



**AN TIEN**  
INDUSTRIES

# CATALOGUE

**An Tien Industries** - Leading Manufacturer of  $\text{CaCO}_3$  powder, Filler & White masterbatch, Additives, Biodegradable materials and Compounds in Vietnam



# AN PHAT HOLDINGS INTRODUCTION



An Phat Holdings is the leading group in the field of advanced technology and environment-friendly plastic production in Southeast Asia. Starting with thin-film packaging, An Phat Holdings has grown strongly and built a comprehensive plastic enterprise ecosystem, with multiple subsidiaries and state-of-the-art manufacturing facilities.

An Phat Holdings focuses on innovation and sustainability by investing in compostable materials, packaging, engineering plastics, precision engineering, and mold manufacturing. The company also develops materials and chemicals for the plastics industry and engages in industrial real estate.

Currently, the Group has affirmed its brand, prestige, and position in both domestic and foreign markets. The Group's products have reached more than 80 countries, including challenging markets such as Europe, America, Japan, Korea, France, the United Arab Emirates, Singapore, and others.



**18**  
Member companies



**15**  
Factories



**80**  
Markets



**5000**  
Employees

# AN TIEN INDUSTRIES INTRODUCTION



An Tien Industries Joint Stock Company, a subsidiary of An Phat Holdings, was established in 2009 in 10005394. After more than a decade of growth and development, An Tien Industries has gained great achievements in business and social contribution, affirming its position as the second largest plastic additives manufacturer in Vietnam.

An Tien Industries operates 03 advanced factories specializing in key product segments.

Factory No. 1: CaCO<sub>3</sub> filler and white masterbatch.

Factory No. 2: ultra-fine CaCO<sub>3</sub> powder.

Factory No. 3: compostable materials, additives and technical compounds.

All plants adhere to modern industrial standards and utilize high-tech production lines from Germany and Taiwan, ensuring efficiency, precision, and superior product quality.

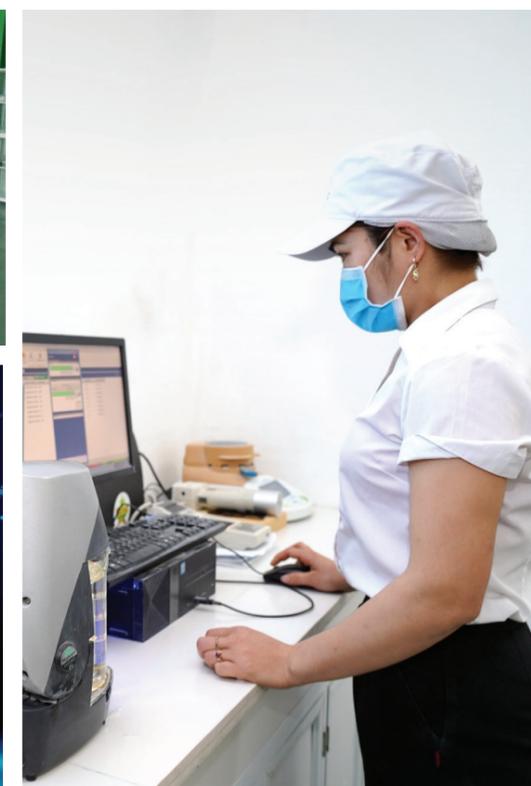


An Tien Industries always ensures the production process to meet high standards with quality management systems such as ISO, SGS, FDA, REACH, ROHS.

An Tien Industries' Research and Development Centers have conducted research to improve and enhance product quality, reduce waste rates, increase material reuse, and save energy in production. In particular, the R&D Centers have achieved significant advancements in the research, development, and improvement of biodegradable filler masterbatch, UV masterbatch, antioxidant masterbatch, and PE compound for blown film.

An Tien Industries assures to bring about the high quality products and effective solutions for our customers and partners.

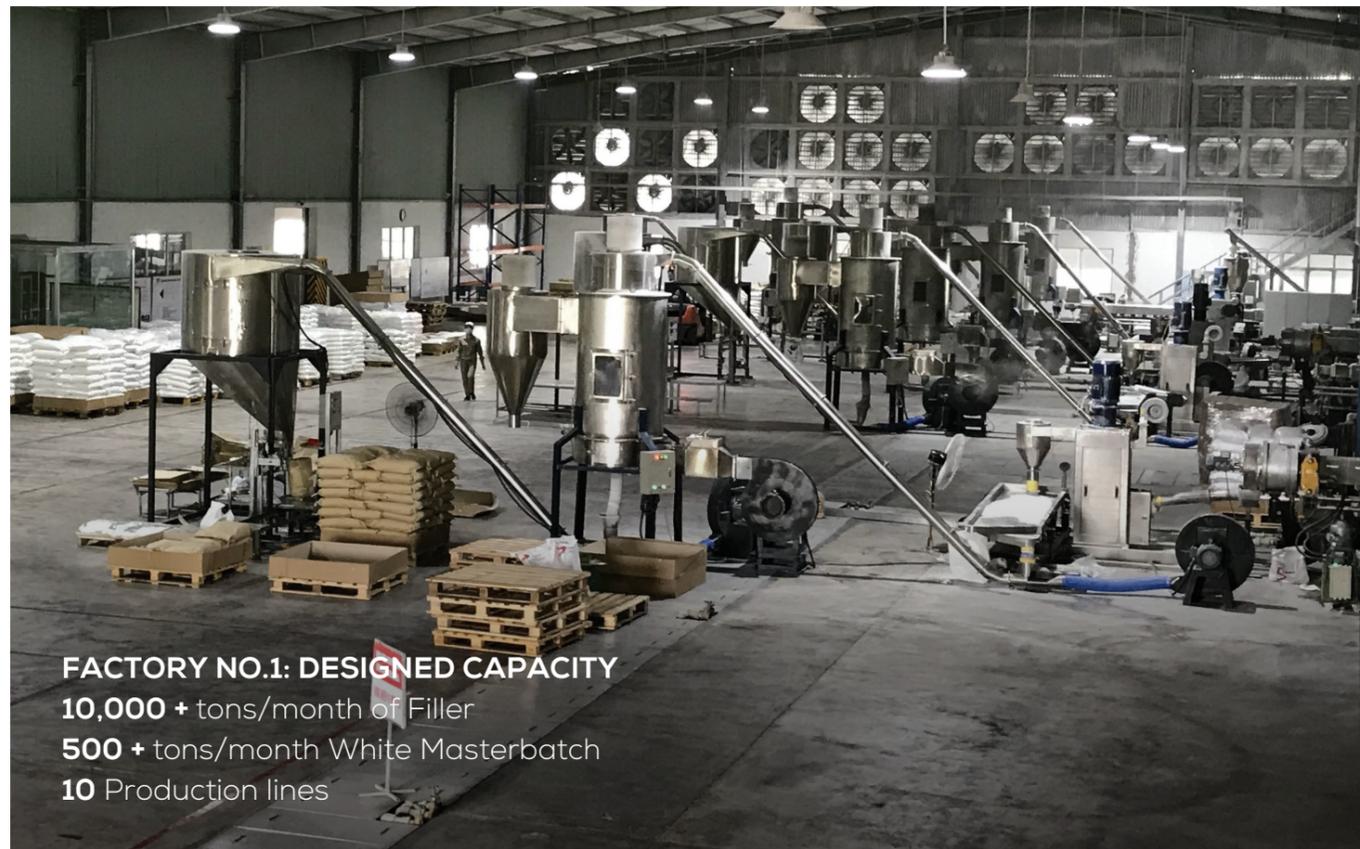
AN TIEN INDUSTRIES  
**RESEARCH AND DEVELOPMENT**



# FACILITY



**PRODUCTION AREA OF 50,000 + m<sup>2</sup>** equipped with modern technology



**FACTORY NO.1: DESIGNED CAPACITY**  
**10,000 + tons/month of Filler**  
**500 + tons/month White Masterbatch**  
**10 Production lines**



**FACTORY NO.2:**  
**DESIGNED CAPACITY**  
**12,000 + tons/month of Ultrafine CaCO<sub>3</sub> Powder**  
**4 Production lines**



- ✓ State-of-the-art Technology
- ✓ Japanese Standard Quality Control
- ✓ **1 Millions USD** investment High-end Laboratory



**FACTORY NO.3:**  
**DESIGNED CAPACITY**  
**150+ tons/month: compostable materials and additives**  
**150+ tons/month: technical compounds**  
**4 Production lines**



**AUTONOMY IN TRANSPORTATION:**  
**100 tractors from subsidiaries An Tin Logistics**

## A. FILLER MASTERBATCH

### I. CaCO3 FILLER MASTERBATCH

**Product description:**

CaCO3 filler masterbatch is used to save production cost and improve specific characteristics of the end products. With outstanding quality Calcium Carbonate from Vietnam knowledge and experiences, we can supply fillers for various application. Beside that, we also can customize our formulas to meet customers special requirements.



#### 1. CaCO3 FILLER MASTERBATCH (PE BASED)

**Application:**

- Blowing film: PE Film and bags
- Injection molding: furniture, food containers, water tanks
- Extrusion: HDPE pipe

**Specifications**

CONTENT	TEST METHOD	UNIT	RESULT
Based resin	ASH TESTER		PE
CaCO3 content	ASH TESTER	%	60-90
Density	ASTM D1506	g/cm <sup>3</sup>	1.80-1.87
Moisture content	IR	%	< 0,2
Melting flow index (190°C/5 kg)	ASTM D1238	g/10mins	3-10
Particle size	Caliper	Mm	2,0-3,0
Color			White
CaCO3 Powder Size	Malvern 3000E	Micron	D97=10-15



#### 2. CaCO3 FILLER MASTERBATCH (PP BASED)

**Application:**

- Raffia: PP woven, PP small bags, jumbo bags
- PP Lamination
- PP Non-woven
- PP injection and extrusion

**Specifications**

CONTENT	TEST METHOD	UNIT	RESULT
Based resin	ASH TESTER		PP
CaCO3 content	ASH TESTER	%	65-90
Density	ASTM D1506	g/cm <sup>3</sup>	1.80-1.87
Moisture content	IR	%	< 0,2
Melting flow index (190°C/5 kg)	ASTM D1238	g/10mins	5-80
Particle size	Caliper	Mm	2,0-3,0
Color			White
CaCO3 Powder Size	Malvern 3000E	Micron	D97=10-18



## II. BIO FILLER MASTERBATCH (BIO HF)

**Product description:**

BIO HF is a biodegradable & compostable filler

The addition of BIO HF goes between 5% to 60% depend on the final application.

**Technical Analysis**  
**Physical Property**

ITEMS	METHOD OF EXPERIMENT	STANDARD	UNIT
CaCO3 Content		75 - 80	wt %
Melt Mass-Flow Rate (190°C/5 kgs)	ASTM D 1238	0.34±0.1	g/10 mins
Melt Temperature	DSC	115	°C
Density	ASTM D1895	1.90	g/cm3
Moisture	ASTM D644	< 0.1	wt %
Polyme content + Additive		20 - 25	wt %

**Property**

Appearance (Surface color) : Light  
 Processing temperature : 145-165°C  
 Pellet Size : 3x3 (±0.3) mm  
 Carrier resin : PBAT (Bio plastic)  
 Packing : 25 kgs per bag  
 Storage : Keep at dry condition

**Application:** Blow film

FORMULA MIXING				
NAME SAMPLE	COMPOUND KINGFA	RECYCLE COMPOSTABLE RESIN	BIO HF1	
Non BIO HF1 (%)	97	3	0	
10% BIO HF1 (%)	87	3	10	
QUALITY ESPECIALLY				
THICKNESS (13MICRO)	MD		TD	
	TENSILE STRENGTH BREAK (MPA)	ELONGATION AT BREAK (%)	TENSILE STRENGTH BREAK (MPA)	ELONGATION AT BREAK (%)
No BIO HF1 (%)	25.48	202	18.81	512
10% BIO HF1 (%)	23.54	252	14.66	528



### III. BASO4/TALC FILLER MASTERBATCH

**Product Description:** BaSO4/Talc filler masterbatch is ideal for PE shopping bags, garbage bags, industrial films, and packaging, as it enhances strength, printability, thermal resistance, and surface quality, ensuring efficient blown film, extrusion, and injection molding.

#### 20% BaSO4 Physical Property

ITEMS: BA20	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH		PE	
BaSO <sub>4</sub> Content	ASH	%	20.0	19.5 - 20.5
Density	ASTM D1506	g/cm3	1.85	
Moisture content	IR	%	≤ 0.15	
Melting flow index (190°C/2.16 kg)	ASTM D1238	g/10mins	20.0	19.0 - 22.0
Particle size	Caliper	mm	1.8	1.6 - 2.0
Appearance			White Oval	

#### 35% BaSO4 Physical Property

ITEMS: BA35	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH		PE	
BaSO <sub>4</sub> Content	ASH	%	35.0	34.5 - 35.5
Density	ASTM D1506	g/cm3	1.85	
Moisture content	IR	%	≤ 0.15	
Melting flow index (190°C/2.16 kg)	ASTM D1238	g/10mins	18.0	17.0 - 19.0
Particle size	Caliper	mm	1.8	1.6 - 2.0
Appearance			White Oval	

#### 75% BaSO4 Physical Property

ITEMS: BAT7505	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH		PE	
BaSO <sub>4</sub> Content	ASH	%	75.0	74.5 - 75.5
Density	ASTM D1506	g/cm3	1.85	1.83-1.87
Moisture content	IR	%	≤0.15	
Melting flow index (190°C/2.16 kg)	ASTM D1238	g/10mins	15.0	14.0 - 16.0
Particle size	Caliper	mm	1.8	1.6 - 2.0
Appearance			White Oval	

**20% Talc Filler**  
Physical Property

PHYSICAL PROPERTIES	TEST METHOD	UNIT	NOMINAL VALUE
Density	ASTM D792	g/cm <sup>3</sup>	1.75
Melt Flow Index (MFI) (190°C/2.160 kg)	ASTM D1238	g/ 10 min	19.0 ± 5
Talc Content	ASH TESTER	%	20.0 ± 1
Carrier resin			LLDPE
Moisture content	IR	%	≤ 0.15
Particle size	Caliper	mm	2.2 ± 0.2
Appearance			White Oval

**70% Talc Filler**  
Physical Property

PHYSICAL PROPERTIES	TEST METHOD	UNIT	NOMINAL VALUE
Density	ASTM D792	g/cm <sup>3</sup>	1.72
Melt Flow Index (MFI) (190°C/2.160 kg)	ASTM D1238	g/ 10 min	18.0 ± 5
Talc Content	ASH TESTER	%	70.0 ± 1
Carrier resin			LLDPE
Moisture content	IR	%	≤ 0.15
Particle size	Caliper	mm	2.2 ± 0.2
Appearance			White Oval

**40% Talc Filler**  
Physical Property

PHYSICAL PROPERTIES	TEST METHOD	UNIT	NOMINAL VALUE
Density	ASTM D792	g/cm <sup>3</sup>	1.75
Melt Flow Index (MFI) (190°C/2.160 kg)	ASTM D1238	g/ 10 min	18.0 ± 5
Talc Content	ASH TESTER	%	40.0 ± 1
Carrier resin			LLDPE
Moisture content	IR	%	≤ 0.15
Particle size	Caliper	mm	2.2 ± 0.2
Appearance			White Oval

## B. BIODEGRADABLE COMPOUND



### 1. BIODEGRADABLE COMPOUND FOR BLOWING FILM

**Product Description:** CTR02 is compound made from PBAT, PLA and additives to achieve complete biodegradability.

**Application**

Blowing film: Shopping bags, grocery bags, carry bags



## 2. BIODEGRADABLE COMPOUND FOR INJECTION MOLDING AND EXTRUSION

**Product Description:** BG is a PLA-based compound blended with specialized additives, certified Compostable and Biodegradable.

**Application:** food container, cutlery, straight and bendy straws, etc.



## C. WHITE MASTERBATCH

**Application:** It is widely used in shopping bags & garbage bags, industrial films, packaging material & containers, injection, extrusion, multi layer, laminate, film blown molding technology.

The addition of Titanium Dioxide goes between 20% to 77% depend on the final application.

### 1. 35% TITANIUM DIOXIDE

ITEMS: PE-TI35	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH TESTER		PE	
TiO <sub>2</sub> content	ASTM D1506	%	35.0	34.5 - 35.5
Density	ASTM D792	g/cm <sup>3</sup>	1.82	
Moisture content	ASTM D644	%	≤ 0.15	
Melting flow index (190°C/2.16 kg)	ASTM D1238	g/10mins	23	20 - 25
Particle size		mm	2.2	2.0 - 2.4
Appearance			White Oval	

## 2. 40% TITANIUM DIOXIDE

ITEMS: PE-TI40	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH TESTER		PE	
TiO <sub>2</sub> content	ASTM D1506	%	40.0	39.7 - 40.3
Density	ASTM D792	g/cm3	1.81	
Moisture content	ASTM D644	%	≤ 0.15	
Melting flow index (190°C/2,16 kg)	ASTM D1238	g/10mins	19.0	18.0 - 25.0
Particle size		mm	1.8	1.7 - 2.0
Appearance			White Oval	

## 3. 50% TITANIUM DIOXIDE

ITEMS: PE-TI40	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH TESTER		PE	
TiO <sub>2</sub> content	ASTM D1506	%	50.0	49.7 - 50.3
Density	ASTM D792	g/cm3	1.81	
Moisture content	ASTM D644	%	≤ 0.15	
Melting flow index (190°C/2,16 kg)	ASTM D1238	g/10mins	26.0	24.0 - 28.0
Particle size		mm	1.8	1.7 - 2.0
Appearance			White Oval	

## 4. 60% TITANIUM DIOXIDE

ITEMS: PE-TI60	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH TESTER		PE	
TiO <sub>2</sub> content	ASH TESTER	%	60	59.5-60.5
Density	ASTM D1506	g/cm3	1.81	1.80-1.83
Moisture content	IR	%	≤0.15	
Melting flow index (190°C/2,16 kg)	ASTM D1238	g/10mins	22	21 - 23
Particle size	Caliper	mm	2.2	1.9 - 2.4
Appearance			White Oval	

## 5. 75% TITANIUM DIOXIDE

ITEMS: PE-TI68	TEST METHOD	UNIT	RESULT	ABOUT RESULT ALLOWED
Carrier resin	ASH TESTER		PE	
TiO <sub>2</sub> content	ASH TESTER	%	68.0	74.5 - 75.5
Density	ASTM D1506	g/cm3	1.81	
Moisture content	IR	%	≤ 0.15	
Melting flow index (190°C/2,16 kg)	ASTM D1238	g/10mins	22.0	21.0 - 23.0
Particle size	Caliper	mm	1.8	1.7 - 2.0
Appearance			White Oval	

## D. ADDITIVE MASTERBATCH



### 1. ANTI - UV MASTERBATCH

#### Introduction

Sunlight exposure can negatively impact the lifespan of plastic products. Ultraviolet (UV) radiation breaks down chemical bonds in polymers, leading to photo-degradation that results in cracking, chalking, color changes, and loss of physical properties. Thus, UV stabilizing packages are essential for polymer durability. UV stabilizers are generally classified into two types: UV absorbers and hindered amine light stabilizers (HALS). High-performance UV stabilizer masterbatches provide optimal UV stability to meet current and future requirements.

#### Product Benefits

- Excellent UV resistance to meet end use requirements
- Optimal balance between UV stability and long-term thermal stability
- Tailored products as per end use requirements
- Good processability.

#### Applications and Recommended UV Stabilizer System

- Polyolefin films (for thin wall thickness like film, HALS is more efficient UV stabilizer than UV absorbers)
- Polyolefin injection molded (synergistic HALS mixture)
- PP fiber pigmented (Combination masterbatch between HALS and UV absorber)
- PP pipes (HALS)



### 2. ANTIOXIDANT MASTERBATCH

#### Product Description

Hll AO 11 is the combination of antioxidant additive in LLDPE carrier. It is used to protect polymers from degradation, both during processing and during use. The percentage of use of masterbatches is recommended about 1 and 5%.

#### Application

Pipes, Profiles, Films, Cables, Injection molding, Tapes, Geotextiles, Blowmoldin



### 3. ANTI-BLOCK MASTERBATCH

#### Introduction

In the production of plastic films, anti-blocking properties are essential for handling and processing, as plastic layers often adhere to each other. Adding an anti-block agent creates surface roughness, preventing blocking between layers. Typically, anti-block masterbatch is utilized in multilayer films to maximize benefits by reducing adhesion between similar or different surface products.

#### Description

Anti block masterbatch is an additives masterbatch in PE resin based. This can give an advantage in end-use ap-plications such as opening plastic bags.

#### Application

Blowing film: Shopping bags, grocery bags, carry bags

## 4. SLIP AGENT

### Introduction

In film processing, films often stick to each other and metal surfaces due to their high coefficient of friction (COF). This adhesion damages product surfaces, reduces optical properties and force, affects appearance, deforms products, and disrupts the printing process.

Slip agents have a low molecular size and low COF, significantly reducing these issues. They offer several advantages, including decreased surface friction and resistivity, reduced melt viscosity, and improved mold release.

### Description

Slip agent is combination of fatty acid amides in PE resin based. It's used to increase the gloss and smoothness of the film.

### Application

Blowing film: Shopping bags, grocery bags, carry bags



## E. CALCIUM CARBONATE POWDER (CaCO<sub>3</sub>)

### Product description

An Tien's Superfine Calcium Carbonate Powder is manufactured from high-purity white marble derived from a natural limestone quarry in Yen Bai province, one of the best and purest quarries in Southeast Asia. An Tien produces and supplies both coated and uncoated calcium carbonate powder, renowned for its superior whiteness and brightness, using the most advanced CaCO<sub>3</sub> stone powder production lines with vertical milling technology and hydraulic milling technology

### Application:

- Plastic industry: Filler masterbatch, plastic pipes, cables, etc.
- Paint industry
- Paper industry
- Construction industry



### Specifications

CONTENT	SPECIFICATIONS
Top-cut: D97	6 - 45µm ± 2
Mean size: D50	2 - 9µm ± 0,5
Whiteness	98% Min
Brightness	96% Min
Moisture (Ex-work)	0,25% Max
Density (Raw material)	2,7 g/cm <sup>3</sup>
PH	8-9
CaCO <sub>3</sub> content	99% Min

## F. TECHNICAL COMPOUND

### 1. PPGF57

**Product Description:**

PP GF57 is a Polypropylene compound reinforced with glass fibers. It exhibits excellent tensile strength, hardness, impact resistance, heat resistance, and low shrinkage. This makes it particularly suitable for injection molding applications, making it recommended choice for producing various products, including motorcycle and car parts, household goods, and furniture.

**Applications:**

Injection molded, extruded products:  
 Motorcycle and car parts,  
 household goods...



PHYSICAL	NOMINAL VALUE	UNIT	TEST METHOD
Density	1.06 ± 0.01		ASTM D792
Melt Flow Index (MFI) (230 °C/ 2.16 kg)	8 ± 2	g/ 10 min	ASTM D1238
Appearance	Black Oval		

MECHANICAL	NOMINAL VALUE	UNIT	TEST METHOD
Tensile Strength	70	MPa	ASTM D638
Tensile Elongation (Break)	11	%	ASTM D638
Flexural Modulus	3200	MPa	ASTM D790
Flexural Strength	95	MPa	ASTM D790
Impact Strength	10	kJ/m²	ASTM D256
Hardness	68		Shore D

### 2. PPGF10-CT09M

**Product Description:**

PP GF10 CT09M is a Polypropylene compound reinforced with glass fibers. It exhibits excellent tensile strength, hardness, impact resistance, heat resistance, and low shrinkage. This makes it particularly suitable for injection molding applications, making it recommended choice for producing various products, including motorcycle and car parts, household goods, and furniture.

**Applications:**

Injection molded, extruded products:  
 Motorcycle and car parts,  
 household goods...



# AN TIEN INDUSTRIES PRODUCTS

PHYSICAL	NOMINAL VALUE	UNIT	TEST METHOD
Density	1.06 ± 0.01		ASTM D792
Melt Flow Index (MFI) (230 °C/ 2.16 kg)	10 ± 2	g/ 10 min	ASTM D1238
Appearance	Black Oval		

MECHANICAL	NOMINAL VALUE	UNIT	TEST METHOD
Tensile Strength	32	MPa	ASTM D638
Tensile Elongation (Break)	15	%	ASTM D638
Flexural Modulus	1500	MPa	ASTM D790
Flexural Strength	51	MPa	ASTM D790
Impact Strength	8	kJ/m <sup>2</sup>	ASTM D256
Hardness	68		Shore D

## 3. PP8402-R3

### Product Description:

PP 8402-R3 is a Polypropylene compound. It exhibits excellent tensile strength, hardness, impact resistance, and low shrinkage. This makes it particularly suitable for injection molding applications, making it recommended choice for producing various products, including motorcycle and car parts, household goods, and furniture.

### Applications:

Injection molded, extruded products:  
Motorcycle and car parts,  
household goods...



PHYSICAL	NOMINAL VALUE	UNIT	TEST METHOD
Density	0.917 ± 0.01		ASTM D792
Melt Flow Index (MFI) (230 °C/ 2.16 kg)	7 ± 2	g/ 10 min	ASTM D1238
Appearance	Black Oval		

MECHANICAL	NOMINAL VALUE	UNIT	TEST METHOD
Tensile Strength	22	MPa	ASTM D638
Tensile Elongation (Break)	58	%	ASTM D638
Flexural Modulus	769	MPa	ASTM D790
Flexural Strength	33	MPa	ASTM D790
Impact Strength	8	kJ/m <sup>2</sup>	ASTM D256
Hardness	63		Shore D



## OUR CONTACT

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