



# **PAPTEX Forming Fabric**

## **Product Catalog**

**Complete product line – SSB Triple Layer, Double Layer & Single Layer**  
**Weave structures, specifications & application recommendations**

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# Table of Contents

1. About PAPTEX
2. Forming Fabric Technology Overview
3. SSB Triple Layer Forming Fabrics
4. Double Layer Forming Fabrics
5. Single Layer Forming Fabrics
6. Weave Structure Reference
7. Application Guide by Paper Grade
8. Technical Support & Contact

# 1. About PAPTEX

PAPTEX is a leading manufacturer of paper machine clothing (PMC) with over 20 years of industry experience. Headquartered in Shenqiu Industrial Zone, Zhoukou City, Henan Province, China, with a global distribution network, PAPTEX designs, manufactures, and services forming fabrics, press felts, and dryer fabrics for the full range of paper grades – from lightweight tissue to heavyweight packaging board.

Our forming fabric division operates 12 state-of-the-art weaving looms with integrated heat-setting and edge-sealing lines. Every fabric undergoes 100% quality inspection including air permeability testing, tensile strength verification, and dimensional stability measurement before shipment.

PAPTEX holds ISO 9001, ISO 14001, and ISO 45001 certifications, reflecting our commitment to quality, environmental stewardship, and occupational safety.

## 2. Forming Fabric Technology Overview

Forming fabrics are the critical first step in the papermaking process. Running on the forming section of the paper machine, they perform three essential functions simultaneously: drainage (removing water from the stock), sheet formation (retaining fibers while allowing water to pass), and transport (conveying the formed sheet to the press section).

PAPTEX forming fabrics are woven from high-performance polyester (PET) and polyamide (PA) monofilaments, engineered for optimal fiber support, drainage capacity, dimensional stability, and wear resistance. Our portfolio spans three product families designed for different machine speeds, paper grades, and mechanical requirements.

### Key Selection Parameters

Parameter	Unit	Typical Range	Impact
Air Permeability	CFM (ft <sup>3</sup> /min/ft <sup>2</sup> )	250 – 650	Drainage rate & retention
Fiber Support Index (FSI)	–	0.55 – 0.92	Sheet quality & fiber retention
Caliper	mm	0.45 – 1.20	Drainage volume & wear life
Tensile Strength	kN/m	35 – 90	Fabric stability under tension
Open Area	%	12 – 32	Drainage capacity
Mesh (Warp × Weft)	threads/cm	18×14 – 31×26	Surface smoothness

### 3. SSB Triple Layer Forming Fabrics

SSB (Sheet Support Binder) triple layer fabrics represent the pinnacle of forming fabric technology. They feature two independent weave structures – a fine top layer for superior sheet formation and fiber retention, and a coarse bottom layer for mechanical strength and wear resistance – joined by binder yarns. This design decouples the competing demands of surface quality and durability.

Model	Mesh (W×W/cm)	FSI	CFM	Caliper (mm)	Best For
SSB-4500	27×24	0.88	340	0.72	High-speed fine paper (1,200+ mpm)
SSB-4300	25×22	0.85	370	0.68	Newsprint & LWC (800–1,200 mpm)
SSB-4100	24×20	0.83	390	0.65	Multi-grade machines
SSB-3800	22×20	0.80	420	0.60	Packaging & kraft
SSB-3500	21×18	0.77	460	0.58	Testliner & corrugating medium

Typical applications include publication papers, high-quality printing & writing grades, and lightweight coated (LWC) papers where surface quality is paramount. The SSB-4500 is our flagship product for machines exceeding 1,200 mpm, delivering exceptional fiber support (FSI 0.88) without compromising drainage capacity.

The SSB-4500 features an 8-shaft satin top weave producing a micro-smooth surface with average roughness (Ra) below 5 µm. Independent third-party sheet marking tests at 1,300 mpm on woodfree uncoated paper (80 gsm) confirmed no statistically significant fabric-side wire mark when compared against the market-leading competitor product. Fabric life is typically 120–180 days on well-maintained machines running fine paper grades.

### 4. Double Layer Forming Fabrics

Double layer fabrics provide a cost-effective balance between surface quality and wear resistance. The design uses two warp systems (top and bottom) with a shared weft, creating a finer top surface than single-layer designs while maintaining acceptable mechanical life. They are the dominant specification for packaging grades worldwide.

Model	Mesh (W×W/cm)	FSI	CFM	Caliper (mm)	Best For
DL-3800	23×18	0.78	400	0.58	Packaging board – liner & fluting
DL-3500	21×16	0.75	440	0.55	Recycled packaging grades
DL-3200	20×16	0.72	470	0.52	Kraft & sack paper
DL-2800	18×14	0.68	510	0.48	Heavyweight board (>200 gsm)

## 5. Single Layer Forming Fabrics

Single layer fabrics are the economical workhorses for slower machines and less demanding grades. Their simple weave structure offers excellent drainage and cleaning properties at the lowest acquisition cost. They remain popular for tissue, molded pulp, and low-speed specialty applications.

Model	Mesh (W×W/cm)	FSI	CFM	Caliper (mm)	Best For
SL-2600	19×14	0.65	520	0.45	Tissue & towel (up to 800 mpm)
SL-2400	18×12	0.62	560	0.42	Molded pulp & filter grades
SL-2200	16×10	0.58	610	0.40	Low-speed specialty papers

## 6. Weave Structure Reference

Weave Pattern	Description	Benefit	Typical Applications
Plain Weave (1/1)	Alternating warp-over-weft each thread	Highest stability, easiest to clean	Single & double layer fabrics
4-Shaft Satin	Each warp floats over 3 wefts	Good sheet release, smooth surface	SSB top layers, fine paper grades
5-Shaft Satin	Each warp floats over 4 wefts	Excellent surface smoothness	High-speed fine paper SSB fabrics
8-Shaft Satin	Each warp floats over 7 wefts	Maximum surface smoothness, minimum marking	Premium SSB top layers (SSB-4500)
Twill (2/1, 3/1)	Diagonal line pattern across fabric	Balanced stability and open area	Bottom wear layers, dryer fabrics

## 7. Application Guide by Paper Grade

Paper Grade	Grammage (gsm)	Speed (mpm)	Recommended	Key Requirement
Tissue / Towel	12–45	600–2,200	SSB-4500 / SL-2600	Fine fiber retention
Fine Paper (CWF/ UWF)	60–120	800–1,500	SSB-4500 / SSB-4300	Surface quality priority

Paper Grade	Grammage (gsm)	Speed (mpm)	Recommended	Key Requirement
Newsprint	42–52	900–1,400	SSB-4300 / SSB-4100	Drainage + wear life balance
LWC Paper	40–70	1,000–1,600	SSB-4500 / SSB-4300	Surface smoothness critical
Liner / Testliner	100–250	400–1,000	DL-3800 / DL-3500	Maximum wear life
Corrugating Medium	90–160	400–900	DL-3500 / DL-3200	High drainage capacity
Kraft / Sack	60–120	300–700	DL-3200 / DL-2800	Tensile strength
Folding Boxboard	160–400	300–600	DL-3800 / DL-2800	Clean sheet release

## 8. Technical Support & Contact

PAPTEX application engineers are available for on-site fabric audits, machine survey measurements (drainage elements, vacuum system, tension profiles), and fabric selection recommendations. Contact our technical team at [tech@paptex.com](mailto:tech@paptex.com) or reach your regional sales representative.

All PAPTEX forming fabrics are covered by our standard warranty against manufacturing defects. Fabric life is dependent on machine conditions and operating practices; our application report provides estimated life ranges based on your specific machine parameters.