

# Specialty Paper Growth in India: Food-Grade Packaging, Pharmaceutical Applications, Technical Papers, and Niche Segment Expansion Beyond Commodity Grades

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**Abstract-** India's specialty paper segment represents a strategically significant yet underexamined component of the national paper industry. While commodity grades including packaging board, printing paper, and tissue dominate production volumes and industry attention, specialty papers serving niche applications in pharmaceutical packaging, food-grade materials, filtration, release papers, and technical applications constitute a growing segment characterized by higher margins, stringent quality requirements, and distinct competitive dynamics. This review examines the scope, scale, growth drivers, technical requirements, and market structure of India's specialty paper sector. Secondary data from IPMA, IMARC, industry reports, and company disclosures indicate that specialty papers account for an estimated 8 to 12 percent of total paper production by volume but command disproportionately higher value shares due to premium pricing. The Indian specialty paper market was valued at approximately 3.30 million metric tons in 2024, projected to reach 4.30 million metric tons by 2033, reflecting a CAGR of 2.60 percent. Growth is driven by expanding pharmaceutical manufacturing, rising food safety standards, regulatory requirements for compliant packaging materials, industrial demand for filtration and technical papers, and import substitution opportunities as domestic producers develop quality-competitive capabilities. Technical requirements for specialty papers are substantially more stringent than for commodity grades, involving precise GSM tolerances, controlled porosity, surface treatment specifications, chemical resistance parameters, and regulatory compliance with food safety and pharmaceutical standards. Quality testing infrastructure, including facilities operated by institutions such as the National Test House, plays a critical role in verifying conformance to domestic and international specifications. Current production is concentrated among a relatively small number of integrated and specialized mills, with ITC Limited, JK Paper, and selected regional producers maintaining established specialty portfolios. Import dependency

remains significant for certain high-specification grades where domestic technical capability or scale economics have not yet been established. The article identifies constraints including limited domestic pulp availability for specific fiber requirements, capital intensity of specialized coating and converting equipment, regulatory certification complexity, and competition from established international suppliers. Strategic implications are discussed for Indian producers considering specialty grade development, policymakers evaluating import substitution priorities, and the broader industry's transition from volume-based commodity production toward value-added differentiation.

**Keywords:** Specialty papers, Food-grade packaging, Pharmaceutical papers, Technical papers, Filtration papers, Release papers, India, Quality standards, Import substitution, Value-added production

## I. INTRODUCTION

India's paper industry is conventionally understood through its major commodity segments: packaging board and containerboard, printing and writing papers, newsprint, and tissue. These categories collectively account for approximately 88 to 92 percent of domestic production by volume and dominate industry discourse, capacity planning, and investment activity. However, a strategically significant segment operates at the periphery of this commodity-focused industry structure: specialty papers serving niche applications that cannot be met by standard commodity grades.

Specialty papers are distinguished from commodity grades by their technical specifications, end-use applications, and value positioning rather than by a single defining characteristic. They typically involve

tighter manufacturing tolerances, specialized surface treatments, controlled chemical or physical properties, and regulatory compliance requirements that standard grades do not address. Applications span pharmaceutical blister packaging, food-contact materials, filtration media, release papers for adhesive and laminate production, security papers, decorative laminates, and industrial technical papers. Their common characteristic is functional performance requirements that command premium pricing relative to commodity alternatives.

The economic significance of specialty papers is disproportionate to their volumetric share. Industry assessments suggest that specialty grades account for 8 to 12 percent of total paper production in India by tonnage but represent 15 to 20 percent of total industry value due to higher average selling prices. This value concentration reflects both the technical complexity of production and the willingness of end-users in pharmaceutical, food processing, and industrial sectors to pay for materials that meet stringent specifications and regulatory compliance requirements.

India's specialty paper market was valued at approximately 3.30 million metric tons in 2024, with projections indicating growth to 4.30 million metric tons by 2033, reflecting a compound annual growth rate of 2.60 percent. This growth trajectory is driven by multiple concurrent factors including expansion of pharmaceutical manufacturing, rising food safety and packaging standards, industrial demand for filtration and process papers, import substitution as domestic capabilities mature, and the broader transition within India's paper industry from pure commodity production toward value-added differentiation.

Despite this strategic and commercial significance, specialty papers receive limited analytical attention within academic and industry literature focused on Indian papermaking. Research coverage emphasizes commodity grades due to their volume dominance and clearer data availability. Specialty segment analysis is fragmented across pharmaceutical packaging studies, food safety literature, and industrial application domains rather than being treated as a coherent sector within the paper industry. This review addresses this analytical gap by providing a structured assessment of

India's specialty paper segment, its growth drivers, technical requirements, competitive structure, and strategic implications.

## II. METHODOLOGY AND DATA SOURCES

This review is based on structured secondary data analysis of institutional statistics, market research reports, technical standards documentation, and company disclosures. Market size and growth projections were derived from IMARC Group market assessments and industry reports covering India's specialty and technical paper segments. Production and consumption data for the broader paper industry context were sourced from IPMA performance reports and IBEF sectoral analyses. Technical requirements and quality standards were referenced from relevant Indian Standards specifications, pharmaceutical packaging guidelines, and food-safety regulations issued by FSSAI. Company-level information on specialty paper portfolios, production capabilities, and investment activity was obtained from annual reports and corporate disclosures of major Indian paper producers including ITC Limited and JK Paper. Where multiple market size estimates existed, directional consistency across authoritative sources was prioritized. The review acknowledges data limitations arising from the proprietary nature of specialty grade production volumes, limited public disclosure of grade-specific pricing, and the absence of centralized specialty paper production statistics within standard industry reporting frameworks.

## III. DEFINING SPECIALTY PAPERS: SCOPE AND CATEGORIES

### 3.1 What Qualifies as a Specialty Paper

Specialty papers are functionally defined rather than compositionally defined. The category encompasses papers and paperboards engineered to meet specific performance requirements that standard commodity grades cannot satisfy. These requirements may involve precise dimensional tolerances, controlled porosity, surface finish specifications, chemical resistance, barrier properties, printability under specialized conditions, or compliance with regulatory standards governing food contact or pharmaceutical packaging.

The distinction between commodity and specialty grades is not absolute but exists along a continuum. High-quality coated printing grades, for instance, occupy an intermediate position: more technically demanding than uncoated commodity grades but less specialized than pharmaceutical blister base papers. For the purposes of this review, specialty papers are defined as grades that command a price premium of at least 20 to 30 percent above comparable commodity grades and serve applications where material specifications are defined by end-use performance requirements rather than by generic product categories.

### 3.2 Major Categories of Specialty Papers

The specialty paper landscape in India can be organized into several functional categories, each with distinct technical requirements, end-use applications, and competitive dynamics. Food-grade packaging papers include greaseproof papers, glassine for bakery

and food service applications, and papers certified for direct food contact under FSSAI regulations. These grades require controlled porosity to prevent oil and moisture migration, surface treatments to achieve necessary barrier properties, and demonstrated compliance with extractives limits to prevent food contamination. Pharmaceutical packaging papers encompass aluminium foil backing papers for blister packs, paper used in strip packaging, and specialty grades for medication labels requiring specific adhesive compatibility and print stability under pharmaceutical storage conditions. Technical and industrial papers include filtration papers for automotive, industrial, and laboratory applications, release papers used in adhesive tape and laminate production, and abrasive backing papers. Decorative and printing specialty grades cover décor papers for laminates, security papers for certificates and currency, and specialized printing substrates requiring unique surface characteristics.

Table 1. Major Categories of Specialty Papers in India

Category	Key Applications	Technical Requirements	Primary End Users
Food-Grade Packaging	Greaseproof, glassine, food contact	Barrier properties, FSSAI compliance	Bakery, FMCG, food service
Pharmaceutical Papers	Blister base, strip packaging, labels	GSM precision, aluminium adhesion	Pharma manufacturers
Filtration Papers	Automotive filters, lab filtration	Controlled porosity, wet strength	Auto, industrial, laboratories
Release Papers	Adhesive tapes, laminates	Silicone coating, smoothness	Adhesive, laminate industries
Decorative Papers	Laminates, furniture décor	Print quality, scratch resistance	Furniture, construction
Security Papers	Certificates, documents	Watermarks, anti-counterfeiting	Government, institutions

Source: Industry categorization based on IMARC, IPMA, and company portfolio analysis.

## IV. MARKET SIZE, GROWTH TRAJECTORY, AND VALUE DYNAMICS

### 4.1 Current Market Size and Projections

Quantifying India's specialty paper market with precision is complicated by limited disaggregated production data and definitional ambiguities regarding which grades qualify as specialty versus premium commodity. Market research assessments provide directional estimates rather than definitive figures. IMARC Group estimates place India's specialty paper market at approximately 3.30 million metric tons in 2024, with projected growth to 4.30 million metric

tons by 2033, representing a CAGR of 2.60 percent over this period. These figures reflect market size in volumetric terms rather than value, though the value equivalent is substantially higher given premium pricing characteristics of specialty grades.

Within the broader context of India's paper industry, specialty grades represent an estimated 8 to 12 percent of total production volume. India's total paper and paperboard production reached approximately 26 million tonnes in 2025, with packaging grades at ~16 million tonnes driven by e-commerce growth, writing and printing papers around 5-6 million tonnes, and

tissue contributing 250,000-300,000 tonnes. Specialty papers occupy 8-12% of this total (2.0-3.1 million tonnes), alongside miscellaneous grades.

Recent reports show variance due to volume (IMARC) vs. value metrics, with faster value growth from pharma/food demand in Table-2.

*Table 2. Comparative Specialty Paper Market Estimates (India)*

Source	2024 Size	Projected Size (Year)	CAGR
IMARC (volume) [1]	3.30M metric tons	4.30M tons (2033)	2.6%
Market Research Future [16]	USD 1.25B	USD 2.5B (2035)	6.5%
Data Bridge [17]	USD 2.76B	USD 5.24B (2032)	14.6%

#### 4.2 Growth Drivers

Multiple factors converge to drive specialty paper demand growth in India. Pharmaceutical manufacturing expansion is particularly significant. India is the world's largest supplier of generic pharmaceuticals and a major producer of active pharmaceutical ingredients. The pharmaceutical sector's growth, estimated at 10 to 12 percent annually, directly translates into demand for compliant packaging materials including specialized blister base papers and pharmaceutical-grade labels. Rising food safety standards and regulatory enforcement create demand for food-grade specialty papers. FSSAI regulations governing food contact materials require documented compliance with extractives limits and migration testing, which drives substitution away from unregulated materials toward certified specialty grades. E-commerce growth and changing food delivery patterns increase demand for functional specialty papers in food packaging and logistics applications. Industrial applications including automotive filtration and technical process papers grow in line with manufacturing sector expansion. Import substitution opportunities arise as domestic producers develop capabilities previously available only through imports, allowing them to capture market share from international suppliers at competitive price points given logistics and tariff advantages.

## V. TECHNICAL REQUIREMENTS AND QUALITY STANDARDS

### 5.1 Manufacturing Specifications

Specialty papers impose manufacturing requirements that are qualitatively more demanding than commodity production. GSM tolerances for pharmaceutical packaging papers, for instance, are typically specified to within plus or minus 2 to 3 percent, compared to plus or minus 5 to 7 percent acceptable variation for commodity grades. Surface smoothness measured in Bendtsen units must meet tighter specifications to ensure reliable adhesion of aluminium foil in blister packaging applications. Porosity control is critical for filtration papers, where Gurley seconds measurements determine air permeability characteristics essential to filtration performance. Chemical purity requirements for food-contact papers mandate low extractives content verified through migration testing protocols, which in turn requires raw material selection and process cleanliness that exceeds commodity mill standards.

### 5.2 Regulatory Compliance and Testing

Specialty papers serving pharmaceutical and food applications must demonstrate compliance with regulatory standards that do not apply to commodity grades. Food Safety and Standards Authority of India regulations specify migration limits for substances transferring from packaging to food. Compliance requires testing by accredited laboratories and documented material safety data. Pharmaceutical packaging materials must meet standards ensuring they do not adversely affect drug stability or introduce contaminants. Quality testing infrastructure plays a critical role in specialty paper verification. Facilities such as the National Test House provide third-party testing services for paper specifications, helping mills and converters demonstrate conformance to customer and regulatory requirements. This testing infrastructure supports both domestic production quality assurance and import evaluation for specialty grades procured internationally.

## VI. PRODUCTION LANDSCAPE AND COMPETITIVE STRUCTURE

### 6.1 Domestic Producers

Specialty paper production in India is concentrated among a relatively small number of integrated and specialized mills. ITC Limited operates one of the most diversified specialty paper portfolios in the country, producing value-added paperboards, food-grade materials, and coated specialty grades at its BILT unit and other facilities. The company's forward integration into FMCG packaging provides captive demand for certain specialty grades while also positioning it as a credible supplier to external customers. JK Paper maintains specialty segments focused on coated boards and select technical grades. Century Pulp and Paper and West Coast Paper Mills produce specialty grades alongside their commodity volumes, with product mix optimized based on market conditions and available equipment capabilities. Several smaller specialized mills focus exclusively on niche segments. These operations typically serve specific geographic markets or application verticals, competing on technical expertise, customer relationships, and ability to produce small batch quantities with customization rather than on scale economies. The competitive advantage of these specialized producers lies in technical service capability and willingness to work with customers on grade development, which larger integrated producers

may deprioritize given their emphasis on high-volume commodity grades.

### 6.2 Import Dependency

Despite growing domestic capabilities, India remains dependent on imports for certain high-specification specialty grades. Release papers, for instance, are largely imported from international suppliers with established silicone coating expertise and specialized converting equipment. Certain pharmaceutical packaging grades requiring extreme consistency and regulatory certifications from established international mills are also sourced through imports. Filtration papers for critical applications including automotive and industrial uses are procured internationally when domestic equivalents do not meet stringent performance specifications. Import volumes for specialty papers are difficult to quantify precisely because trade statistics aggregate specialty and commodity grades under broad harmonized code categories. Industry estimates suggest that specialty paper imports account for approximately 15 to 20 percent of domestic specialty paper consumption, concentrated in high-specification applications where domestic substitutes have not yet been fully developed.

Table 3. India Specialty Paper Market Indicators (2024 Estimates)

Indicator	Value/Range	Source/Notes
Market Size (2024)	3.30 million metric tons	IMARC [1]
Projected Size (2033)	4.30 million metric tons	IMARC [1]
CAGR 2025-2033	2.60%	IMARC [1]
Share of Total Paper Production	8-12% by volume	Industry estimates
Value Share (estimated)	15-20% of industry value	Premium pricing effect
Import Dependency	15-20% of consumption	High-spec grades

Sources: IMARC [1], IPMA [2], Industry assessments. Figures approximate due to limited disaggregated data.

## VII. CONSTRAINTS AND CHALLENGES

### 7.1 Fiber and Raw Material Constraints

Certain specialty paper applications require specific fiber characteristics not readily available from standard domestic pulp sources. Long-fiber softwood pulp, for instance, is needed for high-tear-resistance applications but must be imported given India's limited softwood forestry base. Specialty grades requiring ultra-clean chemical pulp with minimal lignin content face raw material procurement

challenges if domestic pulping facilities are optimized for commodity rather than specialty production. This fiber constraint creates a structural disadvantage for Indian specialty paper producers relative to international competitors with access to diverse pulp supply chains and established relationships with specialized pulp suppliers.

### 7.2 Capital Intensity and Equipment Specialization

Specialty paper production often requires specialized converting equipment that represents significant

capital investment. Silicone coating lines for release papers, precision coating equipment for pharmaceutical packaging papers, and controlled-environment facilities for food-contact grades all involve capital outlays that are difficult to justify unless production volumes are sufficient or pricing premiums are sustainable. The relatively small scale of many Indian specialty paper segments creates a catch-22: volumes are insufficient to justify specialized equipment investment, but without that equipment, producers cannot compete on quality and thus cannot grow volumes. This dynamic explains the persistence of import dependency for certain grades despite India's large domestic paper industry.

### 7.3 Regulatory Certification Complexity

Meeting pharmaceutical and food-contact regulatory requirements involves documentation, testing, and certification processes that are more complex and time-consuming than commodity paper production. Mills must maintain documented quality management systems, conduct regular migration testing for food-contact grades, and establish traceability systems that commodity operations do not require. The administrative and technical burden of regulatory compliance creates a barrier to entry for commodity-focused mills considering specialty grade development, and helps explain why specialty production is concentrated among a relatively small number of established producers willing to invest in compliance infrastructure.

## VIII. STRATEGIC IMPLICATIONS AND FUTURE OUTLOOK

### 8.1 For Indian Paper Producers

Specialty paper segments offer margin enhancement opportunities for integrated producers facing competitive pressure in commodity grades. The decision to develop specialty capabilities requires strategic commitment rather than opportunistic diversification, given the capital investment, technical expertise development, and customer relationship building required. Producers with existing commodity volumes can leverage their manufacturing infrastructure by adding specialty coating or converting lines, allowing them to produce specialty grades using existing base paper capacity. Proximity to end-use customers in pharmaceutical hubs and food

processing zones provides a geographic advantage for mills that develop specialty portfolios aligned with regional industrial clusters.

### 8.2 Import Substitution Potential

Policy interest in import substitution within the paper industry often focuses on commodity grades due to their volume significance. However, specialty papers represent a higher-value import substitution opportunity given their premium pricing and the logistics and tariff disadvantages that international suppliers face. Selective policy support for specialty paper development, including facilitation of technology partnerships, support for quality testing infrastructure, and streamlined regulatory approval processes for new domestic specialty grades, could accelerate import displacement in this segment more effectively than broad-based commodity paper support.

### 8.3 Evolution Toward Value-Added Production

India's paper industry faces structural pressure from low-cost commodity imports and margin compression in high-volume grades. The specialty paper segment offers a strategic pathway toward higher-value production that leverages technical capability rather than competing purely on cost. This transition mirrors broader manufacturing sector evolution toward value-added differentiation. Realizing this opportunity requires industry investment in technical expertise development, quality management systems, and customer relationship capabilities that differ from the operational competencies emphasized in commodity production. The mills that successfully navigate this transition position themselves for sustainable margin improvement independent of commodity price cycles.

## IX. CONCLUSION

Specialty papers in India occupy a niche but strategically significant position within the national paper industry. Representing approximately 8 to 12 percent of production volume but 15 to 20 percent of industry value, specialty grades offer margin enhancement opportunities and serve critical applications in pharmaceutical packaging, food safety, industrial processes, and technical applications that commodity grades cannot address. Growth drivers including pharmaceutical sector expansion, rising

food safety standards, industrial demand, and import substitution opportunities support projected market growth from 3.30 million metric tons in 2024 to 4.30 million metric tons by 2033.

Technical requirements for specialty papers are substantially more demanding than commodity production, involving tighter manufacturing tolerances, specialized surface treatments, regulatory compliance verification, and quality management systems. This complexity creates both a barrier to entry and a source of competitive advantage for established specialty producers. Current production is concentrated among a limited number of integrated and specialized mills, with import dependency persisting for high-specification grades where domestic capabilities have not yet been fully developed.

Constraints limiting expanded specialty paper production include fiber procurement challenges for specific grades, capital intensity of specialized equipment, regulatory certification complexity, and the relatively small scale of certain specialty segments. Despite these challenges, the segment represents a viable pathway for Indian paper producers seeking to transition from volume-based commodity competition toward value-added differentiation. The strategic imperative is clear: specialty paper development requires sustained commitment to technical capability building, quality infrastructure investment, and customer relationship development rather than opportunistic product line extensions.

For India's paper industry, the specialty segment's significance extends beyond its current volumetric contribution. It demonstrates that competitive advantage in paper production need not rest solely on scale economies in commodity grades. Technical expertise, quality assurance capabilities, regulatory compliance infrastructure, and customer service competencies can support margin-positive businesses even at modest production volumes. As commodity paper margins face ongoing pressure from imports and overcapacity, the specialty segment offers a template for strategic evolution that other segments of India's paper industry would be well-served to study.

#### Abbreviations

CAGR – Compound Annual Growth Rate  
 FMCG – Fast-Moving Consumer Goods

FSSAI – Food Safety and Standards Authority of India  
 GSM – Grams per Square Meter  
 IPMA – Indian Paper Manufacturers Association  
 NTH – National Test House  
 TPA – Tonnes per Annum

#### Declarations

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