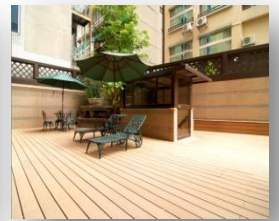




Your Tomorrow™



Masterbatch & Polymer Compounds



KONKAN SPECIALITY POLYPRODUCTS PVT LTD.,

■ Capability

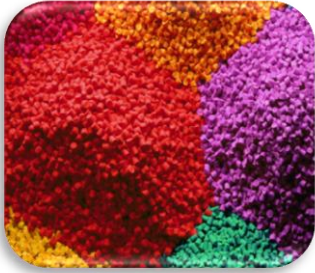
■ Credibility

■ Competency

Incorporated in 1987, Konkan Speciality Polyproducts Pvt Ltd., Head quartered in Mangalore, on the western coast of India, is engaged in the development, manufacture and supply of "KONSPEC" brand of consistent quality colours, additives, functional Masterbatches and compounds for the polymer processing industry from its Mangalore & Chennai manufacturing and an all India / international distribution network.

The KONSPEC Brand

From vibrant visible additives that enhances the value of industrial products, consumer durables, consumer goods & FMCG packaging, brand KONSPEC meets the complete masterbatch and Polymer compound requirements of all polymer processes.



Quality

Quality, Flexibility and Customer orientation are at the forefront of its operations.

The company strictly adheres to ISO 9001-2008 procedures and is certified accordingly by BV



100% Quality ratings from all major customers for past 200 years.

Innovation

Innovation is a continuous process at KONSPEC. Be it a product or process. Technical competency acquired over a period of 25+ years by involvement at every stage of customer's requirement have led us to develop many innovative product and process solutions



By being a preferred partner, KONSPEC is alert to customer's ever changing needs of innovations & optimisations.

Vision

- ❖ Be Among the top 3 players in the market we operate in.
- ❖ Offer the best in class, cost competitive products with a commitment to maintain the highest quality standards.
- ❖ Constantly add value to our customer by value engineering.
- ❖ Constantly invest in new technologies so as to offer path breaking & Innovative products to the industry.
- ❖ Reduce our Carbon – Foot print by offering eco friendly products.

Mission

- ❖ Reach a wide customer base, achieve customer satisfaction and exceed their expectations by means of latest technology by providing customised solutions to customer needs.
- ❖ Provide technical backup to every customer, so that they derive value for money from our products / services, designed by using the latest technology / testing backup for their existing product range in their respective domain.
- ❖ Test and comply as per international standards viz., ASTM, ISO, DIN, UL etc., and to meet regulations viz., RoHS, Food compliance, EC 72/2002, French positive list, Indian Positive list etc.,

MANUFACTURING FACILITIES

KONSPEC delivers top and consistent quality Colour Masterbatches, Additive Masterbatches, Filler Masterbatches, Modifier Masterbatches, Mineral filled and Natural fiber filled compounds matching international standards, manufactured in 6 state of the art manufacturing facilities backed by an highly qualified and experienced Manufacturing & Technical services team to ensure customer delight.

- | | |
|--------------------------------|---|
| <p>▪ Plant Capacity</p> | <p>: 60,000 MTPA</p> <ul style="list-style-type: none"> ▪ 40,000 MTPA installed ▪ 20,000 MTPA under installation. |
| <p>▪ Location</p> | <p>: 6 Units located in</p> <ul style="list-style-type: none"> ▪ Mangalore a port city in the State of Karnataka on the South Western coast of India. ▪ Chennai a port city in the State of Tamilnadu on the South Eastern coast of India. |
| <p>▪ Equipments</p> | <p>: Consisting of State of the art</p> <ul style="list-style-type: none"> ▪ Twin screw extruders – High & Low Throughput ▪ Farrel Continuous mixers ▪ Co-Kneaders ▪ Banbury Mixers |

KONKAN SPECIALITY POLYPRODUCTS PVT LTD.,

■ Capability

■ Credibility

■ Competency

www.konspec.com

KONSPEC

Research & Development

25+ Years of Proven Product Development Expertise

KONSPEC has invested in a state of the art R&D Centre at its headquarters in Mangalore. The centre has been equipped with best in class equipments sourced from leading manufactures and suppliers across the globe. The centre is working on development & innovation of Masterbatches & compounds for a wide range of application. The R&D centre is manned by highly qualified, technically skilled team .



Analytical	AAS	HPLC	GPC	FTIR
	TGA	ICP-OES	GCMS	DSC
Thermal & Rheology	FPV	MFR	HDT/VCP	
	Q-UV	Q-XENON	ESCR	
Mechanical	UTM	IMPACT TESTER		
	HVUL-2	LOI		
Colour	Colour Spectro Photometer		Colour Matching Booth	



- Internal Mixers and Laboratory Twin screw extruders,
- Injection Moulding Machine,
- Moulds as per ASTM Specifications,
- Compression Moulding Machine,
- Blown Film Facilities
- Twin Roll mill
- Lab scale extruders for Pipes, Profiles, Films, Sheets, Tapes, Tubing & Filaments etc.



The Complete MasterBatch And Polymer Compound Solutions Company

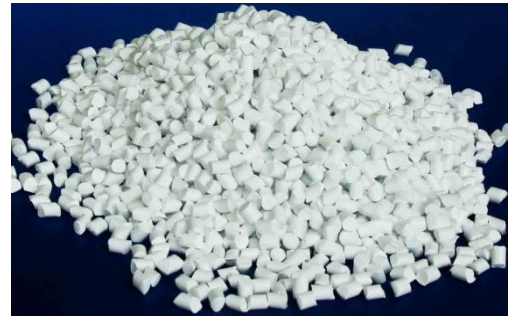
KONSPEC PRESENTS

Master Batches		Performance	Innovative	NFC/WPC	Scientific Services
Generic	Customized	Materials Group	Materials Group	Profiles Group	Group
<input type="checkbox"/> Colosol® Colour Masterbatches <ul style="list-style-type: none"> ▪ White MB ▪ Black MB ▪ Colour MB <input type="checkbox"/> Prosol® Process Additives <input type="checkbox"/> Persol® Performance additives <input type="checkbox"/> ECOWHITE® Opaque Fillers <input type="checkbox"/> TRNASFIL® Transparent Fillers <input type="checkbox"/> ALPHA Modifiers <input type="checkbox"/> ALPHA TRANS Transparent Modifiers	<input type="checkbox"/> ACCUCOL Custom Designed Masterbatches for <ul style="list-style-type: none"> - Food contact, - Appliances, - Toys, - Household, - Telecom, - Outdoor, - Automotive among many applications <input type="checkbox"/> Designed to match various compliances like <ul style="list-style-type: none"> - US FDA - RoHS - WEEE - UL - EC 72 - EN 71 - Indian Positive list <input type="checkbox"/> COMBIKON® range Combi Concentrates	<input type="checkbox"/> FR Compounds -V0, V1 & V2 <input type="checkbox"/> Mineral Filled Compounds	<input type="checkbox"/> Natural Fiber Compounds (NFC) Used for Moulding / Extrusion of <ul style="list-style-type: none"> ○ Writing Instruments ○ Hangers ○ Automobile parts ○ Appliances ○ Packaging ○ Toys ○ Recreational ○ Solar Panel housing ○ Paint Brush ○ Many more 	<input type="checkbox"/> Natural Fiber Based Composites (NFC) <ul style="list-style-type: none"> ○ Outdoor Decking ○ Wall Cladding ○ Railings ○ Material Handling Pallets ○ Profiles for Indoor and Outdoor furniture. 	<input type="checkbox"/> NABL Accredited, State of the art laboratory. <ul style="list-style-type: none"> - Mechanical - Chemical - Thermal - Flammability - Weathering tests -Third Party testing and certifications -Proof of Concept -Test as per ASTM / DIN / ISO standard



COLOSOL® Range of WHITE MASTERBATCHES

A range of White Masterbatches on PP/PE/Universal Base, With TiO2 loading upto 75% for various applications.



Process	Compatible	Polymer	Usable	Special Requirement	Konspec Range
Injection Moulding	✓	PE	✓	Food Compliance	✓
Blow Moulding	✓	PP	✓	RoHS Compliance	✓
Rotational Moulding	✓	PS, ABS, SAN	✓	Toy & Child Safety	✓
Compression Moulding	✓	Engineering Plastics	✓	Filter Value tested	✓
Extrusion	✓	Universal Base	✓	Non Yellowing	✓
Thermoforming	✓			Tones: Blue, Violet, Neutral	✓



COLOSOL® Range of BLACK MASTERBATCHES

Up to 55% for various application like high speed extrusion, Thin film, Fibres, Films etc. Specialities include High Jetness, Conductive, Food grade, Low gel, Sulphur Free, Very Low Filter Pressure Value (FPV).

Process	Compatible	Polymer	Usable	Special Requirement	Konspec Range
Injection Moulding	✓	PE	✓	High Jetness /Gloss	✓
Blow Moulding	✓	PP	✓	High UV Stability	✓
Rotational Moulding	✓	PS /ABS/SAN/HIPS	✓	RoHS Compliance	✓
Compression Moulding	✓	Universal Base	✓	Food Compliance	✓
Extrusion – Films, Laminations, Pipes & Fiber	✓	Engineering Plastics	✓	Low Filter Pressure Value	✓
Thermoforming	✓			Various Tones like Blue etc	✓



COLOSOL® Range of COLOUR MASTERBATCHES

Color is an integral part of every product. Color affords aesthetics & identity to the product.

KONSPEC offers from its data bank 25000 colors / shades, a range of color like:

- Opaque colours *
- Transparent Colours *
- Translucent Colours *
- Pastel colours *
- Frosty Effect *
- Pearlescent
- Metallic Effect
- Sparkle Effect
- Granite Effect
- Marble Effect
- Fluorescent Effect
- Night Glow
- Interference / Dual Shade Effect
- Custom matched Colours *
- Pantone colours *
- RAL Colours *

* - Products offered with very Low Filter Value

KONSPEC is the only masterbatching company in India with **NABL accredited**, **In House laboratory** that offers tested and certified masterbatches for:

- Food contact applications – To meet International and National regulations like
 - **USFDA**
 - **European Union EC/72**
 - **AP (89)**
 - **French Positive List**
 - **JHOSPA**
 - **Indian Positive list**
- Electrical & Electronic Industries – To meet **RoHS & WEEE**
- Toy Industry - To meet **EN 71-3**
- Chemical Industry – **Migration resistance & Acid resistance**
- Automotive Applications
 - **Heavy Metal free – RoHS**
 - **Substance of Concern – SOC free MB**
 - **Light & Weather fast colours**



Process	Compatible
Injection Moulding	✓
Blow Moulding	✓
Rotational Moulding	✓
Compression Moulding	✓
Extrusion	✓
Thermoforming	✓

Polymer	Usable
PE	✓
PP	✓
PS, ABS, SAN	✓
Engineering Plastics	✓

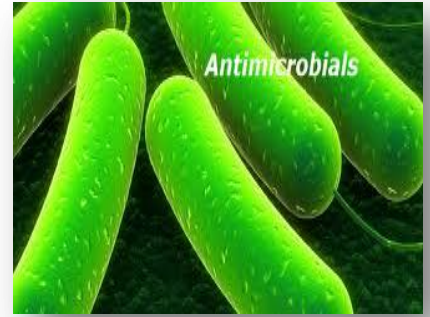
Special Requirement	Konspec Range
Food Compliance	✓
RoHS Compliance	✓
Toy & Child Safety	✓
High Colour fastness	✓
Custom Matched	✓
Low addition level	✓



ADDITIVE MASTERBATCH

A range of Additive Masterbatches providing functional characteristics in various products and process.

- Processing Aid
- UV Stabilizers
- Anti Microbial
- Anti Static
- Anti Fog (Hot and Cold)
- Flame Retardant
- Anti Skid
- Anti Oxidant
- Clarifier
- Nucleating
- Anti Block
- Slip Additive
- Mould Release
- Fragrance
- Anti Scratch
- Blowing Agent
- Optical Brightener



Process	Compatible
Injection Moulding	✓
Blow Moulding	✓
Rotational Moulding	✓
Extrusion	✓
Thermoforming	✓

Polymer	Usable
PE	✓
PP	✓
PS, ABS	✓
Engineering Plastics	✓

Special Requirement	Konspec Range
Food Compliance	✓
RoHS Compliance	✓
Toy & Child Safety	✓
High Colour fastness	✓
Custom Matched	✓
Filter value tested	✓

SPECIALITY COMPOUNDS

- Conductive Compound
- Flame Retardant Compounds
 - V0, V1 & V2
 - Based on Halogenated & Non Halogenated
- Leno Compounds
- Mineral Filled Compounds





COMBIKON Range of COMBI CONCENTRATES

An unique combination of colours & functional additives combined into one single masterbatch.

Combination offered are

- Antistatic & Colour
- UV & Colour
- Flame Retardant + UV & Colour
- Antioxidant & Colour



D'Fox

Photo - Oxo Degradable Masterbatch

**A performance solution for the carrybag & blown film industry.
Tested in-house as per ASTM D Standards 5576, 5208-09, 882 & 3826**

KONSPEC Introduces a new series of Photo - Oxo Degradable Masterbatches for PE films under the brand name of D'Fox which works on the principle of Photo - Oxo Degradation.

D'Fox Masterbatches are formulated with unique additives, which will enable controlled degradation of nags initiated by natural daylight, heat and mechanical stress. One of any combination of the above factors is needed to trigger the degradation process which results in a film breaking down into brittle fragments over a period of time.

The salient future of this new technology are that the films have same properties and other qualities of conventional plastics with very little addition to the cost matrix and there is no need to re-equip machine or process.

Degradation Over Time*



Degradation Starting Day.....

**After 4 Days.....
(100 Hrs)**

**After 10 Days.
(250 Hrs)**

*Degradation is noticed after accelerated UV exposure, as per ASTM D 5208.

MINERAL FILLED MASTERBATCHES

ECOWHITE Range of AFMB (Anti Fibrillation Masterbatches)

Various Grades of AFMB are available for
 High Line Speed
 Medium Line Speed
 Low Line Speed.
 To Produce Ultra low denier, Low denier material

ECO WHITE Range of Opaque Fillers

EcoWhite®

Specifically for Blown Film industry
 Available with tints like Blue, Double blue and Violet tints.
 Suitable for high loading percentages (Exceeding 50%).

TRANSFIL Range of Transparent Fillers

TransFill®

Various grades available for Extrusion and Moulding that are

- Suitable for Coloured applications
- With excellent gloss.
- No variation in addition level of Colour Masterbatches.
- Various grades with High and Medium brightness applications

ALPHA Range of Alpha Modifiers

Alpha Modifier

For Tape / Sheet Extrusion

- To improve
- Tenacity
 - Elongation
 - Higher tape strength / Seam Strength
 - Reduce Powder formation (In Tape extrusion)
 - Stable bubble (In Blown Film extrusion)

For Blown Film extrusion

- To improve
- Surface Gloss
 - Down gauging
 - Better sealability
 - Stable bubble

For Blow Moulding

- To improve
- Surface finish
 - Bottom Sealing
 - Improved neck finish
 - Reduce lines
 - Huge cost saving

Alpha Trans

ALPHATRANS are the transparent variant of ALFA Modifiers

Process		Compatible
Extrusion Sheet & Tape	High Speed	✓
	Medium Speed	✓
	Low Speed	✓
Blown Film Extrusion		✓
Blow moulding		✓

Polymer	Usable
PE	✓
PP	✓

Special Requirement	Konspec Range
Food Compliance	✓
Better Surface finish	✓
RoHS Compliance	✓
Toy & Child Safety	✓
High Strength	✓
Low COF Products	✓
Less Water carry over - Sheet extrusion	✓
Bubble Stability - In Blown films	✓
Better Parison Strength	✓



Application Areas

EXTRUSION	INJECTION MOULDING	BLOW MOULDING	ROTO MOULDING
<ul style="list-style-type: none"> ✓ Mono-Layer Films (Blown and Cast film) ✓ Multi-Layer Films (From 3 to 9 layers) ✓ Mono-Filaments ✓ Multi-Filaments ✓ Extruded Tapes (Woven fabric, sack, FIBC, Leno & Tarpaulins) ✓ Non Woven fabric ✓ Box Strapping ✓ Sutli ✓ PP Mats ✓ Shade Net ✓ Laminations ✓ Thermoformed Sheets ✓ Extruded Sheets ✓ Extruded Hoses ✓ HDPE Pipes (Spec & Non Spec) ✓ Drip Irrigation Pipe / laterals (Spec / Non Spec) ✓ Wires and Cables ✓ OFC Ducts ✓ Corrugated Pipes ✓ PPR Pipes ✓ Aluminium Composite Panel - ACP 	<ul style="list-style-type: none"> ✓ Caps & Closures ✓ Crates ✓ Containers (Food, Pharma, Pesticide & personal care products) ✓ Moulded Furniture (Indoor and Outdoor) ✓ T V Cabinets ✓ Computer Peripherals ✓ Washing Machines ✓ Refrigerators ✓ Automotive Component ✓ Batteries (Automotive and Non Automotive) ✓ Paint Pails / Containers ✓ House hold articles ✓ Moulded Luggage ✓ Sanitary Fittings ✓ Hangers ✓ Poultry Items ✓ Writing Instruments ✓ Textile Bobbins ✓ Electrical Switches ✓ Electrical enclosures ✓ Drippers ✓ Pipe Fittings ✓ Dust Bins 	<ul style="list-style-type: none"> ✓ Cans ✓ Jerry Cans ✓ Barrels ✓ Drums ✓ Lube Oil Container ✓ Edible Oil Container ✓ Personal Care Container ✓ Pharma Container ✓ Pesticide Container ✓ Water Bottles ✓ Automotive Ducts ✓ Fuel Tanks ✓ Water Tank (Multilayer) ✓ Loft Tanks ✓ Bins 	<ul style="list-style-type: none"> ✓ Water storage Tank ✓ Chemical Tanks ✓ Septic Tanks ✓ Cold Storage Boxes ✓ Traffic Management Systems ✓ Pallets ✓ Amusement Park Equipments ✓ Bins ✓ Telephone Booth ✓ Outdoor Furniture



Your Tomorrow™

Scientific Services Group

A World Class Lab

(Fully equipped & NABL Accredited)



Testing Services Provided



Mechanical

- ✦ Tensile properties (Tensile strength, Modulus, Elongation)
- ✦ Flexural Properties (Flexural Strength, Modulus)
- ✦ Compression Strength
- ✦ Izod / Charpy Impact Strength
- ✦ Tear Strength



Rheology

- ✦ Melt Volume Rate
- ✦ Melt Flow Rate



Flammability Test

- ✦ Horizontal burning test (HB)
- ✦ Vertical burning test (V0, V1, V2 etc.,)
- ✦ Limiting Oxygen Index



Electrical

- ✦ Surface resistivity
- ✦ Volume resistivity
- ✦ Antistatic properties



Optical

- ✦ Total Colour Difference as per CIE, L,a,b



Weathering Test

- ✦ Xenon Arc weatherometer with simulations of acid rain condition.
- ✦ Florescent lamp weatherometer – UVA/UVB lamps
- ✦ Environmental Stress Cracking Resistance (ESCR)



Chemical

- ✦ Heavy Metal analysis as per RoHS
- ✦ International Food contact application regulations like US FDA, JHOSPA, French Positive list, EC/72, EN 71-3, etc
- ✦ Analysis of Automatic Amine, PBB etc.,



Thermal

- ✦ Melting Point, Glass Transition temperature, Specific Heat, Oxidation induction time
- ✦ Filler Content, Weight loss, Thermal Stability, Carbon Black content etc.,
- ✦ Heat Deflection Temperature under load / Softening Point

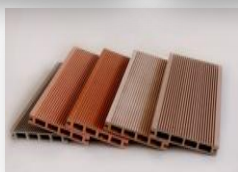


In recent years, natural fibers have gained significant interest as reinforcing material for commercial thermoplastics. Natural fibers (like bamboo, wood, jute, etc.) have low density and high specific properties. They require low energy inputs for processing and are made from atmospheric carbon rather than mined carbon. The added advantage such as reduced dependence on non-renewable energy/material sources, lower pollutant emissions, lower greenhouse gas emissions, enhanced energy recovery, makes them even more attractive. Combining biological fibers and commercial plastics can bring in transition to safer and more environmentally friendly composites. Environmental legislation as well as consumer awareness is forcing manufacturers to consider the environmental impact of their products at all stages of their life cycle, including ultimate disposal.

As a result of dedicated research over last several years, KONSPEC has developed high quality wood plastic composite (WPC) decking and wall cladding products marketed under the brand name "WUDDY". The product has been characterized with respect to their mechanical properties, chemical ultra-structure, water absorption, and thermal behaviour.



WUDDY
forever
PROFILES



WUDDY
forever
COMPOUNDS



Filled polymers are the backbone to structural applications of polymers. Neat polymers blends both may be filled with either particulate fillers or whiskers or fibers or their combinations to arrive at excellent properties. In polymer application. Renewable sources gain an importance, and are more preferred due to the following advantages:-

- Environmental friendly.
- Eco friendly.
- Low density of the material vis-a-vis conventional fillers like minerals.
- Free flowing and appearance like wood.
- Reduction of the carbon emission and leads to less carbon foot print.
- Excellent acoustic properties.
- Fibers are strong, light weight and wear resistant.

KONSPEC PRESENTS



Your Tomorrow™



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