

CLEARWATER PAPER | Pulp + Paperboard Division



PAPERBOARD INSPIRED



INDEPENDENT

Our business won't compete with yours

SERVICE FOCUSED

Industry leading technical assistance, sales and customer service teams

INNOVATIVE

We are committed to providing you high quality solutions to maximize your differentiation and meet today's sustainability standards





OUR PRODUCTS CAN PROVIDE MORE SUSTAINABLE ALTERNATIVES TO PRODUCTS MADE FROM NON-RENEWABLE RESOURCES.

Wood, the primary raw material used in our products - in the form of chips, sawdust, pulp and logs - is a 100 percent renewable and commonly recycled resource.

All Clearwater Paper products that are made of 100 percent paper are recyclable or compostable. Some of our paperboard products have a thin poly barrier which is limited to recycling in areas where facilities are available.

WE DESIGN AND
MANUFACTURE PRODUCTS
USING CIRCULAR
ECONOMY PRINCIPLES
WHERE POSSIBLE.



Design out waste and pollution:

- Innovative coatings
- Improved energy efficiency in operations
- Optimizing fiber yield
- Offering alternative fibers

Learn more in our Corporate Social Responsibility Report at: ClearwaterPaper.com

Regenerate natural systems:

• 100 percent of our fiber comes from responsibly managed forests

Keep products and materials in use:

- Post-consumer recycled fiber helps to reduce paper waste and extends the useful life of our basic raw material
- Recovering and reusing paper fiber minimizes the negative impacts of single use products



OUR CUSTOMERS CARE ABOUT SUSTAINABILITY. WE DO, TOO. The fiber in our paperboard is renewable, recyclable and sourced from environmentally sound forests and suppliers.

Our paperboard products are made from trees, a 100% renewable resource, and all Clearwater Paper products are available with Forest Stewardship Council (FSC®) or Sustainable Forestry Initiative (SFI®) certification. We were the first North American SBS paperboard producer to offer FSC® certification across our entire product line.

Today's consumers desire choices that fit into a circular economy. We are committed to fiber diversity as demand and availability increases for recycled and alternative fibers. Our NuVo® cupstock is an example of innovation optimizing post-consumer recycled fiber content.

Certifications













FOLDING CARTON



CANDESCE® C1S

PREMIUM CONSISTENT PERFORMANCE

An ultra-smooth print surface lays the foundation for superior graphics and our proprietary fiber blends are strong enough to hold up to your most demanding applications.

PRODUCT USES

- Health and beauty packaging
- Pharmaceutical packaging
- Candy and bakery boxes
- Dry and frozen food packaging





• Heat set web offset applications

• Greeting cards





Candesce® C1S Typical values

English	Units	10-129	12-143	14-163	15-172	16-182	18-199	20-217	22-233	24-250	26-273
Caliper (nominal)	mils	10.0	12.0	14.0	15.0	16.0	18.0	20.0	22.0	24.0	26.0
Basis Weight (nominal)	lbs/3msf	129	143	163	172	182	199	217	233	250	273
Brightness	GE	89	89	89	89	89	89	89	89	89	89
b* Value	Spectro	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Smoothness (primary side)	Sheffield	12	15	18	18	18	20	22	23	25	32
Parker Print	microns	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Plybond	lbs/in2	65	55	45	45	45	40	40	40	40	40
Stiffness - MD	g-cm	50	80	115	145	165	225	295	385	460	560
Stiffness - CD	g-cm	25	40	55	70	80	110	150	195	230	275
Metric	Units	254-210	305-233	356-265	381-280	406-296	457-324	508-353	559-379	610-407	660-444
Thickness	microns	254	305	356	381	406	457	508	559	610	660
Basis Weight (nominal)	g/sq.m	210	233	265	280	296	324	353	379	407	444
Stiffness - MD	mN	102	162	233	294	335	457	599	782	934	1137
Stiffness - CD	mN	51	81	112	142	162	223	305	396	467	558

REMAGINE™ C1S

PREMIUM PAPERBOARD WITH A CHOICE OF 10% OR 30% POST-CONSUMER RECYCLED FIBER

Our smooth, white print surface is optimized for all high definition print applications. Using circular economy principles, ReMagine® defines sustainability and meets the needs of the next generation.

PRODUCT USES

- Health and beauty packaging
- Pharmaceutical packaging
- Candy and bakery boxes
- Dry and frozen food packaging
- Point of purchase displays

• Heatset web offset applications

• Presentation folders

• Greeting cards



THE SAME TYPICAL VALUES AS OUR CANDESCE® C1S

Remagine® C1S Typical Values

English	Units	12-143	14-163	16-182	18-199	20-217	24-250
Caliper (nominal)	mils	12.0	14.0	16.0	18.0	20.0	24.0
Basis Weight (nominal)	lbs/3msf	143	163	182	199	217	250
Brightness	GE	89	89	89	89	89	89
b* Value	Spectro	1.2	1.2	1.2	1.2	1.2	1.2
Smoothness (primary side)	Sheffield	15	18	18	20	22	25
Parker Print	microns	1.1	1.1	1.1	1.1	1.1	1.1
Plybond	lbs/in2	55	45	45	40	40	40
Stiffness - MD	g-cm	80	115	165	225	295	460
Stiffness – CD	g-cm	40	55	80	110	150	230
Metric	Units	305-233	356-265	406-296	457-324	508-353	610-407
Thickness	microns	305	356	406	457	508	610
Basis Weight (nominal)	g/sq.m	233	265	296	324	353	407
Stiffness - MD	mN	162	233	335	457	599	934
Stiffness - CD	mN	81	112	162	223	305	467

HIGH DEFINITION Systainability

FOLDED CARTON
PACKAGING CAN
OFFER MORE THAN
JUST PROTECTION

Let the balance of sustainability and superior design maximize the marketing impact of your premium brand

Optimized print quality, converting performance, and cleanliness compared to other paperboards with recycled content

Post-consumer recycled fiber is FDA compliant for all types of food contact

Balanced color and shade are unmatched by other recycled paperboards

Forest Stewardship Council® (FSC®) Chain of Custody Certification

ANCORA® C2S

TWO-SIDED DEPENDABILITY

The premier choice for side-to-side consistency. The ultra-smooth print surface and fiber strength will consistently hold up to your most demanding print applications such as varnishing treatments, foil stamping and embossing.

PRODUCT USES

• Presentation folders

• Luxury merchandise packaging

• Point of purchase displays

• Digital printing

• Brochures

• Direct mailers



Ancora® C2s Typical Values

English	Units	12-167	14-188	16-203	18-220	20-240	22-265	24-286
Caliper (nominal)	mils	12.0	14.0	16.0	18.0	20.0	22.0	24.0
Basis Weight (nominal)	lbs/3msf	167	188	203	220	240	265	286
Brightness (both sides)	GE	89	89	89	89	89	89	89
b* Value (both sides)	Spectro	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Smoothness (both sides)	Sheffield	15	18	18	20	20	22	25
Parker Print (both sides)	microns	1.1	1.2	1.2	1.3	1.3	1.3	1.3
Plybond	lbs/in2	52	48	48	45	45	45	45
Stiffness - MD	g-cm	80	120	170	230	300	400	470
Stiffness – CD	g-cm	40	60	85	115	155	205	250
Metric	Units	305-272	356-306	406-330	457-358	508-391	559-431	610-465
Thickness	microns	305	356	406	457	508	559	610
Basis Weight (nominal)	gsm	272	306	330	358	391	431	465
Stiffness - MD	mN	162	244	345	467	609	812	954
Stiffness - CD	mN	81	122	173	233	315	416	508

CANDESCE® TS

TOPSHEET OPTIMIZED FOR HIGH IMPACT GRAPHICS

Our coated topsheet optimizes moisture content and a proprietary fiber mix to ensure the converting strength for demanding applications. The premium print surface provides the foundation for superior graphics to create a consistent brand image across multiple packaging options.

PRODUCT USES

- Club-store packaging
- Electronics packaging
- Rigid box alcohol packaging
- Video and gaming packaging



Candesce® Top Sheet Typical values

English	Units	10-129	12-143
Caliper (nominal)	mils	10.0	12.0
Basis Weight (nominal)	lbs/1msf	43.0	47.7
Basis Weight (nominal)	lbs/3msf	129	143
Brightness	GE	89	89
b* Value	Spectro	1.2	1.2
Smoothness (primary side)	Sheffield	15	20
Plybond	lbs/in2	55	55
Stiffness - MD	g-cm	45	75
Stiffness - CD	g-cm	20	30
Metric	Units	254-210	305-233
Thickness	microns	254	305
Base Weight	gsm	210	233
Stiffness - MD	mN	91	152
Stiffness - CD	mN	41	61



CARDED PACKAGING





CANDESCE® Blister

VISUAL PACKAGING WITHOUT COMPROMISE

A more sustainable option than rigid plastic packaging. Our proprietary fiber and coating technology ensures consistent sealing, gluing, and adhesion with an ultra-smooth clay coated print surface for the most demanding blister applications.

PRODUCT USES

- Visual packaging
- Health and beauty packaging
- Personal care products
- Office products
- Computer cables and accessory packaging
- Personal electronics packaging



Candesce® Blister Typical Values

English	Units	12-143	14-163	16-182	18-199	20-217	24-250	26-273
Caliper (nominal)	mils	12	14	16	18	20	24	26
Basis Weight (nominal)	lbs/3msf	143	163	182	199	217	250	273
Brightness	GE	89	89	89	89	89	89	89
b* Value	Spectro	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Smoothness (primary side)	Sheffield	21	24	27	39	49	52	48
Parker Print (primary side)	microns	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Plybond	lbs/in2	52	42	37	35	38	36	34
Stiffness - MD	Taber g-cm	87	122	173	217	277	416	496
Stiffness – CD	Taber g-cm	39	57	79	109	144	220	267
Metric	Units	305-233	356-265	406-296	457-324	508-353	610-407	660-444
Thickness	microns	305	356	406	457	508	610	660
Basis Weight	g/sq.m	233	265	296	324	353	407	444
Stiffness - MD	mN	176	245	314	421	519	813	970
Stiffness - CD	mN	102	133	176	245	294	441	529

CANDESCE® Foldover Blister

A SUSTAINABLE OPTION FOR VISUAL PACKAGING



Designed for two-sided messaging and product visability. Omni-directional adhesion for sealing and gluing without compromising your print surface. Our unique coating formulation delivers an ultra-smooth print surface on both the primary and secondary side for the most demanding applications.

PRODUCT USES

- Visual packaging
- Computer cables and accessory packaging
- Personal electronics packaging
- Vitamin and health supplements packaging
- Nutraceutical packaging

Candesce® Foldover Blister Typical Values

English	Units	14-176	16-195	18-212	20-230	24-263
Caliper (nominal)	mils	14.0	16.0	18.0	20.0	24.0
Basis Weight (nominal)	lbs/3msf	176	195	212	230	263
Brightness	GE	89	89	89	89	89
b* Value	Spectro	1.2	1.2	1.2	1.2	1.2
Coated Smoothness (primary side)	Sheffield	25	28	31	34	40
Parker Print (primary side)	microns	1.2	1.2	1.2	1.2	1.2
Plybond	lbs/in2	42	40	37	37	37
Stiffness – MD	g-cm	100	145	200	260	405
Stiffness - CD	g-cm	45	70	95	120	200
Metric	Units	356-286	406-317	457-345	508-374	610-428
Thickness	microns	356	406	457	508	610
Basis Weight	gsm	286	317	345	374	428
Stiffness - MD	mN	203	294	406	528	822
Stiffness – CD	mN	91	142	193	244	406

CANDESCE® Skin

VISIBILITY WITH STRENGTH



English	Units	20-205	24-242
Caliper (nominal)	mils	20.0	24.0
Basis Weight (nominal)	lbs/3msf	205	242
Brightness	GE	86	86
b* Value	Spectro	1.5	1.5
Uncoated Smoothness	Sheffield	203	213
Plybond	lbs/in2	36	36
Stiffness - MD	Taber g-cm	260	400
Stiffness – CD	Taber g-cm	130	195
Metric	Units	508-334	610-394
Thickness	microns	508	610
Basis Weight	g/sq.m	334	394
Stiffness - MD	mN	528	812
Stiffness – CD	mN	264	396



FOODSERVICE PACKAGING







NuVo® Cupstock

PREMIUM PERFORMANCE AND ENHANCED SUSTAINABILITY

NuVo® cupstock provides a new standard to meet the evolving demands of the next generation. Our multi-ply fiber blending technology optimizes strength and stretch for consistent forming while ensuring a dependably smooth print surface for the most demanding design applications. Our reputation for product innovation and cleanliness is backed with more than 60 years of experience in delivering food grade paperboard.

(HOOSE YOUR DIFFERENTIATION

Up to 35% Post Consumer Fiber

Our multi-ply fiber blending technology allows the post consumer recycled fiber to be placed in the center layer of the cup. This innovative material design allows the highest % of PCR fiber content available without compromising converting or consumer performance.

Forest Stewardship Council® Chain of Custody Certification

By purchasing products from well-managed forests you send a direct message that your company cares about protecting forests.



Superior Cup Sidewall Strength

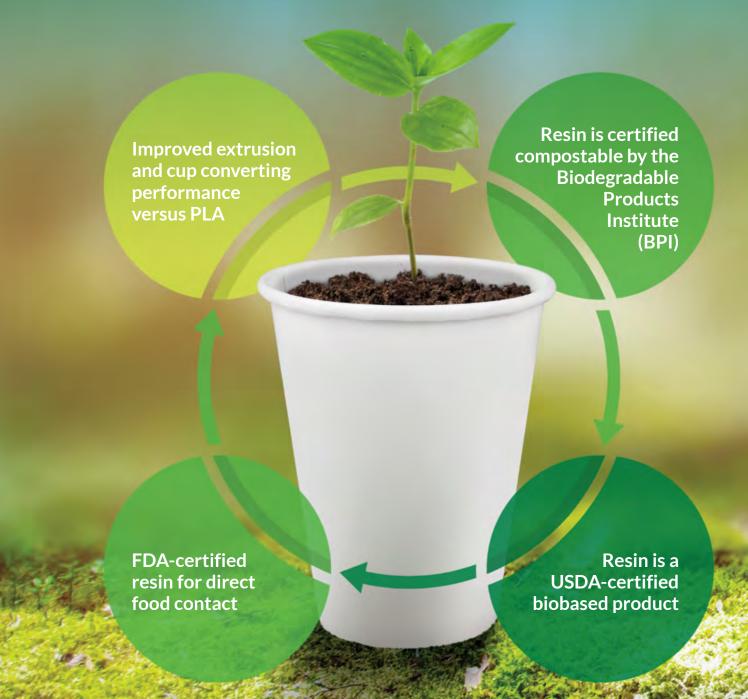
Our fiber blend and unique multi-ply construction provide superior sidewall strength characteristics using virgin and post- consumer recycled fiber.

High Definition with Premium White Shade

Our enhanced surface technology and premium white shade provide a smooth surface to ensure even the most challenging graphics are crisp and clear. Our enhanced hot cup surface can reduce ink usage by 50% to improve costs and sustainable design.



A COMPOSTABLE ALTERNATIVE TO LOW DENSITY POLYETHYLENE (LDPE) PLASTIC BARRIERS





NEXT-GENERATION CUPSTOCK

Cupstock listed below can be produced standard LDPE or compostable

Hot Uncoated Cupstock with P.C.R. Fiber

English	Units	12.5-138*	14-154	15-160	16.5-175	17.5-185	18.0-201
Caliper (nominal)	mils	12.5	14	15	16.5	17.5	18.0
Basis Weight (nominal)	lbs/3msf	138	154	160	175	185	201
Brightness	GE	80	80	80	80	80	80
b* Color	Spectro	1.8	1.8	1.8	1.8	1.8	1.8
Smoothness (printed side)	Sheffield	235	200	205	220	225	230
Plybond	lbs/in²	55	58	56	55	54	54
Stiffness - MD	Taber g-cm	90	140	165	206	245	275
Stiffness - CD	Taber g-cm	40	60	70	88	110	120
Stretch - MD	%		2.0	2.0	2.0	2.0	2.0
Stretch - CD	%		5.5	5.5	5.5	5.5	5.5
Metric	Units	317-225	356-251	381-260	419-285	445-301	457-327
Thickness	microns	317	317	317	419	445	457
Basis Weight	g/sq.m	225	225	225	285	301	327
Plybond	kPa	379	379	379	379	372	372
Stiffness - MD	mN	183	183	183	404	480	539
Stiffness - CD	mN	81	81	81	172	216	235

Hot Uncoated Cupstock

English	Units	12.5-138 [*]	14-154	15-160	16.5-175	17.5-185	18.0-201
Caliper (nominal)	mils	12.5	14	15	16.5	17.5	18.0
Basis Weight (nominal)	lbs/3msf	138	154	160	175	185	201
Brightness	GE	80	80	80	80	80	80
b* Color	Spectro	1.8	1.8	1.8	1.8	1.8	1.8
Smoothness (printed side)	Sheffield	235	200	205	220	225	230
Plybond	lbs/in²	55	58	56	55	54	54
Stiffness - MD	Taber g-cm	90	140	165	206	245	275
Stiffness - CD	Taber g-cm	40	60	70	88	110	120
Stretch - MD	%		2.0	2.0	2.0	2.0	2.0
Stretch - CD	%		5.5	5.5	5.5	5.5	5.5
Metric	Units	317-225	356-251	381-260	419-285	445-301	457-327
Thickness	microns	317	317	317	419	445	457
Basis Weight	g/sq.m	225	225	225	285	301	327
Plybond	kPa	379	379	379	379	372	372
Stiffness - MD	mN	183	183	183	404	480	539
Stiffness - CD	mN	81	81	81	172	216	235

^{*}Bottom Cupstock Only

CANDESCE® Cupstock

STRENGTH AND STRETCH

Food grade paperboard with a reputation for industry leading cleanliness, strength and stretch. **CLAY COATED PRODUCT USES** • Hot and cold drink cups • Dry foods such as cereal, noodles and instant soup • Premium ice cream, sherbet and frozen yogurt NON-CLAY COATED PRODUCT USES • Coffee, tea, and other hot liquids • Instant soups • Ice cream cups • Cold drinks

Candesce® Cupstock Clay Coated Typical Values

English	Units	12.5-146	14-162	15-170	16-180	17-189	18-201	19-210	20-218	22-230	23-248
Caliper (nominal)	mils	12.5	14.0	15.0	16.0	17.0	18.0	19.0	20.0	22.0	23.0
Basis Weight (nominal)	lbs/3msf	146	162	170	180	189	201	210	218	230	248
Brightness	GE	83	83	83	83	83	83	83	83	83	83
b* Color	Spectro	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Smoothness (printed side)	Sheffield	40	50	60	70	80	90	100	120	130	140
30 min 20% LA Edgewick	kg/m2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Plybond	lbs/in2	60	60	60	55	55	55	55	55	53	52
Stiffness - MD	g-cm	105	145	170	195	225	255	310	355	450	485
Stiffness – CD	g-cm	45	65	75	85	95	115	135	155	195	210
Stretch - MD	%	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Stretch - CD	%	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Metric	Units	318-238	356-264	381-277	406-293	432-308	457-327	483-342	508-355	559-374	584-404
Thickness	microns	318	356	381	406	432	457	483	508	559	584
Basis Weight	gsm	238	264	277	293	308	327	342	355	374	404
Plybond	kPa	414	414	414	379	379	379	379	379	365	359
Stiffness - MD	mN	213	294	345	396	457	518	629	721	914	985
Stiffness – CD)	mN	91	132	152	173	193	233	274	315	396	426

Candesce® Cupstock Non-Clay Coated Typical Values

English	Units	10.8-129	11.8-141	12.5-138	14-154	15-160	16.5-175	17.5-185	18.0-201	19-200
English										
Caliper (nominal)	mils	10.8	11.8	12.5	14.0	15.0	16.5	17.5	18.0	19.0
Basis Weight (nominal)	lbs/3msf	129	141	138	154	160	175	185	201	200
Brightness	GE	80	80	80	80	80	80	80	80	80
b* Color	Spectro	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Smoothness (printed side)	Sheffield	220	220	175	200	205	220	230	240	250
Hot Coffee Edgewick, Coffee Mate	1/32"	2	2	2	2	2	2	2	2	2
Plybond	lbs/in2	58	58	58	58	56	55	54	54	53
Stiffness - MD	g-cm	70	90	95	140	165	205	240	275	300
Stiffness - CD	g-cm	30	40	45	60	70	90	105	120	130
Stretch - MD	%	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Stretch - CD	%	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Metric	Units	274-210	300-229	318-225	356-251	381-260	419-285	445-301	457-327	483-326
Thickness	microns	274	300	318	356	381	419	445	457	483
Basis Weight	gsm	210	229	225	251	260	285	301	327	326
Plybond	kPa	400	400	400	400	386	379	372	372	365
Stiffness – MD	mN	142	183	193	284	335	416	487	558	609
Stiffness - CD	mN	61	81	91	122	142	183	213	244	264

Both single and double sided polyethylene extrusion is available in a variety of weights, starting at 6.5 lbs. (10.6 GSM), and in matte, satin and mirror finishes. Optional flame treatment of the print side polyethylene allows for consistent ink adhesion with excellent sealing.

^{*}Bottom Cupstock Only

CANDESCE® GablePak®

PURITY AND PERFORMANCE





Industry leading functionality, graphic quality and cleanliness for upscale gable applications.

PRODUCT USES

- Dairy products such as milk and creams
- Fruit juices
- Sake, tea, wine and health drinks
- Non-beverage uses such as candy, sugar and pasta salad

Candesce® Gable Liquid Packaging Typical Values

English	Units	13.5-156	14.5-159	16-175	17-207	17.7-197	18-210	19-246	21-235	21-260	23-270	26-295
Caliper (nominal)	mils	13.5	14.5	16.0	17.0	17.7	18.0	19.0	21.0	21.0	23.0	26.0
Basis Weight (nominal)	lbs/3msf	156	159	175	207	197	210	246	235	260	270	295
Brightness	ISO	80	80	80	80	80	80	80	80	80	80	80
b" Color Cream Shade	Spectro	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
b" Color Blue White	Spectro	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
24 hr 1% LA Edgewick	g/100"	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.5
Plybond	lbs/in2	60	60	60	60	60	60	60	60	60	60	60
Smoothness	Sheffield	200	210	220	200	250	225	200	250	225	250	265
Stiffness – GM*	g-cm	79	96	118	163	177	190	234	273	293	330	429
Metric	Units	343-254	368-259	406-285	432-337	450-321	457-342	483-400	533-382	533-423	584-439	660-480
Thickness	microns	343	368	406	432	450	457	483	533	533	584	660
Basis Weight	Gsm	254	259	285	337	321	342	400	382	423	439	480
24 hr 1% LA Edgewick	kg/m2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Plybond	kPa	414	414	414	414	414	414	414	414	414	414	414
Stiffness – GM*	mN	160	195	240	330	360	385	475	555	595	670	870

Standards & Certifications



Fiber Procurement and Chain-of-Custody

- FSC® chain of custody and controlled wood certification
 C008402, FSC certified paperboard available by request only
- SFI® fiber sourcing, chain of custody, and product labeling certification BV-SFICOC-US007081-1
- PEFC™ chain of custody: BV-PEFC-US008236-I

Food Contact

- USFDA 21 CFR176.170 Contact with aqueous and fatty foods
- USFDA 21 CFR176.180 Contact with dry food and food types III, IV-A,V, VII-A,VIII and IX
- USFDA 21 CFR 176.260 Use of reclaimed fiber from manufacturer process
- USFDA 21 CFR 109.30a(9) PCB content limits to 10 parts per million (ppm)

Health and Safety

- FSSC 22000 certified by the American Institute of Baking (AIB) and recognized by the Global Food Safety Initiative (GFSI)
- U.S. California Proposition 65 compliant
- CONEG model heavy metal and EC/94/62 article II compliant
- Elemental Chlorine Free (ECF) bleached fiber
- RoHS3 (Restriction of Hazardous Substances) compliant
- Canadian Environmental Protection Act, 1999 compliant
- European Chemicals Agency (ECHA) Substances of Very High Concern (SVHC) compliant

Manufacturing

ISO 9001:2015 certification number QSR-249













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