CONQUEROR SMOOTH CX22

Common Attributes	Units	Test Method	80gsm	90gsm	100gsm	120gsm	160gsm	220gsm	250gsm	300gsm	320gsm	350gsm
Wood Pulp & Bleach Type			ECF Cotton Linters (not CX22), ECF Virgin Woodfree, (25% Recycled Post Consumer Fibre and 75% FSC virgin fibre only for FSC Recycled grades)									
Printing Process Suitability			Litho, Letterpress, Silk Screen, Dry Offset (Toray)									
Mono laser Guaranteed			✓									
Colour Laser Guaranteed			✓				Not guaranteed for office print technology					
Mono Ink Jet Guaranteed			✓									
Colour Ink Jet Guaranteed			✓									
Recommended p.H. of Fount Solution			5.5 ± 0.5									
Surface p.H.		TAPPI 5290M	≈ 7.5									
None Aging Credentials		ISO 9706	Yes									
Environmental Label		ISO 14001	Yes									
Quality Management		ISO 9002 : 2000	Yes									
Moisture Content	%	ISO 287	5.7					6.7				
Relative Humidity	%	TAPPI T502	35 – 55					40 - 60				

Wove

	Units	Test Method	80gsm	90gsm	100gsm	120gsm	160gsm	220gsm	250gsm	300gsm	320gsm	350gsm
Caliper	µm	ISO 534	104	117	130	156	208	280		350		410
Whitest Shade Opacity	%	ISO 2471	84	86	87	91	95					
Bendtsen Roughness	ml/min	ISO 2494	220	220	220	220	220	400		220		220
Stiffness M Direction	mN	ISO 2493	100	150	200	300	80	100		160		240
C Direction		L+W, TABER	60	90	120	180	40	60		80		120

FSC Recycled Wove

	Units	Test Method	80gsm	90gsm	100gsm	120gsm	160gsm	220gsm	250gsm	300gsm	320gsm	350gsm
Caliper	µm	ISO 534			130		208			330		
Whitest Shade Opacity	%	ISO 2471			87		95					
Bendtsen Roughness	ml/min	ISO 2494			200		220			200		
Stiffness M Direction	MN	ISO 2493			200		80			160		
C Direction		L+W, TABER			120		40			80		

CX22

	Units	Test Method	80gsm	90gsm	100gsm	120gsm	160gsm	220gsm	250gsm	300gsm	320gsm	350gsm
Caliper	µm	ISO 534		108	120	137	180		270		345	365
Whitest Shade Opacity	%	ISO 2471		90	93	94	95					
Bendtsen Roughness	ml/min	ISO 2494		50	50	50	50		50		60	60
Stiffness M Direction	mN	ISO 2493		150	200	300	60		100		200	220
C Direction		L+W, TABER		90	120	180	30		55		100	110

FSC Recycled CX22

	Units	Test Method	80gsm	90gsm	100gsm	120gsm	160gsm	220gsm	250gsm	300gsm	320gsm	350gsm
Caliper	µm	ISO 534			120		172			345		
Whitest Shade Opacity	%	ISO 2471			87		95					
Bendtsen Roughness	ml/min	ISO 2494			50		50			60		
Stiffness M Direction	MN	ISO 2493			200		50			200		
C Direction		L+W, TABER			120		28			100		

These specifications are the property of Arjo Wiggins Fine Papers Ltd and may be changed without prior notice. They are target values only for use as a guide.

CONQUEROR SMOOTH CX22

Printing Hints Sheet

Conqueror Smooth CX22 is a super smooth wove sheet providing excellent performance on desk top laser and ink jet printers. Available in six shades across seven weights with matching envelopes. Watermarked versions are available in three paper weights.

PRINTING GUIDELINES

1. SCREEN RULING

For standard process colour printing it is not usual to exceed 150 lpi however depending upon the image, screen rulings of 200 lpi can be achieved with careful ink control. Some dark four-colour images may benefit from Under Colour Removal techniques and/or the use of 'Stochastic' (FM) screening technologies.

2. PRINTING INKS

Use fully oxidizing or conventional positive drying, quick setting, 'hard dry' inks, with or without I.R. drying assistance*. Must avoid the use of press stable / stay fresh ink systems.* UV cured inks can be used. Use laser suitable inks when subsequent laser processing is required.

3. PAPER HANDLING & TIPS TO AVOID SET OFF

As the delivery stack grows quickly when printing boards, select a slow press speed and do not allow the delivery stack to become too large, as the prints at the bottom of the stack will still be wet and therefore less resistance to marking as compared to when printing paper weights. It may be helpful to turn off the delivery sheet joggers and use a 35 micron 'Anti-set off' spray powder (can use a vanishing grade). Also the sheet gripper release should be adjusted so the board lands gently in the delivery with the minimum of movement. The paper weights although less likely can also set off, particularly when printing wet on dry. It is recommended to protect the paper from environmental changes in humidity and temperature at all times, by the use of pallet covers or stretch wrap.

4. VARNISHING & SEALING

A gloss varnish is not easily achieved. To obtain successful varnishing results it is essential to pre-seal the surface with large amounts of either Acrylic or Glycol sealers. The UV Silk Screen process must be used to achieve sufficient varnish weight. The first application should be with a Matt UV varnish, followed by repeat varnishings of Gloss UV varnish until the desired effect is achieved. Be certain the printing inks are suitable for UV varnishing and sealers and ensure they are thoroughly dry before sealer and varnish application. Other machine varnish applications are not advisable as the visual effect may be disappointing. Sealers can be used to give minimal protection to printed material to help avoid marking when further processing is required. Stay fresh inks (*not recommended*) may mark more readily so a seal may be of benefit, particularly when the prints contain dark areas. Best results are obtained when applying the sealer after the inks are thoroughly dry. Some sealers may not be compatible with laser equipment and UV varnishing is only recommended for the text and board weights. Areas to be later laser or ink jet printed should be free from varnishes or sealers to get the best printing performance.

Embossings may be done with relative ease. For deep or large embossings it is recommended to have the corners of the die rounded off to help prevent creases forming from them. Laser machines do not care for embossed images, however shallow embosses are less likely to cause problems. Embossed papers will be more prone to miss feeds and jams within office printing technologies.

DIE CUTTING
Die cutting can be performed without difficulty.   Feeding problems can be experienced with die cut or perforated papers on office printing technologies.

LASER CUTTING
Laser cutting can be performed easily however as with any paper there will be some scorching evident around the cut area. Feeding problems can be experienced with laser cut papers on office printing technologies.

HOT FOIL BLOCKING
Due to the very smooth surface of CX22, foil blocking may be performed easily. This is not a recommended print process for subsequent laser printing. If laser printing is essential ensure the foiled image is indented to below the paper surface and always trial the foil compatibility with the laser printer prior to committing to a long print run.

CREASING
The board weight will require pre-creasing by a channel and matrix system before folding to help avoid cracks appearing at the fold. The raised bead formed by the creasing rule should always be on the inside of the fold.

DIE STAMPING
Die stamping may be performed with relative ease. This is not a recommended print technique for subsequent office printing as the relief image may lead to feeding difficulties. A shallow emboss is less likely to cause feeding problems. If the die stamped work is intended for subsequent laser printing ensure the materials used are laser suitable and trial on the intended office machine before committing to a large print run, whenever possible.

THERMOGRAPHY
Conqueror Smooth CX22 can be thermographically printed. Thermography prints are not recommended for laser printing. If subsequent laser printing is essential, ensure the thermography powder is suitable for use with laser printers. Also note thermography can distort paper and so promote feeding problems with office printers.

FILM LAMINATING
Conqueror Smooth CX22 will accept laminates easily however since it is an uncoated paper some silvering may be evident. To reduce silvering apply an excess of adhesive if possible and increase the laminating pressure. The increased adhesive volume will extend the time required to reach a strong bond between paper and laminate surfaces. Be certain the printing inks are suitable for laminating and ensure they are thoroughly dry before hand.

CONQUEROR SMOOTH CX22

DESK TOP PERFORMANCE

Conqueror Smooth CX22 is guaranteed for offset lithography pre-printing and subsequent use with colour laser and inkjet machines subject to manufacturer's guidance on grammage, roughness and use, up to and including 160gsm. Ensure laser suitable inks and materials are used for pre-printing including any digital images which have been pre-printed.