5	5.0 ± 0.5	
12	pH		-	7.0 ± 0.2	7.0 ± 0.2	7.0 ± 0.2	7.0 ± 0.2	7.0 ± 0.2	7.0 ± 0.2	7.0 ± 0.2	7.0 ± 0.2	7.0 ± 0.2	
13	Shade		-	Natural									
14	Furnish		-	Virgin pulp									
15	Core (ID)		mm	76									
16	Number of joints		-	70% ZERO JOINT, 20% ONE JOINT 10% TWO JOINTS									
17	Reel Diameter		mm	± 10 % of Actual ordered reel dia									

\*Note : If goes beyond higher side tolerance, Quality is OK.

Test Conditions : Temperature 23 ± 1°C & Relative Humidity 50± 2 % ( Tappi 402)

All properties are as per CPP Lalkua measurements

Tolerance are based upon 95 % confidence limits of single mill measurement on conditioned Random samples.

An ISO 9001, ISO 14001 & OHSAS 18001 Company.

Recommended by	Approved by		Issued by Management Representative	Issue Date 01.08.2023	Revision No 03	Page 1 of 2	Doc No SPC-III-40 (M-5)
DGM (QA/R&D)	Head Process						
	CSO						
	CEO						



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### Product Specification

S.No.	Properties		UOM	Product Quality : Toilet										
				3 Ply	3 Ply									
1	No of Ply													
2	Substance (1 Ply)		g/m <sup>2</sup>	15 ± 0.5	17 ± 0.6									
3	Thickness (1 PLY)		Micron	98 ± 10	111 ± 10									
4	*Bulk		CC/gm	6.5 ± 0.5	6.5 ± 0.5									
5	*Dry Tensile Strength	MD	gf/25mm	825 ± 50	1000 ± 50									
		CD	gf/25mm	390 ± 25	450 ± 25									
6	MDT/CDT RATIO			2.1 ± 0.2	2.2 ± 0.2									
7	Stretch	MD	%	17 ± 2	16 ± 2									
8	*Wet Tensile Strength	MD	gf/50mm	-	-									
9	Wet / Dry Tensile		%	-	-									
10	*ISO Brightness(Frank, PTI )		% ISO	87 ± 2	87 ± 2									
11	Moisture		-	5.0 ± 0.5	5.0 ± 0.5									
12	pH		-	7.0 ± 0.2	7.0 ± 0.2									
13	Shade		-	Natural										
14	Furnish		-	Viirgin pulp										
15	Core (ID)		mm	76										
16	Number of joints		-	70% ZERO JOINT, 20% ONE JOINT 10% TWO JOINTS										
17	Reel Diameter		mm	± 10 % of Actual ordered reel dia.										

\*Note : If goes beyond higher side tolerance, Quality is OK.

Test Conditions : Temperature 23 ± 1°C & Relative Humidity 50± 2 % ( Tappi 402)

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