Proto® C1S

Extraordinary performance for everyday applications. Proto C1S is a sturdy SBS capable of meeting a breadth of applications. It's the paperboard for everyday jobs, providing the quality you deserve with superior convertibility and a consistent surface.

The Proto experience

Product uses

- General folding carton
- Cosmetics and perfume
- Health and beauty care
- Pharmaceutical and OTC
- Confectionery
- Fashion and lifestyle
- Consumer electronics
- Beverage carton
- Dry food packaging
- Frozen food packaging
- POS material

Product classification

Solid Bleached Sulfate (SBS)[1]

Unmatched SBS yield advantage

Proto achieves a lower basis weight in higher calipers, resulting in a product that feels substantial and significantly reduces paper distribution costs and environmental footprint.

Consistent downstream performance

As an SBS board, Proto has the strength and durability to offer a variety of calipers and optimum convertibility for folding, die-cutting, gluing and other converting applications. It's designed with exceptional dimensional stability, providing more flexibility in layout and downstream operations.

Strict tolerance standards

Using tight tolerance standards, Proto's uniform printing surface delivers minimal variability within and across production runs and calipers.

Enhanced optics for lasting impact

With the absence of optical brighteners and a unique coating, Proto minimizes fade resistance—ensuring lasting whiteness and image integrity.

Superior surface and printability

Capable of printing on both offset lithography and flexography presses, Proto's smooth and uniform surface has a proprietary coating engineered for brilliant color reproduction, sharper details, and better ink hold-out on both sides of the paperboard. Suitable for UV, aqueous, or specialty coatings, gravure, hot and cold foil stamping, embossing/special effects or varnishes.

Food contact/health and safety

Proto C1S is produced without added optical brightening agents (OBAs).

- US FDA Title 21 § CFR 176.170 and 176.180 compliant (restrictions apply)
- Canada Food and Drug Regulations Division 23 compliant
- Elemental chlorine-free (ECF)
- Canada EPA Chemical Challenge List compliant
- California Proposition 65 (labeling is not required)
- REACH Regulation 1907/2006/EC (registration is not required and the product does not contain any substances found on the SVHC Candidate List)
- RoHS (Restriction of Hazardous Substances) compliant
- Heavy metals: compliant with the Model Toxics in Packaging Legislation (formerly known as CONEG) and Directive 94/62/EC

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The Sappi experience

Independent supplier

With Sappi, we're your partner, not your competitor. We focus only on producing paperboard—prioritizing the needs of customers and providing you with a quality, cost-efficient product.

Innovation

In our state-of-the-art Somerset Mill located in Skowhegan, Maine, we continue to invest in machinery designed to deliver a high-quality product with optimal performance throughout the converting process.

Sustainability

Sappi North America is an industry leader in sustaining a low carbon footprint, with approximately 78% of our energy generated from renewable or alternative fuels. We are committed to decreasing energy consumption, reducing waste and improving process efficiencies across our entire manufacturing process. In 2023 we earned a Platinum rating from EcoVadis, a highly regarded rating firm assessing over 30,000 companies annually around the globe. We are one of the only SBS suppliers to receive a Platinum rating. This puts us in the top 1% of all companies surveyed across a broad range of social and environmental indicators.

Sales and tech support

Our teams have the expertise and dedication to ensure customer success before and after the sale. The Sappi technical services group can help with all aspects of printing and converting, and our sales team provides end-to-end packaging support.

Certifications

All of Sappi North America's US-based coated paper and packaging mills are triple-certified in accordance with the leading global sustainable forestry chain-of-custody certification systems, including the Forest Stewardship Council® (FSC®-C014955), the Sustainable Forestry Initiative® (SFI®) program and the Programme for the Endorsement of Forest Certification (PEFC/29-31-10). Product certifications are available upon request, pending availability of credits. The producing mill is ISO 9001, ISO 14001, ISO 22000 and ISO 45001 certified.

Proto C1S targets—grade properties by caliper[2]

IMPERIAL												UNITS	METHOD	TOLERANCE
Caliper		10	11	12	14	15	16	18	20	22	24	mils	TAPPI T411	± 0.5
Nominal BW (24" x 36")		120	131	141	158	167	177	193	206	226	243	lb/3000 ft²	TAPPI T410	
Moisture		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	percent	TAPPI T412	
Taber Stiffness 15°	MD	42	46	67	100	115	136	180	225	295	365	g-cm	TAPPI T489	
	CD	25	27	42	65	75	90	121	160	200	247	g-cm	TAPPI T489	
Cobb Size (2 minute)		50	50	50	50	50	50	50	50	50	50	g/m²	TAPPI T441	
ZDT		50	50	50	50	50	50	50	50	50	50	psi	TAPPI T541	

METRIC												UNITS	METHOD	TOLERANCE
Thickness		254	279	305	356	381	407	457	508	559	610	micron	TAPPI T411	± 12.7
Nominal Grammage		195	213	230	257	272	288	314	335	368	396	gsm	TAPPI T410	
Moisture		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	percent	TAPPI T412	
Taber Stiffness 15°	MD	4.1	4.5	6.6	9.8	11.3	13.3	17.7	22.1	28.9	35.8	mNm	TAPPI T489	
	CD	2.5	2.6	4.1	6.4	7.4	8.8	11.9	16.6	19.6	24.2	mNm	TAPPI T489	
ZDT		345	345	345	345	345	345	345	345	345	345	kPa	TAPPI T541	

Proto C1S targets—coated side

L = 92.50, a = -0.40, b = 1.00 [3]
L* = 94.35, a* = -0.16, b* = 1.12 [4]

COATED SIDE											UNITS	METHOD	TOLERANCE
Caliper	10	11	12	14	15	16	18	20	22	24	mils	TAPPI T411	± 0.5
GE Brightness	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	percent	TAPPI T452	
Parker Print	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	micron	TAPPI T555	

1 SBS is produced with a proprietary blend of bleached chemical fiber and high-quality bleached chemical-thermo mechanical pulp.

2 Proto C1S is tightly controlled to caliper. Basis weight may vary by production run.

3 Paperboard shade values are stated according to the Hunter L,a,b color model. The color measurement methodology incorporates CIE standard illuminant D65 (simulated), 10° Standard Observer, and d/0° illumination/measurement geometry. Data are reported with UV excluded.

4 CIE L*a*b* values are approximate and stated in conformance with the guidelines of ISO 13655:2017. Data are specified according to the measurement condition M1; measured using an X-Rite eXact spectrophotometer, configured to CIE standard illuminant D50 (simulated), 2° Standard Observer, 45/0 measurement geometry, with white (self) backing. Values may vary significantly when measured with different instruments. Average CIE L*a*b* data are presented for relative paperboard shade comparison—not as product specifications.

All values listed are approximate and subject to change.

Sappi packaging products may be available as certified upon request. For more information, please contact your Sappi representative or visit our website at *sappi.com*.

The data, specifications and/or certifications provided herein are current as of the date of printing and may change without notice at Sappi's discretion.

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