

# COMPANY PROFILE

# MERICK POLYMERS

**YOUR TRUSTED SUPPLIER FOR A FULL SPECTRUM OF PLASTIC  
& BIO-COMPOUND SOLUTIONS WITH EMBRACING SUSTAINABILITY**

**ISO 9001:2015 Certified**

**Bio & compostable plastic**  
**Color masterbatch**  
**White & Black masterbatch**  
**Flame retardant compound**  
**PP compound for automotive**  
**Additives masterbatch**  
**Testing service**



17 Soi ICD5 Khlong Sam Prawet Subdistrict, Lat krabang, Bangkok 10520, Thailand.



092-2896364



Info@merickpolymers.com



www.merickpolymers.com

# CONTENTS

- **Bio & compostable plastic**
- **Color masterbatch**
- **White & Black masterbatch**
- **Flame retardant compound**
- **PP compound for automotive**
- **Additives masterbatch**
- **Testing service**





# OUR COMPANY

## OUR STORY

Merick polymers Company Limited was established in 2016. With our Research & Development strength in polymer & material science, we successfully developed a comprehensive portfolio of high performance plastic compounded, masterbatch and bioplastic products.

Merick's color & additive masterbatch bioplastic, flame retardant, modified pp compound, white & black testing & toll compounding



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# OUR VISION & MISSION



## VISION / วิสัยทัศน์

Merick Polymers is dedicated to becoming a leading organization in the field of bioplastic & compostable materials, including specialty polymer compounding. We are committed to environmental sustainability, producing world-class bioplastic products, and advocating for eco-friendly packaging. Our products meet internationally accepted quality standards and are recognized as environmentally friendly. We are experts in providing comprehensive consultations in the realm of plastics, driving our organization with innovation and cutting-edge technology. We aim to elevate economic value through green initiatives, preserve biodiversity, and work towards a low-carbon society. This is to ensure the robust growth and enduring strength of our organization while contributing to a sustainable and resilient community.

เมอร์ริก พอลิเมอร์ มุ่งมั่นก้าวไปสู่การเป็นองค์กรชั้นนำ ด้านสินค้าวัสดุพอลิเมอร์ พลาสติกชีวภาพเป็นมิตรต่อสิ่งแวดล้อม บรรลุคุณค่าที่รักโลก มีคุณภาพมาตรฐาน เป็นที่ยอมรับระดับสากล และเป็นผู้เชี่ยวชาญการให้คำปรึกษาด้านพลาสติก อย่างครบวงจร ขับเคลื่อนองค์กรด้วยนวัตกรรมและเทคโนโลยีอันทันสมัย ยกระดับมูลค่า เศรษฐกิจสีเขียว สร้างสมดุลของทรัพยากรชีวภาพ และมุ่งสู่สังคมคาร์บอนต่ำ เพื่อความ เข้มแข็งขององค์กรให้สามารถเติบโตอย่างมั่นคงและยั่งยืน



## MISSION / พันธกิจ

Our mission is to be a leading innovator in the production of high-quality plastic products, committed to sustainability and environmental responsibility. We strive to exceed customer expectations by delivering innovative solutions, maintaining the highest standards of product quality, and minimizing our environmental footprint. Through continuous research, development, and collaboration, we aim to contribute to a cleaner, safer, and more sustainable world, while creating long-term value for our stakeholders and fostering a culture of excellence and integrity within our organization

พันธกิจของเราคือการเป็นผู้นำด้านนวัตกรรมในการผลิตผลิตภัณฑ์พลาสติกที่มีคุณภาพ สูง และมีความมุ่งมั่นในการรับผิดชอบต่อสิ่งแวดล้อม เรามีความมุ่งมั่นที่จะเป็นส่วนหนึ่ง ในการแก้ไขปัญหาของลูกค้านวัตกรรม รักษามาตรฐานสูงสุดของคุณภาพผลิตภัณฑ์ และลดผลกระทบต่อสิ่งแวดล้อมให้เหลือน้อยที่สุด ด้วยการวิจัย การพัฒนา และการทำงาน ร่วมกันอย่างต่อเนื่อง เรามุ่งหวังที่จะสนับสนุนโลกที่สะอาดขึ้น ปลอดภัยยิ่งขึ้น และยั่งยืน มากขึ้น ในขณะที่เดียวกันเราสร้างมูลค่าระยะยาวสำหรับผู้มีส่วนได้ส่วนเสียของเรา และส่งเสริม วัฒนธรรมแห่งความเป็นเลิศและความซื่อสัตย์ภายในองค์กรของเรา



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# ENVIRONMENTAL POLICY

## Bio economy

The bioeconomy refers to an economic system that utilizes biological resources and processes to create sustainable products, services, and solutions. It involves using renewable biological resources, such as plants, animals, and microorganisms, to generate value in various industries, including agriculture, forestry, food production, bioenergy, biotechnology, and more. Incorporating bioeconomy principles into a company's operations can lead to enhanced sustainability, reduced environmental impact, and innovative product development.

## Circular economy

A circular economy is an economic model designed to minimize waste, maximize resource utilization, and promote sustainability by keeping products, materials, and resources in use for as long as possible. This approach aims to reduce the environmental impact of production and consumption while creating economic value.

## Green economy

A green economy in a company refers to an approach that focuses on sustainable and environmentally-friendly business practices. It involves integrating environmental considerations into all aspects of a company's operations, from product design and manufacturing to supply chain management and customer engagement. The goal of a green economy is to create economic growth while minimizing negative environmental impacts and promoting resource efficiency.

## Carbon Neutrality

Carbon neutrality in a company refers to the state where the company's net carbon dioxide (CO<sub>2</sub>) emissions are balanced out by removing or offsetting an equivalent amount of CO<sub>2</sub> from the atmosphere. This is achieved through a combination of reducing emissions and investing in projects or activities that remove or capture carbon from the atmosphere. The goal of achieving carbon neutrality is a crucial step in addressing climate change and minimizing the environmental impact of business operations.



# PRODUCTION FACILITIES

- High speed mixer
- Loss in weight feeder
- Twin screw extruder
- Hopper dryer
- Injection molding
- Compression molding
- Specimen testing
- Two roll mill



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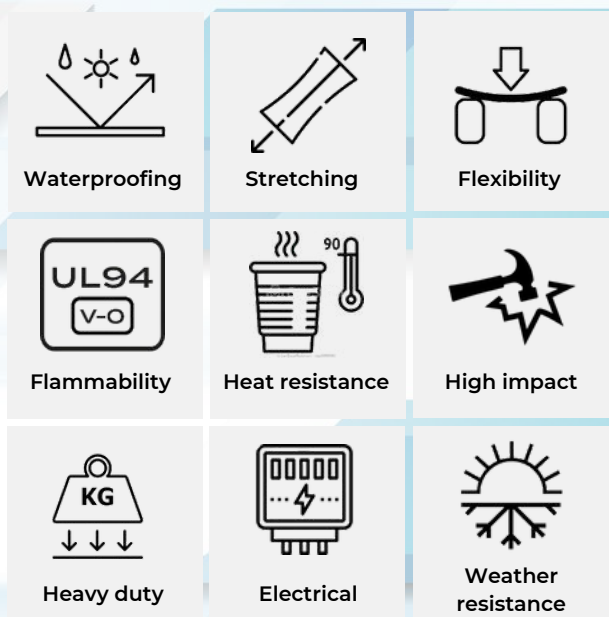
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# LAB & TESTING FACILITIES



## Merick's Testing services

- Tensile & Elongation
- Flexural strength & Modulus
- Izod Notched Impact strength
- Heat Deflection Temperature
- Vicat Softening Point
- Flammability
- QUV Weathering
- Hardness
- Density
- RoHS
- Color measurement
- Melt flow, Melt Index
- Mold shrinkage
- Moisture content
- Specimen preparation ISO, ASTM
- Injection & Compression
- FTIR
- DSC
- TGA
- SEM
- Water absorption
- Light Transmission
- % Ash content
- Material Characterization





# OUR EVENTS

## INTERPLAS THAILAND 2023 AT BITEC BANGNA



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# RESEARCH & QUALITY CONTROL LABORATORY



Now, the problem of global warming and there is a campaign to reduce of plastic. So, we are development of single-use plastic can be 100% compostable and high temperature stability for hot food. Our products are cutlery, bowl, food tray, straw and compound pellets.

## Preliminary biodegradation test in compost

**Biodegradation percentage:**

Codes	37 ± 2 °C		58 ± 2 °C	
	Average (%)	Time (Days)	Average (%)	Time (Days)
Ref	99.2 ± 1.1	14	99.0 ± 1.0	24
Merick 1	16.2 ± 0.5	35 *	99.7 ± 1.1	28

## Preliminary migration test

**Migration test of bowl:**



Food simulants	Overall Migration (mg/dm <sup>3</sup> )
<b>A (10% Ethanol)</b>	<b>0.7071 - 2.6957</b>
<b>B (3% Acetic acid)</b>	<b>1.7235 - 12.3295</b>
<b>D2 (95% Ethanol)</b>	<b>4.4413 - 5.7670</b>



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# MERICK'S BIO & COMPOSTABLE PLASTIC



## WHAT IS BIO & COMPOSTABLE PLASTIC ?

Bioplastics can be produced from a variety of natural materials, including corn starch, sugarcane, potato starch, and other agricultural products. These raw materials are processed through different methods to create polymers that can be used as alternatives to conventional plastics.



## Features

- 100% Biobased & compostable
- Green tax Compliance
- Custom formulation
- Sustainable economy
- PLA, PBAT, PBS and TPS based products
- Circular economy
- Zero waste management

## ADVANTAGES OF BIO & COMPOSTABLE PLASTIC



**Renewable Resource**



**Lower Carbon Footprint**



**Non-toxic**

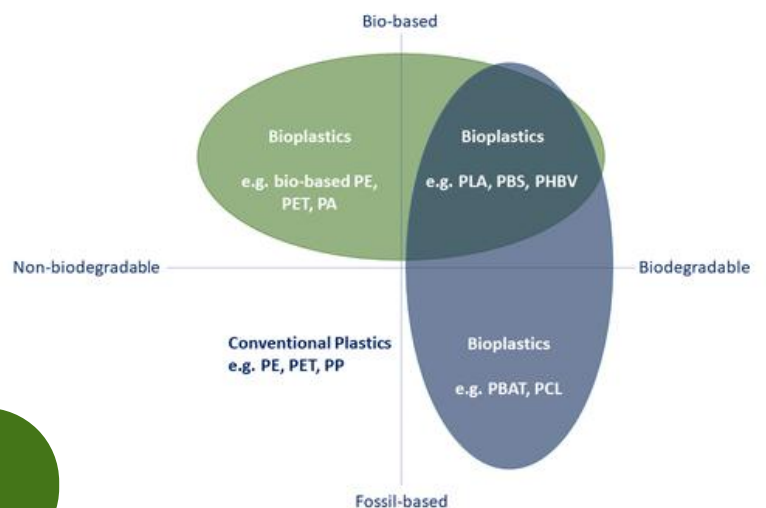


**reduced Dependency on Fossil Fuels**



**Positive Brand Image**

## TYPE OF BIO & COMPOSTABLE PLASTIC ?



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## • BIO-COLOR MASTERBATCH

Product code	Color	Properties			Regulations
		Heat stability	Light fastness	Migration	
K-X-005		250	7.5	4	RoHS and EN71:3
		250	7.5	4	RoHS and EN71:3
K-X-006		300	8	5	RoSH, EN71:3, AP89:1, FDA
		300	8	5	RoHS, EN71:3, AP89:1, FDA
K-X-007		300	8	5	RoHS, EN71:3, AP89:1
		300	8	5	RoHS, EN71:3, AP89:1
K-X-052		300	8	5	RoHS
		300	8	5	RoHS
K-X-008		300	8	5	RoSH, EN71:3, AP89:1, FDA
		300	8	5	RoSH, EN71:3, AP89:1, FDA
K-X-048		250	8	5	AP89:1
		250	8	5	AP89:1
K-X-001		250	8	5	RoHS, EN71:3, AP89:1, FDA
		250	8	5	RoHS, EN71:3, AP89:1, FDA
K-X-063		250	8	5	AP89:1
		250	8	5	AP89:1



## • BIO POLYESTERS COMPOUND

Brand	A200	A300	A400	KB100	KB500	KB600
Component	PBS	PBSeT	PBAT	PBAT	PBSA	PLA
Grades	NF/NK/HF/SF	NF/LF	NF/LF/MF/HF/SF	NF/LF/MF/HF/SF	NF	NF/UF/MF/HF/SF
Characteristics	Good processing and flow performance, customized, biobase content	Good processing and flow performance, biobase > 37%	Good processing and flow performance	Good processing and flow performance, home compostable	Good processing and flow performance	Good processing and flow performance
Application	Blending, coating	Blending, coating	Blending, coating	Blending, coating	Blending, coating	Blending, coating
Certification	BPI OK Compost Industrial Din Certco Industrial Seeding	BPI OK Compost Industrial Din Certco Industrial Seeding	BPI OK Compost Industrial Din Certco Industrial Seeding JBPA	BPI OK Compost Industrial OK Compost Home Din Certco Industrial Seeding AS 4736/5810	OK Compost Industrial	Pennding



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## • STARCH-BASED COMPOUNDS

Brand	C200	C200	C600
Component	PBAT+St	PBAT+St	PBAT+PLA+St
Grades	S20/S21/S22/S23/S25/S30	A10/A20	A10/A20
Characteristics	Good processing stability, long sheft life, to meet the requirements of European and American food contact	Biobase content 30/40%;Meet European and American food contact requirements	Biobase content 50/60%;Meet European and American food contact requirements
Application	Fruit and vegetable bags, shopping bags, garbage bags, clothing bags, Ziplock bags	Fruit and vegetable bags, shopping bags, garbage bags	Fruit and vegetable bags, shopping bags, garbage bags
Certification	BPI OK Compost Industrial OK Compost Home Din Certco Industrial Seedling AS 4736/5810	BPI OK Compost Industrial OK Compost Home Din Certco Industrial Seedling AS 4736/5810	BPI OK Compost Industrial Seedling



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## • HIGH-PERFORMANCE COMPOUNDS

Brand	D200	D300	D500
Component	PBAT+PLA+MD	PBAT+PLA+MD	PBAT+PLA+MD
Grades	A10/A12/A20/A21	M20/M21/M22/M30/M40/M41	T20
Characteristics	High light, high penetration, high stiffness, excellent edge sealing strength, meet the requirements of food contact	High gloss, high stiffness, high performance, excellent cost performance	High stiffness, low odor, meet food contact requirements, excellent cost performance
Application	Fruit and vegetable bags, garbage bags, milk tea bags, clothing bags, gloves, lunch box coated	Shopping bags, garbage bags, milk tea bags, delivery bags	Milk tea bags, even rolled fruit and vegetable bags, shopping bags
Certification	BPI OK Compost Industrial Seedling	BPI OK Compost Industrial Seedling	Pending



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## • COMPOUNDS FOR EXTRUSION AND INJECTION MOLDING

Brand	G200	G600	G800	L200
Component	PLA + PBS +MD	PLA + PBS +MD	PLA + MD	PLA + PBAT
Grades	S15	M35	M29/M30/M35	A82
Characteristics	Heat-resistant > 80 °C, food contactable	Direct heat-resistant, food contactable	food contactable, heat-resistant after crystallization treatment	food contactable, High cost-performance
Application	Heat-resistant straw	Disposable cutlery knife, fork and spoon	Disposable cutlery knife, fork and spoon	Common straw
Certification	Pending	BPI OK Compost Industrial Seeding	BPI OK Compost Industrial Seeding	BPI OK Compost Industrial Din Certco Industrial Seeding



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## • COMPOUNDS FOR MULCHING

Brand	D300	D300	D300
Component	PBAT+PLA+MD	PBAT+PLA+MD	PBSeT
Grades	F20	F21	F10
Characteristics	Wide adaptability	High cost- Performance for black film	Better Performance for lower thickness
Application	Mulching	Mulching	Mulching
Certification	BPI OK Compost Industrial Seedling	BPI OK Compost Industrial Seedling	BPI OK Compost Industrial Seedling



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## • FINISH GOODS



Packaging



Bowl



## Food contact

Cutlery



Straw



## Non-Food contact

Stationary



Agriculture



# MERICK'S COLOR MASTERBATCH



## WHAT IS COLOR MASTERBATCHES ?



Color Masterbatches are highly concentrated pigments. derived from polymer Or plastic pellets mixed with pigment and various additives together to achieve uniform distribution. With the melting process with a Twin Screw Extruder, which can be used to mix with a variety of plastic pellets such as PE, PP, EVA, ABS, HIPS, SAN, PA, PC, ASA, PMMA, POM, PLA and PBAT from That is processed into plastic products by Injection Molding, Blow Molding, Blow Film Extrusion and Sheet Extrusion.

## WHY CHOOSE MERICK'S COLOR MASTERBATCHES ?

- We received ISO9001:2015 quality certification standards as a manufacturer of products for use as raw materials in the plastic parts industry.
- Customers can request to match colors from Pantone in all shades,
- Time for testing, quotation, and sample delivery within 3-5 working days
- There is a dedicated Technical Services team to serve customers

## CERTIFIED INTERNATIONAL STANDARDS



EN71-3



AP89



ROHS

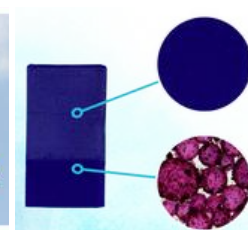
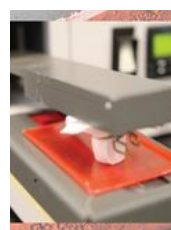
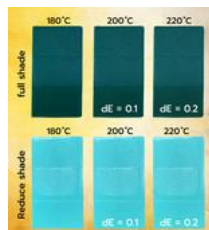
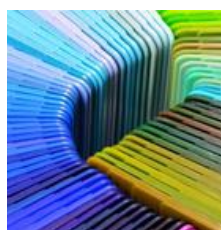


REACH



## BASIC PROPERTIES OF COLOR MASTERBATCHES

- Color Shade
- Heat Resistance
- Light/Weather Fastness
- Migration Resistance
- Density
- Dispersibility



## WHICH PLASTIC MOLDING PROCESSES CAN BE USED ?

- Injection Molding
- Extrusion Molding
- 3D Printing
- Compression Molding
- Blow Molding
- Rotational Molding



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# MERICK'S COLOR MASTERBATCH



## • OUR PRODUCTS

CODE	COLOR	PROPERTIES					APPLICATION	FOR USE IN
		Density (g/cm <sup>3</sup> )	Heat Stability(°C)	Light Fastness	Migration	Regulation		
211204-MB-LPHPP	LIGHT PEACH	1.08 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
220234-MB-LBLPP	LIGHT BLUE	1.59 ±0.03	280	6-7	4-5	RoHS 10, REACH, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
220240-1-MB-LGYPP	LIGHT GRAY	1.22 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
220238-MB-LGNPP	LIGHT GREEN	1.45 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
210922-MB-MGRET	GREEN	1.34 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
220402-5-MB-SBRET	CLEAR BROWN	1.42 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic

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		Density (g/cm <sup>3</sup> )	Heat Stability (°C)	Light Fastness	Migration	Regulation		
230522-MB-SCNET	GREEN	1.43 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
221222-MB-OWHPLA	OFF-WHITE	2.23 ±0.03	280	7-8	4-5	RoHS 10	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA.
OAB090518 (GA400)	ORANGE	1.04 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
MTB LBELD-210715	BEIGE	1.07 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
MTB LBELD-210715	ORANGE	1.01 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
MB-LPKLD-210514-1	PINK	0.94 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic

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		Density (g/cm <sup>3</sup> )	Heat Stability (°C)	Light Fastness	Migration	Regulation		
220714-1-MB-PYEPE	YELLOW	1.01 ±0.02	270	7-8	4-5	RoHS 10, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
230217-MB-MREBS	RED	1.17 ±0.03	280	7-8	4-5	RoHS 10	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
210204-2-MB-MBLPE	BLUE	1.17 ±0.03	280	7-8	4-5	RoHS 10 , AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic
230327-MB-MBLPE	MEDIUM BLUE	0.961 ±0.03	280	7-8	4-5	RoHS 10	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
230329-MB-LBLPE	LIGHT BLUE	0.961 ±0.03	280	7-8	4-5	RoHS 10	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
230207-1-MB-MDRPE	DARK RED	1.12 ±0.03	280	7-8	5	RoHS 10	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA

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## • OUR PRODUCTS

CODE	COLOR	PROPERTIES					APPLICATION	FOR USE IN
		Density (g/cm <sup>3</sup> )	Heat Stability(°C)	Light Fastness	Migration	Regulation		
230202-MB-LYEPS	LIGHT YELLOW	1.28 ±0.03	280	7-8	4-5	RoHS 10	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
230501-MB-MWHPP	WHITE	1.81 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
210610-1-MB-MORPP	ORANGE	1.02 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermo plastic
MB-DBKPE-00M109	BLACK	0.97 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
WH-MB-PE03	WHITE	2.13 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
230509-MB-MBKGP	BLACK	1.07 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA





# MERICK'S COLOR MASTERBATCH



## • OUR PRODUCTS

CODE	COLOR	PROPERTIES					APPLICATION	FOR USE IN
		Density (g/cm <sup>3</sup> )	Heat Stability(°C)	Light Fastness	Migration	Regulation		
230613-CP-MWHPP	WHITE	0.93 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
230501-1-MB-MWHPP	WHITE	1.81 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	LDPE, HDPE, LLDPE, PP, EVA
220308-MB-MBNET	BROWN	0.93 ±0.03	280	7-8	4-5	RoHS 10, EN71:3, AP89:1	Injection molding, Blow molding, Blow film, Extrusion steet	Thermoplastic



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# MERICK'S BLACK MASTERBATCH



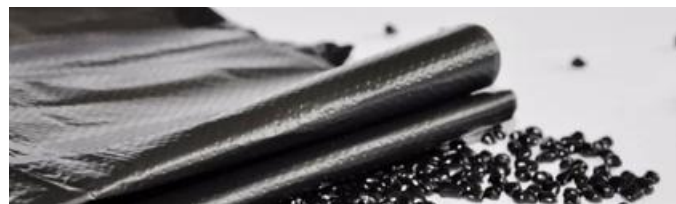
## WHAT IS MERICK'S BLACK MASTERBATCH ?



Is a combination of high-quality Carbon Black pigments, other polymers, and specific additives. to be used for plastic products, For increasing intensity, opacity and color in jobs that require black.

## BENEFITS

- Increase the intensity of Opacity and gives black to the product.
- UV protection, thermal stability, electrical conductivity, heat dissipation.
- It is used for coloration, reducing production costs and performance.



## WHICH PLASTIC MOLDING PROCESSES CAN BE USED ?



### BLOWN FILM EXTRUSION

- Packaging Film
- Garbage Bags
- Shopping Bags
- Mulching Film



### INJECTION MOLDING

- Automotive Parts
- Electrical Components



### EXTRUSION MOLDING

- Water pipe
- Wire stripping



### BLOW MOLDING

- Containers
- Plastic Cans



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## • OUR PRODUCTS

Code No.	Carbon Black%	Carrier	%ADD-RATE	APPLICATIONS
BK-MB-001	92%	Wax	0.5-1.5%	Household Electronic, Toy & Sports, Packing Materials, Wire & Cable, Housewares, Vehicles, Building Material etc.
BK-MB-002	40±0.5%	LLDPE	1-5%	Blowing film, Injection molding, Extrusion molding, Sheets
BK-MB-003	40±1%	LDPE	1-4%	Injection molding, Blow molding, Extrusion, Compound
BK-MB-004	40%	LLDPE	1-5%	Injection, Extrusion sheet, Blow molding, Blow film
BK-MB-005	26-30%	LDPE+LLDPE	1-5%	Injection molding, Blow molding, Extrusion, Compound
BK-MB-006	-	PE	1-5%	Injection molding, Blow molding, Extrusion, Compound
BK-MB-007	40%	PP	1-5%	Injection molding, Blow molding, Extrusion, Compound
BK-MB-008	40%	PE	1-5%	Injection molding, Blow molding, Extrusion, Compound
BK-MB-009	30%	PP HDPE LDPE	1-5%	Injection molding, Blow molding, Extrusion, Compound

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Code No.	Carbon Black%	Carrier	%ADD-RATE	APPLICATIONS
BK-MB-011	40-43%	PE	1-4%	Injection Molding, Blow Molding, Extrusion, Compound
BK-MB-012	50%	PE	1-5%	Injection Molding, Blow Molding, Extrusion, Compound
BK-MB-013	28±2%	PE	2-6%	Blown Film(Garbage Bag), Injection, Sheet, Tubing
BK-MB-014	33±2%	PE	1-4%	Blowing Film, Injection, Sheet, Tubing
BK-MB-015	35±2%	PE	1-4%	Blowing Film, Injection, Sheet, Tubing
BK-MB-016	42±2%	LLDPE	1-4%	Blowing Film, Injection, Sheet, Tubing
BK-MB-017	45±2%	LLDPE	1-4%	Extruded, Tubing, Sheets, Granule, Blowing Film
BK-MB-018	40±2%	LLDPE	1-4%	Blowing Film, Tube, Sheet, Granule
BK-MB-029	70%	HIPS	0.2-1%	Injection Molding, Blow Molding, Extrusion, Compound

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# MERICK'S WHITE MASTERBATCH

## WHAT IS MERICK'S WHITE MASTERBATCH ?



A type of color masterbatch produced from Titanium Dioxide (TiO<sub>2</sub>) mixed with plastic pellets. and other additives are used to adjust the opacity, whiteness, gloss, brightness, and beauty of plastic products, Compatible with any type of plastic resins PE, PP, EVA, ABS, PC, HIPS, and others

## BENEFITS

- Increase opacity and whiteness by using Titanium Dioxide (TiO<sub>2</sub>), renowned for its natural brightness and whiteness.
- Improved properties White Masterbatch acts as an effective UV-blocking additive To prevent the environmental effects of deterioration of the plastic surface.



## WHICH PLASTIC MOLDING PROCESSES CAN BE USED ?



### BLOWN FILM EXTRUSION

- Packaging Film
- Garbage Bags
- Shopping Bags
- Agricultural Film



### INJECTION MOLDING

- Housewares
- water tanks
- toys



### EXTRUSION MOLDING

- Straw
- Water Pipe



### BLOW MOLDING

- Water Bottles
- Containers
- Plastic Cans



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# MERICK'S WHITE MASTERBATCH

## • OUR PRODUCTS

Code No.	Titanium Dioxide %	Carrier	%ADD-RATE	APPLICATIONS
WH-MB-PE01	50%	LLDPE	1-5%	Injection, Extrusion Sheet, Blow Film, Blow Molding
WH-MB-PE02	60%	LLDPE	1-5%	Injection, Extrusion Sheet, Blow Film, Blow Molding
WH-MB-PE03	70%	LLDPE	1-5%	Injection, Extrusion Sheet, Blow Film, Blow Molding
WH-MB-ET01	60%	PET	1-5%	Injection, Extrusion Sheet, Blow Molding
WH-MB-ET02	30%	PET	1-5%	Injection, Extrusion Sheet, Blow Molding
WH-MB-ET03	30%	PET	1-5%	Injection, Extrusion Sheet, Blow Molding
WH-MB-PE04	25±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.
WH-MB-PE05	30±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.

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# MERICK'S WHITE MASTERBATCH

## • OUR PRODUCTS

Code No.	Titanium m Dioxide %	Carrier	%ADD- RATE	APPLICATIONS
WH-MB- PE06	40±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.
WH-MB- PE07	50±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.
WH-MB- PE08	60±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.
WH-MB- PE09	70±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.
WH-MB- PE10	70±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.
WH-MB-PE11	45±2%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.
WH-MB- PE12	50%	LLDPE	1-5%	Injection, Wire drawing, Cast film, Film blowing.



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## WHAT IS ADDITIVE MASTERBATCH ?



Additives enhance the performance of plastic products. They add a variety of special properties in plastics, which drastically improve the quality, longevity, and resistance of the end product. Below are few examples to better understand Additive Masterbatches for the Plastic.

The market applications of Merick Polymers Additive Masterbatches provides global Additive service for the following industries:

- Automotive
- Agriculture
- Building & Construction
- Packaging
- Home, sport & leisure industry
- Textiles & Fiber industry
- Electric & Electronic industry



- UV-STABILIZERS
- ANTI - STATIC AGENTS
- SLIP AND ANTI-BLOCK AGENTS
- NUCLEATING AGENT
- ANTIOXIDANT
- POLYMER PROCESSING ADDITIVE
- LIGHT DIFFUSION
- OPTICAL BRIGHTENING AGENT



## UV-STABILIZERS

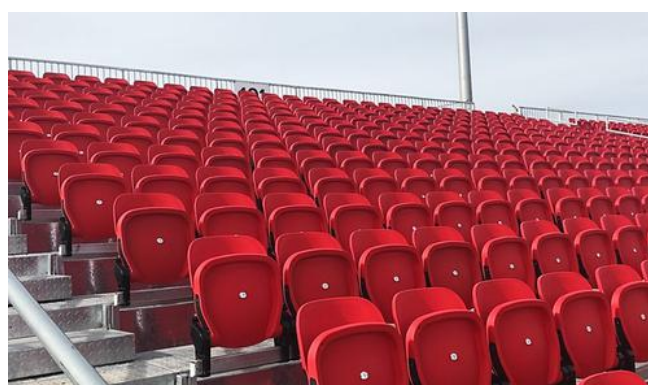


### BENEFITS

- Long-term polymer protection.
- Absorption of harmful UV radiation.
- Innovative range of additives.
- Food-approved UV MB.
- Ongoing support on the production line to ensure optimal outcome.

### WHAT IS UV STABILIZERS ?

Substances that prevent decomposition of polymers from being destroyed by UV light by absorbing light energy, and released back into the environment in the form of heat energy that does not affect the polymers.



Product Code	Active Content	%Add rate	Carrier	Main Applications
UV-MB-PE01	20%	1-3%	PE	This masterbatch suitable for injection and extrusion process such as sheet, blown film, blow molding, Filament, etc.
UV-MB-PE02	20%	2-3%	PE	This masterbatch suitable for injection and extrusion process such as sheet, blown film, blow molding, Filament, etc.
UV-MB-PE03	20%	2-3%	PE	This masterbatch suitable for injection and extrusion process such as sheet, blown film, blow molding, Filament, etc.
UV-MB-PE04	20%	2-3%	PE	This masterbatch suitable for injection and extrusion process such as sheet, blown film, blow molding, Filament, etc.





## ANTI - STATIC AGENTS



### WHAT IS ANTI - STATIC AGENTS ?

We use antistatic agent in our masterbatch to reduce or eliminate buildup of static electricity. The role of an antistatic agent is to make the surface or the plastic product itself slightly conductive, either by being conductive itself, or by absorbing moisture from the air.

### BENEFITS

- Fire and explosion hazards
- Poor mold release
- Damage to electrical component
- Attraction of dust
- Ongoing support on the production line to ensure optimal outcome.



Product Code	Active Content	%Add rate	Carrier	Main Applications
AS-PE-001	20%	0.2-0.5%	PE	This masterbatch suitable for film, sheet, injection molded products, containers, and especially packaging materials, etc.
AS-PE-002	20%	2-4%	PE	This masterbatch suitable for film, sheet, injection molded products, containers, and especially packaging materials, etc.
AS-PP-001	20%	2-4%	PP	This masterbatch suitable for film, sheet, injection molded products, containers, and especially packaging materials, etc.
ASP-PE-001	20%	0.3-0.8%	PE	Antistatic masterbatch widely used to polyolefin plastics such as PE, PP containers, drums (bags, boxes), polypropylene spinning, non-woven fabrics.
ASP-PE-002	20%	0.3-0.8%	PE	Antistatic masterbatch widely used to injection molding and extrusion molding area of PP, PE, PS, HIPS and ABS.



## SLIP AND ANTI-BLOCK AGENTS



### WHAT IS SLIP AND ANTI-BLOCK AGENTS?

It is a substance that is added to prevent the adhesion of the film surface. make the work smooth and shiny And if put in recycled plastic, it will improve the quality of recycled plastic. The recommended dosage is about 2%-5%, suitable for mixing with LLDPE / LDPE, blowing through water and blowing up.

### BENEFITS

- The film not stick together.
- To increase the roughness of the film surface. This makes the film easy to separate.



Product Code	Active Content	%Add rate	Carrier	Main Applications
AB-PE-001	20%	2-5%	PE	This masterbatch suitable for blown film, Cast Film, Extrusion, etc.
AB-PE-002	20%	2-5%	PE	This masterbatch suitable for blown film, Cast Film, Extrusion, etc.
AB-PET-001	20%	0.5-3.0%	PET	<ul style="list-style-type: none"><li>• Polyester base Sheet/Film packaging</li><li>• Copolyester base Sheet/Film packaging</li><li>• Outer Layer top coat reduce friction</li><li>• Industrial packaging</li></ul>



## NUCLEATING AGENT



### WHAT IS NUCLEATING AGENT?

The substance has the ability to induce polymers to crystallize quickly. The obtained crystals are smaller than normal, and arrange the samples in an orderly manner, making the polymers more clear, have a better shape and better heat resistance.

### BENEFITS

- Produces smaller Crystallites of similar size. It is also more dense.
- Make semi-crystalline plastics have better shape stability.
- The plastic parts shrink at each point that is close to each other.
- Reduce production cycle time.
- Improved mechanical properties and solvent resistance to plastics.



Product Code	Active Content	%Add rate	Carrier	Main Applications
NU-MB-PE01	-	3-8%	PE	<ul style="list-style-type: none"> <li>• Consumer Packaging PE &amp; PP base.</li> <li>• Industrial packaging</li> <li>• Display part</li> <li>• Container which intention to improve Stiffness,</li> <li>• Barrier properties.</li> </ul>
NU-MB-PP01	5%	2-4%	PP	This masterbatch suitable for Injection, Blow film, Cast flim, Blow molding, filament, etc.



## ANTIOXIDANT



### WHAT IS ANTIOXIDANT?

It is added to the polymer to prevent it from reacting with oxygen. cause free radicals which will destroy the molecular structure of the polymer.



### BENEFITS

- Prevent the product from yellowing in the production process.
- Extend the useful life of the product or the product does not deteriorate quickly.

Product Code	Active Content	%Add rate	Carrier	Main Applications
AO-MB-PE01	10%	2-3%	PE	This masterbatch suitable for Pipes, Profiles, Films, Cables, Injection molding, Tapes, Geotexfiles, Blow moldings. Plastic items made out of LLDPE, LDPE, MDPE, and HDPE.



## POLYMER PROCESSING ADDITIVE



### WHAT IS PPA ?

It is a substance produced from Fluoropolymers. It is an additive for helping in plastic forming by Extrusion process. The PPA acts as a film coating on the surface of the die, to liquefy the plastic. Easily flows through dies or molds.

### BENEFITS

- Reduce or eliminate shark skin problems in the bag/film production process.
- Improves the flow rate of the polymer.
- Reduce gel formation in the bag production process.
- Increase the transparency of the bag / film.
- Improves the gloss and smoothness of the surface of the work piece.



Product Code	Active Content	%Add rate	Carrier	Main Applications
PPA-MB-PE01	-	0.2-0.5%	PE	<ul style="list-style-type: none"> <li>• Polyolefin's all extrusion &amp; injection</li> <li>• Smoothly surface film/Sheet</li> <li>• Medium-Low COF Film/Sheet/Injection part</li> <li>• Less blocking layer packaging</li> </ul>
PPA-MB-PE02	-	2-3%	PE	This masterbatch suitable for Nonwovens and fibre, Injection, Blow film, Cast film, Blow molding and all other polyolefin extrusion process.
PPA-MB-PE03	-	2-3%	PE	This masterbatch suitable for Nonwovens and fibre, Injection, Blow film, Cast film, Blow molding and all other polyolefin extrusion process.



## LIGHT DIFFUSION



### BENEFITS

- High temperature resistance
- No yellowing (no yellowing)
- Homogeneous light distribution
- Good spot coverage
- Use a small quantity but high quality.
- Good compatibility with Resin

### WHAT IS LIGHT DIFFUSION ?

It is a white silicone powder added to many modules which gives a detailed diffusion of the matrix that passes through it. This helps to stay within the refractive index of the light source, so in order to redirect of light in order to obtain the light that will bring about success.



Product Code	Active Content	%Add rate	Carrier	Main Applications
LDF-MB-PP01	10%	0.5-2%	PE	This masterbatch suitable for injection and extrusion process such as luminous profiles, lamp covers, LED cover / LED lights, LCD displays, optical lenses etc.
LDF-MB-MA01	10%	0.5-2%	PMMA	This masterbatch suitable for injection and extrusion process such as light diffusion films & profiles luminous profiles, lamp covers, LED cover / LED lights, LCD displays, optical lenses etc.
LDF-MB-PC01	10%	0.5-2%	PC	This masterbatch suitable for injection and extrusion process such as luminous profiles, lamp covers, LED cover / LED lights, LCD displays, optical lenses etc.



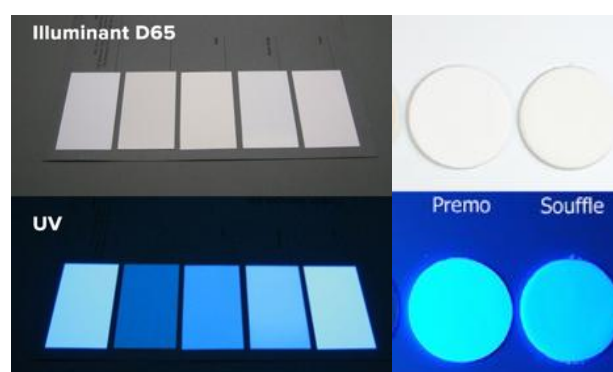


## OPTICAL BRIGHTENING AGENT



### WHAT IS NUCLEATING AGENT?

It is a substance that adds brightness to the work piece. It absorbs light and emits blue light, especially with ultraviolet light. Compatible with Grade A and Grade B plastic resins, available in 2 shades, white and blue. in both powder and pill form.



### BENEFITS

- Make the color of the white workpiece brighter.
- Masks the natural yellowing of plastic.
- Add whiteness to recycled plastic.

Product Code	Active Content	%Add rate	Carrier	Main Applications
OB-MB-PET01	5%	0.5-1.5%	PET	Suitable for Injection sheets, fibers, and PET etc.
OB-MB-GP01	5%	3%	GPPS	Suitable for the whitening of polyester fiber, nylon fiber and etc. Suitable for hard PVC, ABS, PS, polycarbonate etc.
OB-MB-PE01	10%	0.2-0.5%	PE	Suitable for films & sheets, fibers, molded thermoplastic, etc.
OB-MB-PE02	10%	0.2-0.5%	PE	Suitable for films & sheets, fibers, molded thermoplastic, etc.



# MERICK'S PP COMPOUND FOR AUTOMOTIVE



## • PP-TALC FILLED



### WHAT IS PP-TALC FILLED

PP-Talc Filled Compound is polypropylene, including talc powder by mixing it to be used with an automatic dispenser and bring the mixture into meat. Same as Twin-Screw Extruder for adjusting PP pellets. This process makes the mechanical PP better, the cracking process from the more precise state of use, this mineralized PP is often used earlier.

### BENEFITS

- Enhanced stiffness and rigidity
- Improved heat resistance
- Increased impact resistance
- Reduced shrinkage
- Lower material costs
- Improved surface appearance
- Reduced creep and improved creep resistance
- Lower density



SERIES	compound	PROPERTIES				
		MFI	Tensile stress	Elongation	Impact	Application
PP- Talc filled 10%	CP-BKH10-TC10	35.93	21.98	-	-	Automotive industry, Bumpers
	CP-UBKH10-TDI10	32.09	31.58	-	-	Dashboard parts,
PP- Talc filled 20%	CP-BKH20-TD201	1.16	21.44	-	-	Automotive industry, Bumpers
PP-Talc filled 30%	CP-HUBKC30-TC30	14.00	20.45	-	-	Dashboard parts,



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## • PP-GF REINFORCED

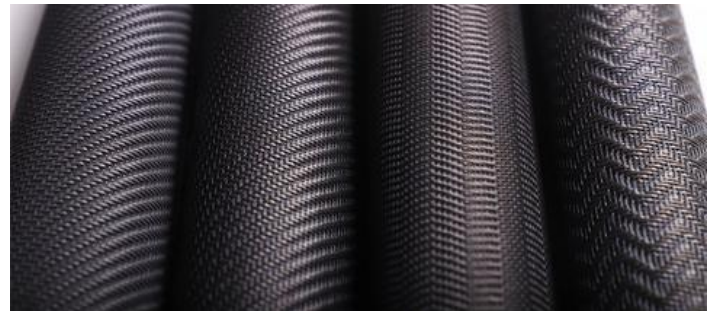


### WHAT IS PP-GF REINFORCED ?

PP-GF (Polypropylene-Glass Fiber) reinforced compound is a composite material made by incorporating glass fibers into polypropylene. The addition of glass fibers to polypropylene enhances its mechanical properties and provides several advantages, making it a popular choice for various industrial and engineering applications. The glass fibers are usually randomly oriented or arranged in a specific direction to tailor the material's properties to meet specific requirements.

### BENEFITS

- Increased strength and stiffness
- Improved impact resistance
- Dimensional stability
- Heat resistance
- Chemical resistance
- Reduced creep
- Lower density compared to metals
- Cost-effective solution



SERIES	compound	PROPERTIES				
		MFI	Tensile stress	Elongation	Impact	Application
PP-GF 30%	CP-UVBKH30-GF30	6.00	75.00	-	3.00	17.00
	CP-HTBKH30-GF30	4.00	75.00	-	-	16.00



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## • PP/TE COMPOUND (TPO)

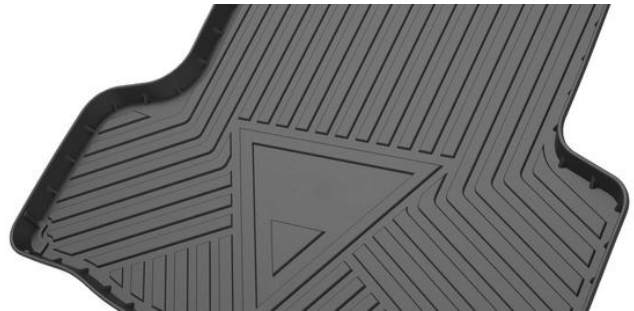


### WHAT IS PP/TE COMPOUND (TPO) ?

TPO is a polymer blend between Polypropylene with uncrosslinked Ethylene-Propylene Diene rubber, which is mainly used when toughness or greater impact strength is required. Polypropylene, such as in the automotive industry, bumper and dashboard parts, etc.

### BENEFITS

- Excellent weather resistance
- High impact resistance
- Flexibility and ductility
- Chemical resistance
- Lightweight
- Low production costs



SERIES	compound	PROPERTIES					Application
		MFI	Tensile stress	Elongation	Impact		
TPO ELASTOMER MODIFIED TALC FILLED 15%	CP-TUBKE15-E1525	28.96	20.62	-	-		Automotive industry, Bumper



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# MERICK'S FLAME RETARDANT COMPOUND



## WHAT IS FLAME RETARDANT COMPOUND ?



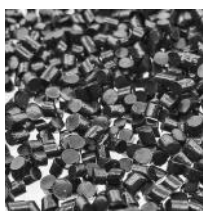
Flame retardants are chemical additives or substances that are used to reduce the flammability of materials and inhibit or delay their ignition, combustion, or spread of flames. They are commonly added to various products and materials to improve fire safety and reduce the risk of fire hazards.

## TYPE OF FLAME RETARDANT COMPOUND



### 1. Halogen-Based Flame Retardant

It is a family of halogen-based flame retardants. And it is the most used flame retardant. both in plastics and textiles because it has good flame retardant performance But when burned or recycle Will cause dioxins (Dioxins) with structure and toxicity. which is a carcinogen Can spread in the air or into the soil. can cause harm to the environment.



### 2. Halogen-Free Flame Retardant

Most of them consist of Phosphorus, Ethylene Vinyl Acetate (EVA), Aluminum Tri Hydroxide (ATH), Polyethylene (PE) and some products may use Magnesium Oxide instead of ATH as a flame retardant.

Currently, this type of flame retardant It is very popular. Because it is safe, environmentally friendly. because it does not produce toxic gases when burning.

## APPLICATIONS OF FLAME RETARDANT

Plastic Type	Applications
Polypropylene (PP)	Wire and cable sheathing, small appliances, furniture components, toys
Nylon or Polyamide (PA)	Electrical connector, electrostatic spray painting
Polycarbonate (PC)	Commodities, houses, buildings and medical equipment
Acrylonitrile Butadiene Styrene (ABS)	Medical equipment
Polybutylene Terephthalate (PBT)	Electrical connector



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# MERICK'S FLAME RETARDANT COMPOUND



## • FR-PP COMPOUND

product code	MFR (g/10 min)	density (g/cm <sup>3</sup> )	tensile strength at yield (MPa)	elongation at break (%)	flexural modulus (MPa)	flexural strength (MPa)	UL94	izod notched impact
FR-PP-001	2.65	1.09	21.67	387.74	1564.33	34.85	V2 (1.6 mm) V0 (3.2 mm)	11.95
FR-PP-002	2.52	1.14	21.71	377.40	1544.97	35.20	V2 (1.6 mm) V0 (3.2 mm)	11.48
FR-PP-003	1.83	1.07	-	-	-	-	V2 (1.6 mm) V0 (3.2 mm)	-
FR-PP-005	0.84	0.92	15.32	119.85	441.41	15.65	V2 (1.6 mm) V0 (3.2 mm)	no break

## • FR-HL COMPOUND

product code	MFR (g/10 min)	density (g/cm <sup>3</sup> )	tensile strength at yield (MPa)	elongation at break (%)	flexural modulus (MPa)	flexural strength (MPa)	UL94	izod notched impact
FR-HL-001	0.95	1.03	15.77	95.57	666.50	17.41	V0 (1.6 mm) V0 (3.2 mm)	9.39
FR-HL-002	2.90	1.16	14.65	97.35	500.67	13.99	V0 (1.6 mm) V0 (3.2 mm)	3.20
FR-HL-003	2.43	1.02	16.00	12.53	1184.96	23.03	no pass (1.6 mm) V0 (3.2 mm)	3.13



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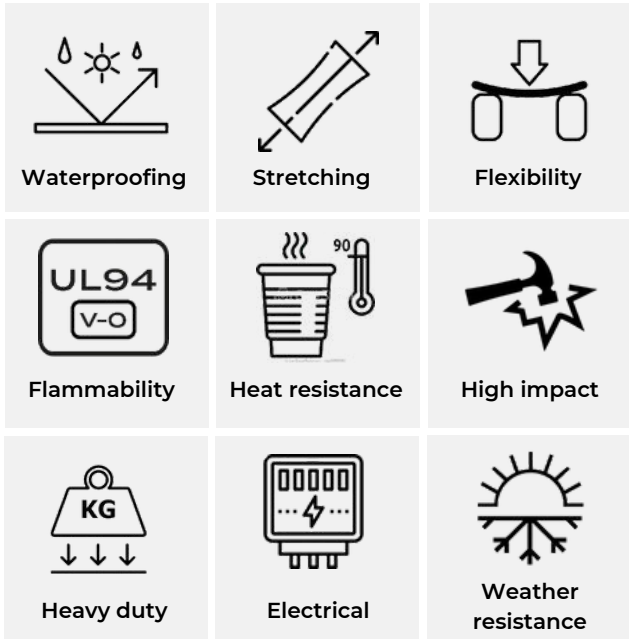






## Merick's Testing services

- Tensile & Elongation
- Flexural strength & Modulus
- Izod Notched Impact strength
- Heat Deflection Temperature
- Vicat Softening Point
- Flammability
- QUV Weathering
- Hardness
- Density
- RoHS
- Color measurement
- Melt flow, Melt Index
- Mold shrinkage
- Moisture content
- Specimen preparation ISO, ASTM
- Injection & Compression
- FTIR
- DSC
- TGA
- SEM
- Water absorption
- Light Transmission
- % Ash content
- Material Characterization



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