



LC Paper 1881, S.A.
Product catalog



LC Paper 1881, S.A.

Towel.

LC Paper's **towel lineup of products** consists of grammages from 17 gr. up to 32gr., in 100% cellulose, with the possibility of manufacturing an autocut-ready version. LC Paper also offers its towel product ready for laminate applications.

LC Paper's **constant commitment to energy savings and sustainability** in raw materials and manufacturing process has allowed us to achieve a low environmental impact in the entire cycle of our role. This commitment has been constant during the recent decades, and responds to a long-term philosophy. These are our major milestones in sustainability:

- ▶ LC Paper has a **CO₂ audit** certifying 1132,57kg of carbon dioxide emissions per tonne of paper produced. The audit, conducted by TUV Rheinland, gives the company the **ISO 14.067 certificate** of greenhouse gases emissions.
- ▶ The **cogeneration plant adjacent to Besalu's production plant** has an efficiency of 88%, a very high figure in the sector. This level of efficiency is achieved through the use of waste heat from electricity production to further dry the paper, thus saving a significant amount of energy needed for drying.
- ▶ The European Union gave LC Paper the **Ecolabel certification** for its products, certifying multiple good practices horizontally in all the processes of the company, through standardized methods and strict evaluation.





Towel

	Value	Deviation
GSM (g/m²)		
↪ 17g/m ²	17	±1
↪ 18g/m ²	18	
↪ 19g/m ²	19	
↪ 20g/m ²	20	
↪ 21g/m ²	21	
↪ 22g/m ²	22	
Bulk (mm/10 plies)		
↪ 17g/m ²	1.2	±0,05
↪ 18g/m ²	1.23	
↪ 19g/m ²	1.23	
↪ 20g/m ²	1.25	
↪ 21g/m ²	1.25	
↪ 22g/m ²	1.4	
MD tensile strength (N/m)		
↪ 17g/m ²	166.6	±20
↪ 18g/m ²	176.4	
↪ 19g/m ²	186.2	
↪ 20g/m ²	254.8	
↪ 21g/m ²	274.4	
↪ 22g/m ²	294	
Extension (%)	20	
CD tensile strength (N/m)		
↪ 17g/m ²	78.4	±10
↪ 18g/m ²	88.2	
↪ 19g/m ²	90.16	
↪ 20g/m ²	137.2	



Towel

	↪ 21g/m ²	147	±10
	↪ 22g/m ²	156.8	
Wet strength			
	↪ 17g/m ²	49	±10
	↪ 18g/m ²	54.88	
	↪ 19g/m ²	56.84	
	↪ 20g/m ²	58.8	
	↪ 21g/m ²	68.6	
	↪ 22g/m ²	74.48	
Brightness	84 – 87		
Roll width	256 – 278 cm		
Core	7,5 / 15.2 cm		
Roll diameter	115 – 130 cm / 225 cm (jumbo)		



LC Towel Autocut

	Minimum	Target	Maximum
GSM (g/m²)			
↪ 38g/m ²	37	38	39
↪ 34g/m ²	33	34	35
Bulk (mm/10 layers)			
↪ 38g/m ²	1.4	1.55	1.8
↪ 34g/m ²	1.28	1.38	1.45
MD tensile strength (N/m)			
↪ 38g/m ²	780	900	1100
↪ 34g/m ²	650	750	900
Extension (%)			
↪ 38g/m ²	13	15	18
↪ 34g/m ²	13	16	18
CD strength (N/m)			
↪ 38g/m ²	430	500	650
↪ 34g/m ²	390	450	500
Roll width (cm)	256	–	278
Core (cm)	7.5	–	15.2
Roll diameter (cm)	115	–	130



LC Towel Autocut

	Minimum	Target	Maximum
GSM (g/m²)			
↪ 17.5g/m ²	16.5	17.5	18.5
↪ 18.0g/m ²	17	18	19
↪ 18.5g/m ²	17	18	19
↪ 19.0g/m ²	18	19	20
↪ 19.5g/m ²	18.5	19.5	20.5
↪ 20.0g/m ²	19	20	21
↪ 22.0g/m ²	21	22	23
Bulk (mm/10 layers)			
↪ 17.5g/m ²	0.95	1.00	1.05
↪ 18.0g/m ²	1.05	1.10	1.15
↪ 18.5g/m ²	1.05	1.10	1.15
↪ 19.0g/m ²	1.05	1.10	1.15
↪ 19.5g/m ²	0.98	1.05	1.15
↪ 20.0g/m ²	1.05	1.08	1.10
↪ 22.0g/m ²	1.10	1.15	1.20
MD tensile strength (N/m)			
↪ 17.5g/m ²	270	300	350
↪ 18.0g/m ²	245	260	290
↪ 18.5g/m ²	245	260	290
↪ 19.0g/m ²	270	280	300
↪ 19.5g/m ²	300	350	400
↪ 20.0g/m ²	300	380	420
↪ 22.0g/m ²	400	480	580

Extension (%)			
↪ 17.5g/m ²	15	17	20
↪ 18.0g/m ²	19	20	22
↪ 18.5g/m ²	19	20	22
↪ 19.0g/m ²	18	20	22
↪ 19.5g/m ²	17	18	21
↪ 20.0g/m ²	18	20	22
↪ 22.0g/m ²	19	21	23
CD tensile strength (N/m)			
↪ 17.5g/m ²	140	170	200
↪ 18.0g/m ²	130	145	160
↪ 18.5g/m ²	130	145	160
↪ 19.0g/m ²	120	140	160
↪ 19.5g/m ²	190	200	240
↪ 20.0g/m ²	190	200	220
↪ 22.0g/m ²	220	250	300
Wet strength			
↪ 17.5g/m ²	60	75	90
↪ 18.0g/m ²	60	70	80
↪ 18.5g/m ²	60	70	80
↪ 19.0g/m ²	65	75	85
↪ 19.5g/m ²	85	90	90
↪ 20.0g/m ²	85	90	100
↪ 22.0g/m ²	95	110	150
Roll width (cm)	256 – 278		
Core (cm)	7.5 – 15.2		
Roll diameter (cm)	115 – 130		



LC Paper 1881, S.A.

Servis.

LC Paper's **servis lineup of products** consists of grammages from 30 gr. up to 38 gr., in 100% cellulose, with single-layer qualities which allow the same properties as multiple-layer papers at a lower price point and with a strongly reduced environmental footprint.

LC Paper's **constant commitment to energy savings and sustainability** in raw materials and manufacturing process has allowed us to achieve a low environmental impact in the entire cycle of our role. This commitment has been constant during the recent decades, and responds to a long-term philosophy. These are our major milestones in sustainability:

- ▶ LC Paper has a **CO₂ audit** certifying 1132,57kg of carbon dioxide emissions per tonne of paper produced. The audit, conducted by TUV Rheinland, gives the company the **ISO 14.067 certificate** of greenhouse gases emissions.
- ▶ The **cogeneration plant adjacent to Besalu's production plant** has an efficiency of 88%, a very high figure in the sector. This level of efficiency is achieved through the use of waste heat from electricity production to further dry the paper, thus saving a significant amount of energy needed for drying.
- ▶ The European Union gave LC Paper the **Ecolabel certification** for its products, certifying multiple good practices horizontally in all the processes of the company, through standardized methods and strict evaluation.





Servis – SLTech®

	Value	Range
Grammage (g/m²)		
↪ 30g/m ²	30	29 – 31
↪ 32g/m ²	32	31 – 33
↪ 33g/m ²	33	31 – 33
↪ 38g/m ²	38	37 – 39
Bulk (mm/10 layers)		
↪ 30g/m ²	1.85	1.65 – 2.0
↪ 32g/m ²	1.85	1.75 – 2.0
↪ 33g/m ²	1.5	1.4 – 1.8
↪ 38g/m ²	1.6	1.50 – 1.75
Tensile strength MD/CD (N/m)		
↪ 30g/m ²	200	190 (minimum)
↪ 32g/m ²	200	190 (minimum)
↪ 33g/m ²	400	350 (minimum)
↪ 38g/m ²	680	500 – 650
Extension (%)		
↪ 30g/m ²	25	23 – 26
↪ 32g/m ²	25	23 – 26
↪ 33g/m ²	13	12 – 15
↪ 38g/m ²	24	23 – 25
CD strength (N/m)		
↪ 30g/m ²	130	100 (minimum)
↪ 32g/m ²	130	100 (minimum)
↪ 33g/m ²	200	180 (minimum)
↪ 38g/m ²	320	250 – 350

	Value	Range
Wet strength (N/m)		
↪ 30g/m ²	N/A	
↪ 32g/m ²		
↪ 33g/m ²	95	80 (minimum)
↪ 38g/m ²	190	180 – 220



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Interkraft & Exterkraft.

Interkraft and Exterkraft are a line of non-bleached paper products intended for packaging applications, featuring an above-the-line resistance capacity. Those products are designed to manufacture paper bags and sacks. Both Interkraft and Exterkraft are Isega certified.

Exterkraft, unlike Interkraft, is manufactured using high resistance recycled paper. Exterkraft Plus offers even more resistance, as the recycled paper is mixed with virgin pulp.

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Exterkraft & Exterkraft Plus

	Test method	EXTERKRAFT	EXTERKRAFT PLUS
Grammage (g/m²)	ISO-536-GSM	24 – 45 (±1g)	35 – 45 (±1g)
Breaking length MD/CD (km)	UNE-57-030 / ISO-287-1983	4000/2000	5000/2500
Tensile strength MD/CD (N/m)			
↳ 24g/m ²	UNE-57-030 / ISO-287-1983	941/470	–
↳ 32g/m ²		1254/627	–
↳ 35g/m ²		1372/686	1715/858
↳ 45g/m ²		1764/882	2205/1103
Bursting strength, mullen (kPa)			
↳ 24g/m ²	ISO 2758	50	–
↳ 32g/m ²		70	–
↳ 35g/m ²		70	80
↳ 45g/m ²		80	100
Water absorptiveness – Cobb (g/ m²)	UNE-EN-20535 / ISO-535-198	< 18	
Brightness	UNE-57-062-94 / ISO-2470-197	N/A	
Moisture content (%)	UNE-57-005/ ISO-1924-1-1983	5±1	
Bendtsen smoothness (mL/min)		1100±100	
Bendtsen porosity (mL/min)		950±100	
Inner core diameter (cm)		7 – 7,6	
Reel diameter (cm)		90 – 120	
Reel width (cm)		30 – 300	



Interkraft

	Test method	Value
Grammage (g/m²)	ISO-536-GSM	40 – 80 (±1g)
Breaking length MD/CD (km)	UNE-57-030 / ISO-287-1983	3500/1750
Tensile strength MD/CD (N/m)	UNE-57-030 / ISO-287-1983	
↳ 40g/m ²		1373/686
↳ 45g/m ²		1544/772
↳ 65g/m ²		2230/1115
↳ 70g/m ²		2401/1200
↳ 80g/m ²		2744/1372
Bursting strength, mullen (kPa)	ISO 2758	
↳ 40g/m ²		60
↳ 45g/m ²		75
↳ 65g/m ²		100
↳ 70g/m ²		105
↳ 80g/m ²		110
Water absorptiveness – Cobb (g/m²)	UNE-EN-20535 / ISO-535-198	< 18
Brightness	UNE-57-062-94 / ISO-2470-197	N/A
Moisture content (%)	UNE-57-005/ISO-1924-1-1983	5±1
Bendtsen smoothness (mL/min)		1100±100
Bendtsen porosity (mL/min)		950±100
Inner core diameter (cm)		
Reel diameter (cm)		110 (±3%)
Reel width (cm)		To order (±3mm)



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Recycled cellulose.

Recycled cellulose is a bleached product designed for the manufacturing of packaging paper. It is an ISEGA-certified product, thus it's suitable for food grade. It's made from a mix of select recycled paper plus virgin pulp, in order to obtain over-the-line resistance levels and excellent qualitative parameters. LC Paper's recycled cellulose paper can be resistant to humidity and can optionally contain OBA bleaching agents.

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Recycled cellulose

	Test method	CR 72	CR 78
GSM (g/m²)			
↪ 24g/m ²	ISO-536-GSM	24 ±1	24 ±1
↪ 30g/m ²		30 ±1	30 ±1
↪ 33g/m ²		33 ±1	33 ±1
↪ 35g/m ²		35 ±1	35 ±1
↪ 40g/m ²		40 ±1	40 ±1
↪ 50g/m ²		50 ±1	50 ±1
Breaking length MD/CD (m)	UNE-57-030/ISO-287-1983	4000/2000	5000/2500
MD/CD tensile strength (N/m)			
↪ 24g/m ²	UNE-57-030 ISO-287-1983	941/470	1176/588
↪ 30g/m ²		1176/588	1470/735
↪ 33g/m ²		1294/647	1617/809
↪ 35g/m ²		1372/686	1715/858
↪ 40g/m ²		1568/748	1960/980
↪ 50g/m ²		1960/980	2450/1225
Extension (%)		4.5	6
Bursting strength, Mullen (kPa)			
↪ 24g/m ²	ISO 2758	48	65
↪ 30g/m ²		53	70
↪ 33g/m ²		60	78
↪ 35g/m ²		65	83
↪ 40g/m ²		70	90
↪ 50g/m ²		85	110
Water absorptiveness – Cobb (g/m²)	UNE-EN-20535/ISO-535-198	< 18	



Recycled cellulose

Brightness	UNE-57-062-94/ISO-2470-197	78	
Moisture content (%)	UNE-57-005/ISO-1924-1-1983	5 – 6	
Extension (%)		4.5	6
Thickness (mm/10 plies)		0.7	
Inner core diameter (cm)		7 – 7.6	
Reel diameter (cm)		110 ±3%	106.7 ±3%
Reel width (cm)		Custom	30 – 300



LC Paper 1881, S.A.

Toilet.

LC Paper's **toilet paper offering** consists of a single, innovative product: our state-of-the-art 30 gr., single-layer tissue paper. It features very similar attributes than other multiple-layer tissue papers, while keeping the costs low and drastically reducing the amount of energy and water required for its manufacturing.

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LC Toilet

	Minimum	Target	Maximum
GSM (g/m²)	29	30	31
Bulk (mm/10 plies)	1.50	1.65	1.90
MD tensile strength (N/m)	200	220	250
Extension (%)	20	24	26
CD tensile strength (N/m)	105	110	130
Roll width	256 – 278		
Core	7.5 – 15.2		
Roll diameter	115 – 130		