



Quality Assurance and R&D Division



PRODUCT SPECIFICATION

S.No.	Properties	UOM	PRODUCT QUALITY: KITCHEN TOWEL								
1	No of Ply		1 Ply	2 Ply	3 Ply	1 Ply	2 Ply	2 Ply	1 Ply	1 Ply	
2	Substance (1 Ply)	g/m ²	19 ± 0.6	19 ± 0.6	19 ± 0.6	20 ± 0.7	20 ± 0.7	21.0 ± 0.5	22 ± 0.7	22.8 ± 0.5	
3	Thickness (1 PLY)	Micron	86 ± 10	86 ± 10	86 ± 10	90 ± 10	90 ± 10	95 ± 10	99 ± 10	141 ± 10	
4	Bulk	CC/gm	4.5 ± 0.5	4.5 ± 0.5	4.5 ± 0.5	4.5 ± 0.5	4.5 ± 0.5	4.5 ± 0.5	4.5 ± 0.5	6.0 ± 0.3	
5	Dry Tensile Strength	MD	gf/25mm	550 ± 100	1050 ± 100	1550 ± 100	550 ± 100	1100 ± 100	1250 ± 100	1200 ± 100	700 ± 100
	Dry Tensile Strength	CD	gf/25mm	370 ± 50	700 ± 50	1000 ± 50	380 ± 50	735 ± 50	800 ± 50	800 ± 50	500 ± 50
6	MDT/CDT RATIO			1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.3	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	1.4 ± 0.3
7	Stretch	MD	%	15 ± 2	15 ± 2	15 ± 2	15 ± 2	15 ± 2	13 ± 2	16 ± 2	18 ± 2
8	Wet Tensile Strength	MD	gf/50mm	127 ± 25	245 ± 25	370 ± 25	140 ± 25	280 ± 25	320 ± 25	320 ± 25	182 ± 25
9	Wet / Dry Tensile		%	23 ± 2	23 ± 2	23 ± 2	23 ± 2	23 ± 2	25 ± 2	24 ± 2	26 ± 2
10	ISO Brightness(Frank, PTI)		% ISO	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2
11	Shade		-	Natural							
12	Furnish		-	Virgin pulp							
13	Core (ID)		mm	76							
14	Number of joints		-	70% ZERO JOINT, 20% ONE JOINT 10% TWO JOINTS							
15	Reel Diameter		mm	± 10 % of Actual ordered reel dia.							

An ISO 9001 : 2008 , ISO 14001:2004 & OHSAS 18001:2007 Company



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1	No of Ply		1 Ply	1 Ply	1 Ply	1 Ply	1 Ply	1 Ply	1 Ply	1 Ply	
2	Substance (1 Ply)	g/m ²	23 ± 0.8	30 ± 0.8	32 ± 0.8	34 ± 0.9	35 ± 0.9	36 ± 0.9	37 ± 0.9	38 ± 0.9	
3	Thickness (1 PLY)	Micron	104 ± 10	135 ± 10	138 ± 10	146 ± 10	151 ± 10	155 ± 10	140 ± 10	152 ± 10	
4	Bulk	CC/gm	4.5 ± 0.5	4.5 ± 0.5	4.3 ± 0.5	4.3 ± 0.5	4.3 ± 0.5	4.3 ± 0.5	4.0 ± 0.5	4.0 ± 0.5	
5	Dry Tensile Strength	MD	gf/25mm	680 ± 100	1050 ± 100	1150 ± 100	1280 ± 100	1400 ± 100	1500 ± 100	1650 ± 100	1700 ± 100
	Dry Tensile Strength	CD	gf/25mm	460 ± 50	700 ± 50	770 ± 50	860 ± 50	935 ± 50	1000 ± 50	1070 ± 50	1130 ± 50
6	MDT/CDT RATIO		1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	1.5 ± 0.2	
7	Stretch	MD	%	16 ± 2	16 ± 2	13 ± 2	13 ± 2	13 ± 2	13 ± 2	13 ± 2	13 ± 2
8	Wet Tensile Strength	MD	gf/50mm	165 ± 25	311 ± 25	368 ± 25	410 ± 25	460 ± 25	480 ± 25	538 ± 25	545 ± 25
9	Wet / Dry Tensile		%	24 ± 2	30 ± 2	32 ± 2	32 ± 2	32 ± 2	32 ± 2	32 ± 2	32 ± 2
10	ISO Brightness(Frank, PTI)		% ISO	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2
11	Shade	-	Natural								
12	Furnish	-	Virgin pulp								
13	Core (ID)	mm	76								
14	Number of joints	-	70% ZERO JOINT, 20% ONE JOINT 10% TWO JOINTS								
15	Reel Diameter	mm	± 10 % of Actual ordered reel dia.								

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1	No of Ply		1 Ply	1 PLY	1 Ply(HS)	2 Ply (HS)	1 Ply(Normal)	2 Ply(Normal)	1 Ply (C T)	
2	Substance (1 Ply)	g/m2	40 ± 1	42 ± 1	17 ± 0.5	17 ± 0.5	17 ± 0.6	17 ± 0.6	16 ± 0.5	
3	Thickness (1 PLY)	Micron	140 ± 10	160 ± 10	100 ± 10	100 ± 10	82 ± 10	82 ± 10	95 ± 10	
4	Bulk	CC/gm	3.8 ± 0.5	3.5 ± 0.5	5.9 ± 0.5	5.9 ± 0.5	4.3 ± 0.5	4.3 ± 0.5	5.9 ± 0.7	
5	Dry Tensile Strength	MD	gf/25mm	1940 ± 100	2100 ± 100	480 ± 50	950 ± 50	460 ± 100	900 ± 100	700 ± 100
	Dry Tensile Strength	CD	gf/25mm	1300 ± 50	1400 ± 50	240 ± 25	475 ± 25	290 ± 50	560 ± 50	240 ± 50
6	MDT/CDT RATIO		1.5 ± 0.2	1.5 ± 0.2	2.0 ± 0.2	2.0 ± 0.2	1.6 ± 0.2	1.6 ± 0.2	2.9 ± 0.2	
7	Stretch	MD	%	13 ± 2	13 ± 2	20 ± 1	20 ± 1	14 ± 2	14 ± 2	18 ± 2
8	Wet Tensile Strength	MD	gf/50mm	620 ± 25	672 ± 25	105 ± 12	210 ± 25	83 ± 12	175 ± 25	210 ± 50
9	Wet / Dry Tensile		%	32 ± 2	32 ± 2	20 ± 2	20 ± 2	18 ± 2	18 ± 2	30.0
10	ISO Brightness(Frank, PTI)		% ISO	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2	87 ± 2
11	Shade		-	Natural						
12	Furnish		-	Virgin pulp						
13	Core (ID)		mm	76						
14	Number of joints		-	70% ZERO JOINT, 20% ONE JOINT 10% TWO JOINTS						
15	Reel Diameter		mm	± 10 % of Actual ordered reel dia.						

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S.No.	Properties	UOM	PRODUCT QUALITY KITCHEN TOWEL							
			1 Ply	2 Ply	1 Ply (HRT)	2 Ply				
1	No of Ply		(Maxi	(Maxi						
2	Substance (1 Ply)	g/m2	17 ± 0.5	17 ± 0.5	40 ± 0.8	24 ± 0.6				
3	Thickness (1 PLY)	Micron	102 ± 5	102 ± 5	135 ± 10	137 ± 10				
4	Bulk	CC/gm	6.0 ± 0.2	6.0 ± 0.2	3.8 ± 0.7	5.7 ± 0.7				
5	Dry Tensile Strength	MD	gf/25mm	480 ± 50	950 ± 50	2700 ± 100	1400 ± 100			
	Dry Tensile Strength	CD	gf/25mm	300 ± 25	595 ± 25	2100 ± 50	935 ± 50			
6	MDT/CDT RATIO		1.6 ± 0.2	1.6 ± 0.2	1.3 ± 0.2	1.5 ± 0.2				
7	Stretch	MD	%	21 ± 1	21 ± 1	16 ± 2	16 ± 2			
8	Wet Tensile Strength	MD	gf/50mm	120 ± 12	240 ± 25	1025 ± 25	336 ± 25			
9	Wet / Dry Tensile		%	24 ± 2	24 ± 2	38 ± 2	24 ± 2			
10	ISO Brightness(Frank, PTI)	% ISO	87 ± 2	87 ± 2	87 ± 2	87 ± 2				
11	Shade	-	Natural							
12	Furnish	-	Virgin pulp							
13	Core (ID)	mm	76							
14	Number of joints	-	70% ZERO JOINT, 20% ONE JOINT 10% TWO JOINTS							
15	Reel Diameter	mm	± 10 % of Actual ordered reel dia.							

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