



CUSTOM EPP SOLUTIONS

Lightweight Strength for
Critical Applications





At K. K. Nag Private Limited, we specialise in custom moulded EPP solutions designed to meet demanding industrial needs, spanning automotive safety parts, returnable packaging and thermal insulation products.

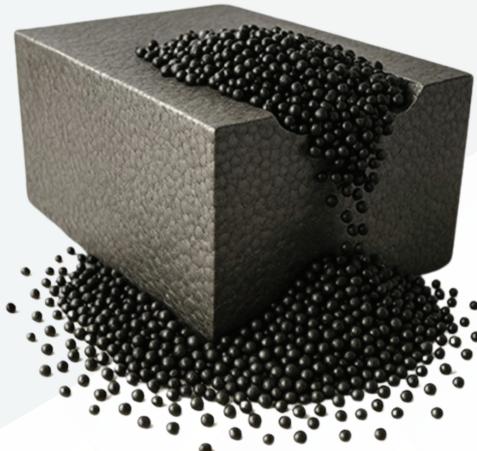
As India's first company to mould EPP, our expertise spans six decades of material innovation and collaborative development across industries. Whether you're designing for durability, impact resistance, thermal efficiency or sustainability, we deliver tailored solutions that perform.

Certifications and Commitments



What is EPP Expanded Polypropylene?

EPP is a lightweight, closed-cell foam made by expanding polypropylene granules using a blowing agent. It offers excellent energy absorption, impact resistance and vibration damping.



EPP vs. Conventional Materials

Existing Material	Problem	EPP Advantage
Expanded Polystyrene (Thermocole)	Breaks easily, not reusable	Multi-use, flexible and impact resistant
Wood	Heavy, absorbs moisture	Lightweight, waterproof and hygienic
Rigid Plastic	Cracks under stress	Highly shock-absorbent, durable and resilient
PU Foam	Not recyclable, fragile	100% recyclable and durable
Metal	Too heavy, expensive	Lighter and cost-effective for non-structural parts

Custom Solutions for Specific Needs

Our expert team collaborates closely with you to design and manufacture EPP components tailored to your specific requirements. No matter how complex the challenge or unique the feature, we partner with you from concept to final production – making sure every solution reflects your exact vision.

The Unique Characteristics of EPP



Lightweight yet Strong

Combines low weight with high mechanical resistance for demanding environments.



Excellent Impact and Vibration Absorption

Protects products and components during transport, handling or collisions.



Moisture and Chemical Resistance

Performs reliably in humid, oily or corrosive conditions without degrading.



Highly Durable and Long-Lasting

Withstands repeated use while maintaining structural integrity and performance.



Mouldable and Versatile

Adapts to complex shapes with built-in features like hinges, contours and inserts.



Multi-Use Durability

Built to perform across repeated lifecycles, cutting down on single-use packaging waste.



Recyclable

Can be processed and reused at the end of its lifecycle, supporting circular economy initiatives.



Colour Options

Available in black, white, grey and pink to suit diverse functional needs and industry applications.

Our Process: From Concept to Delivery

We follow a structured, collaborative approach to ensure every custom EPP solution is precise, reliable and delivered on time:

Concept and Requirement Gathering

We understand your application, design goals and functional needs



Design and Engineering

Our team develops models, runs simulations and finalises designs for production



Prototype Development

We build sample parts for quick fit, form and function validation



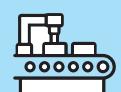
Mould Development

Precision tooling is crafted for accurate and consistent moulding



Production

EPP components are moulded with strict quality control for any volume



Inspection and Quality Assurance

Each batch is tested to meet performance and durability standards



Packaging and Delivery

Products are securely packed and delivered on schedule



EPP Applications

EPP products from K. K. Nag are engineered for strength, versatility and reusability making them ideal for a wide range of industrial and commercial needs.

Automotive

Battery covers, bumper cores, seat components, sun visors

Reduces vehicle weight while providing excellent energy absorption, impact protection and thermal resistance.



Drones Components and Packaging

Frames and wings, protectors and covers, landing gear, fuselage, nose foam, tip, tail

Enhances flight efficiency while protecting critical components from vibration and impact.

Defence

Custom-fitted equipment cases

Rugged and field-ready protection, engineered for high-impact use in demanding environments.



Dunnage

Stackable bins, custom-fit trays, returnable logistics solutions

Eco-friendly, long-lasting solutions that reduce single-use packaging and optimise supply chains.



HVAC

Duct and pipe insulation

Lightweight and thermally efficient EPP parts help reduce energy loss, improve system performance and simplify installation in HVAC systems.

Sports and Leisure

Helmet liners, protective gear, equipment inserts

Lightweight and impact-resistant materials that enhance safety, comfort and performance.



Saddles and Pipe Separators

Heavy-duty cradles, cylindrical spacers and load-bearing solutions

Lightweight, high-strength structures designed to absorb vibration and protect heavy or sensitive industrial components during transport.



Precision Electronics Case

Custom camera housings, optical and instrument cases

Compact, high-performance EPP solutions with precision-fit cavities that protect sensitive equipment from shock and impact.

Insulated Containers

Catering boxes, food delivery carriers and pharma cold-chain solutions

Lightweight, thermally efficient designs that maintain food safety, protect temperature-sensitive medicines and ensure durable, reliable performance.



Built for Performance. Designed for the Planet.

Sustainability is more than a product feature; it's a company-wide philosophy. Every design, process and innovation is guided by our commitment to reduce waste, extend product life and promote circularity across industries.

Our Approach to Sustainable Solutions



Resilient by Design

Our products are engineered for long-term use and durability, reducing the need for frequent replacements, conserving resources and lowering environmental impact.



Lightweight for a Lighter Footprint

By developing ultra-lightweight yet strong components, we help reduce transportation fuel consumption, contributing to lower carbon emissions across supply chains.



Lifecycle Efficiency

From multi-use industrial trays to energy-efficient protective packaging, our solutions are designed to deliver maximum utility over their lifespan while minimising resource consumption.



Why Choose K. K. Nag for Your EPP Solutions



In-House Design and Engineering Expertise

Custom solutions tailored to your space, safety and weight requirements using advanced modelling as well as simulation software.



Moulding Capabilities

Designed with integrated channels and impact buffers, our EPP solutions meet the highest standards across all industry applications.



Rapid Tool Development

Complete control over tool design and manufacturing – ensuring precision, speed and confidentiality.



Seamless Transition from Pilot to Production

End-to-end support from initial concept and prototyping to full-scale manufacturing all under one roof.

Why It Matters

- Accelerated Time-to-Market
- Lower Development Costs
- Improved Product Performance
- Aligned Technical Collaboration
- First Time Right Manufacturing
- Scalable Local Production



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