Nirumand Polymer

Back to
first page

If the buttons are not functioning in the Android operating system, please use the Microsoft 365 application.

OK

FILLED & REINFORCED
ENGINEERING PLASTICS

Nirumand Polymer

Table of Contents

FILLED & REINFORCED
ENGINEERING PLASTICS

Help


Nirumand Polymer
About US
Introduction
History
Social responsibility
FILLED & REINFORCED
ENGINEERING PLASTICS
Back

Nirumand Polymer

Introduction

The knowledge-based engineering, Nirumand Polymer Company, obtained its industrial license over 50 years ago from the Ministry of Industry. In addition to expanding its product portfolio and increasing market share, this manufacturing entity has achieved significant success in the field of exports. Furthermore, the issuance of a research and development license by the Ministry of Industry, Mine, and Trade has been made possible through the active presence of a specialized polymer team in the laboratory, quality control, and research departments.


Nirumand Polymer
History
1971–1991
1991–2001
2001–2011
2011–2021
2021–up to now
FILLED & REINFORCED
ENGINEERING PLASTICS
Back

Nirumand Polymer

1971–1991

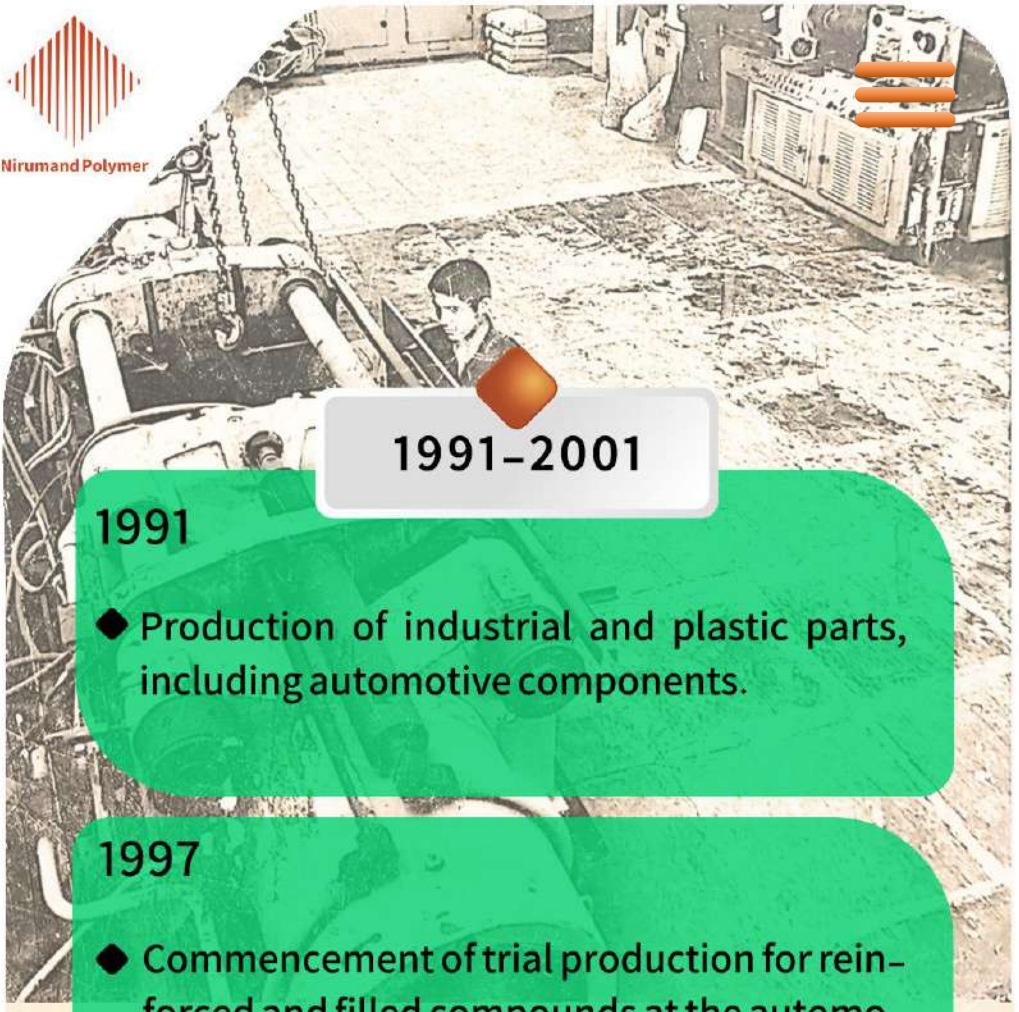
1971

- Obtaining an establishment license from the Ministry of Industries for the production of melamine and plastic household appliances.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer



1991–2001

1991

- Production of industrial and plastic parts, including automotive components.

1997

- Commencement of trial production for reinforced and filled compounds at the automotive parts manufacturing unit.

Nirumand Polymer

2001–2011

2005

- Obtaining ISO 9001:2008 Quality Management Certification.

2009

- Relocation of the factory from the old plant in Rey (Tehran) to the new site in Abbas Abad Industrial Zone.
- Installation of two compounding lines with twin screw extruder for the production of engineering compounds.
- Increasing the production capacity to 3000 tons per year.

Nirumand Polymer

2011–2021

2015

- Obtaining ISO 17025 certification.
- Installation and operation of a new production line.
- Selling 10,400 tons per year.

2016

- Enhancing productivity and raising capacity to 13,200 tons per year.
- Receiving a 3-star recognition certificate through the Excellence Award.

2018

- Obtaining ISO 9001: 2015 certification.
- Achieving IATF 16949: 2016 certification.

Nirumand Polymer

2011-2021

2019

- Obtaining knowledge-based certificates for 14 polymer products produced by Nirumand Polymer Pars

2020

- Renewal of ISO/IEC 17025:2005 certificate.
- Renewal of IATF 16949:2016 certificate.
- Obtaining a research and development certificate from the Ministry of Industry, Mining, and Trade.
- Selection as a top export unit for small industries.

Nirumand Polymer

2021-up to now

2021

- Selection as a dynamic export unit in the Iran National Polymer Industries Association Festival.
- Selection as an innovative company and receiving the excellence star badge at the
- Fourth National Innovation Conference in the Polymer Industries.
- Selection as a top knowledge-based export company in the Knowledge-Based Export Companies Club.

2022

- Selection as a four-star export company in the Knowledge-Based Export Companies Club.
- Receipt of the top producer badge at the National Production Festival, National Honor.
- Attainment of the title of dynamic exporter at the Second International Export Development
- Conference for Polymer Industries .
- Renewal of the knowledge-based certificate.

Nirumand Polymer

Social Responsibility

Nirumand Polymer engineering company, as part of its commitment to social responsibility, has been actively involved in various initiatives. These include the construction and furnishing of schools in underserved areas, fostering job creation in Abbas Abad industrial town, supporting the treatment of cancer patients, and engaging in environmental cleanup efforts to contribute to the development and progress of Iran.

Nirumand Polymer

Products

- NiruMid
- NiruPylene
- NiruFlex
- NiruBlend
- NiruABS
- NiruThylene
- NiruAdd
- NiruCalcit
- NiruBio

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruMid

Products based on polyamide are manufactured by Nirumand Polymer Company in various grades, 6 and 66, to meet customer requirements. Blending polyamide with glass fibers enhances several mechanical properties. These include:

- Tensile strength
- Flexural modulus
- Impact resistance
- Wear resistance
- Heat resistance

The blending of polyamide with glass fibers is utilized in the production of various components, such as:

- Automotive parts
- Electrical components
- Other high-performance engineering parts

These enhancements and applications make our polyamide products suitable for a diverse range of industries and applications.

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

- 6A30GB–747R
- 6A30GN–768
- 6AN–114
- 6AN–162
- 6AN–Supertough
- 66A30GN–759
- 66A35GB–938R
- 66AB–153
- 66AN–115
- 66AN–153
- 66AN–Supertough

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

6A30GB-747R
Polyamide 6 Reinforced with Glass Fiber

Product Description

6A30GB-747R is recyceled polyamide 6 reinforced with 30% glass fiber. It provides high mechanical properties, good impact resistance, toughness, stiffness, surface hardness, better dimensional stability, good thermal and chemical resistance. This compound is used in automotive applications, electrical goods, home appliance industry, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.33	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR)	.....	gr/10 min	ASTM D1238
Shrinkage	≤ 0.2	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	≥ 110	MPa	ISO 527
Tensile Strength@Break	≥ 110	MPa	ISO 527
Elongation @ Break	5	%	ISO 527
Flexural Modulus	7000	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	≥ 8	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	75	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

6A30GN-768
Polyamide 6 Reinforced with Glass Fiber

Product Description

6A30GN-768 is polyamide 6 reinforced with 30% glass fiber. It provides a combination of high mechanical properties and impact resistance, stiffness, surface hardness, dimensional stability, appropriate abrasion, good thermal and chemical resistance. This compound is designed to be used in automotive applications, electrical goods, home appliance industry, and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.32	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR)	.....	gr/10 min	ASTM D1238
Shrinkage	≤ 0.3	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	145	MPa	ISO 527
Tensile Strength@Break	145	MPa	ISO 527
Elongation @ Break	7	%	ISO 527
Flexural Modulus	7000	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	20	kj/m^2	ISO 180
Notched Izod Impact (-20°C)	14	kj/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	75	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

6AN–114
Polyamide 6

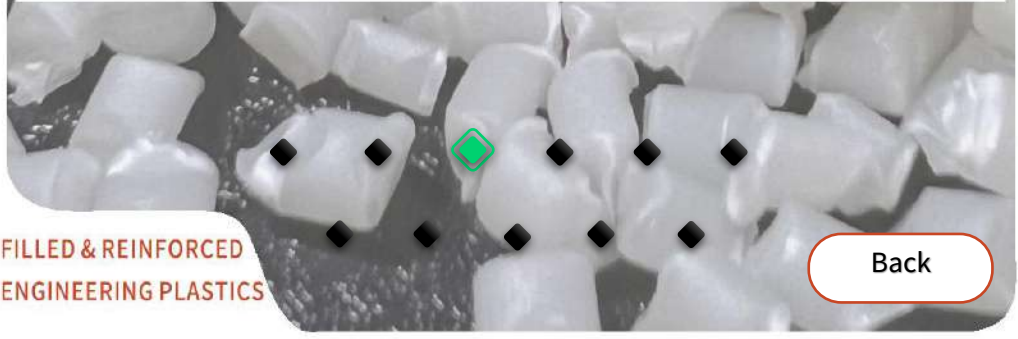
Product Description

6AN-114 is polyamide 6 resin offering high mechanical properties, stiffness and thermal resistance. This product is used in housewares, automotive applications, home appliance industry, electrical goods and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.11	gr/cm^3	ISO 1183
Shrinkage	1.4-1.6	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	75	MPa	ISO 527
Tensile Strength @ Break	....	MPa	ISO 527
Elongation @ Break	≥ 25	%	ISO 527
Flexural Modulus	2200	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	2	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	80	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

6AN-162
Impact Modified Polyamide 6

Product Description

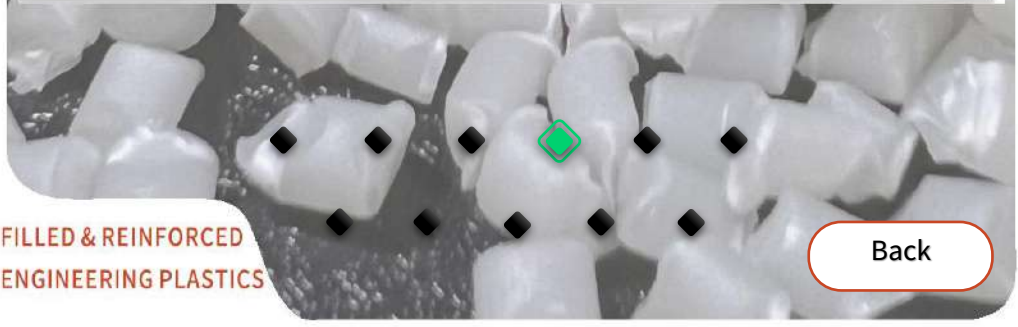
6AN-162 is polyamide 6 resin offering good balance of mechanical properties and toughness. This compound provides better impact resistance compared to typical polyamide 6 resin. This product is used in automotive applications, home appliance industry, electrical goods and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.1	gr/cm^3	ISO 1183
Shrinkage	1.35	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	60	MPa	ISO 527
Tensile Strength @ Break	.....	MPa	ISO 527
Elongation @ Break	≥ 20	%	ISO 527
Flexural Modulus	2200	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	18	kj/m^2	ISO 180
Notched Izod Impact (-20°C)	12	kj/m^2	ISO 180
Thermal Properties	**Value**	**Unit**	**Test Method**
Heat Deformation Temperature (1.80 Mpa)	70	°C	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

6AN-Supertough
Polyamide 6

Product Description

6AN-Supertough is polyamide 6 resin offering good balance of mechanical properties and toughness. This compound provides very high impact resistance compared to typical polyamide 6 resin. This product is used in automotive applications, electrical goods, home appliance industry, and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.03	gr/cm^3	ISO 1183
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	≥ 40	MPa	ISO 527
Tensile Strength @ Break	...	%	ISO 527
Elongation @ Break	≥ 40	%	ISO 527
Flexural Modulus	1200	%	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	> 65	kJ/m^2	ISO 180
Notched Izod Impact (-20°C)	> 25	kJ/m^2	ISO 180

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

66A30GN-759
Polyamide 66 Reinforced with Glass Fiber

Product Description

66A30GN-759 is polyamide 66 reinforced with 30% glass fiber. It provides a combination of superior mechanical properties and impact resistance, high stiffness, surface hardness, dimensional stability, appropriate abrasion, excellent thermal and chemical resistance. This compound is designed to be used in automotive applications, electrical goods, home appliance industry, and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value (dry condition)	Unit	Test Method
Density	1.35	gr/cm^3	ISO 1183
Filler Content	30 ± 2	%	ISO 3451/1
Shrinkage	≤ 0.3	%	Internal
Mechanical Properties	**Value (dry condition)**	**Unit**	**Test Method**
Tensile Strength@Break	150	MPa	ISO 527
Elongation @ Break	6	%	ISO 527
Flexural Modulus	7000 ≤	MPa	ASTM D790
Impact	**Value (dry condition)**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	14 ≤	kj/m^2	ISO 180
Hardness	**Value (dry condition)**	**Unit**	**Test Method**
Durometer Hardness	75	Shore D	ASTM D2240
Flammability	**Value (dry condition)**	**Unit**	**Test Method**
Flammability (3.2 mm)	HB	.....	UL94

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

66A35GB-938R

Polyamide 66 Reinforced with Glass Fiber

Product Description

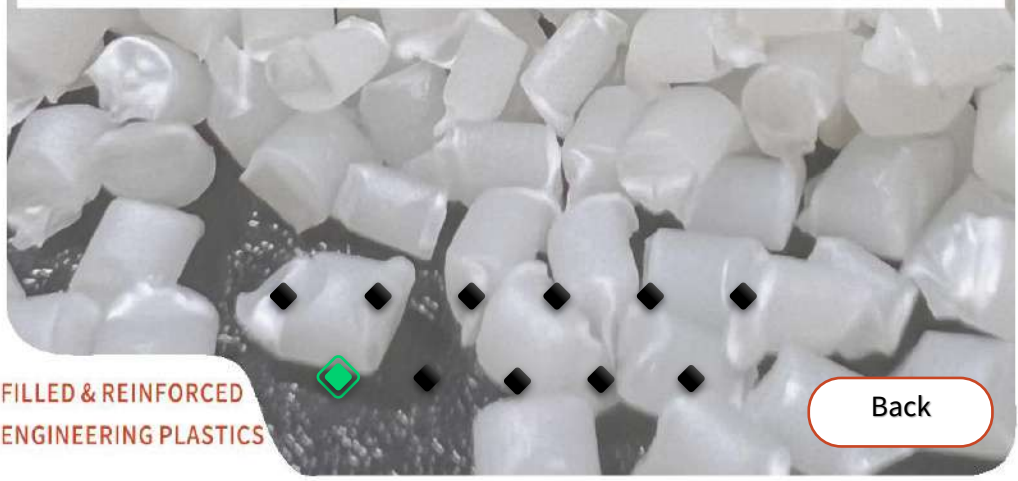
66A35GB-938R is recycled polyamide 66 reinforced with 35% glass fiber. It provides a combination of high mechanical properties , stiffness, surface hardness, dimensional stability, good impact and thermal resistance.This product is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.4	gr/cm^3	ISO 1183
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	≥ 130	MPa	ISO 527
Elongation@Break	6	%	ISO 527
Flexural Modulus	> 8500	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	7	Kj/m^2	ISO 180
Notched Izod Impact (-20°C)	....	Kj/m^2	ISO 180

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

66AB-153
Impact Modified Polyamide 66

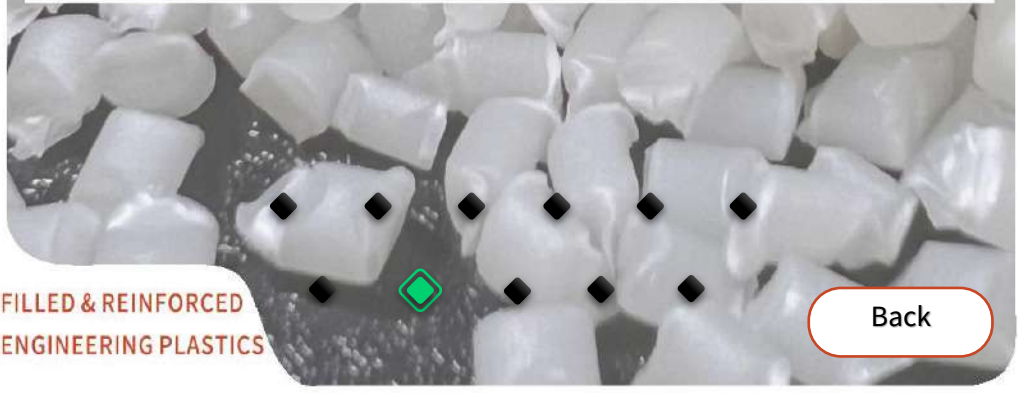
Product Description

66AB-153 is polyamide 66 resin offering good balance of mechanical properties and toughness. This compound provides better impact resistance compared to typical polyamide 66 resin. This product is used in automotive applications, home appliance industry, electrical goods and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black
Flammability	•HB

Physical Properties	Value	Unit	Test Method
Density	1.14	gr/cm^3	ISO 1183
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	≥ 60	MPa	ISO 527
Elongation @ Break	≥ 20	%	ISO 527
Flexural Modulus	2300	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	15	kj/m^2	ISO 180
Thermal Properties	**Value**	**Unit**	**Test Method**
Durometer Hardness	80	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

66AN-115
Polyamide 66

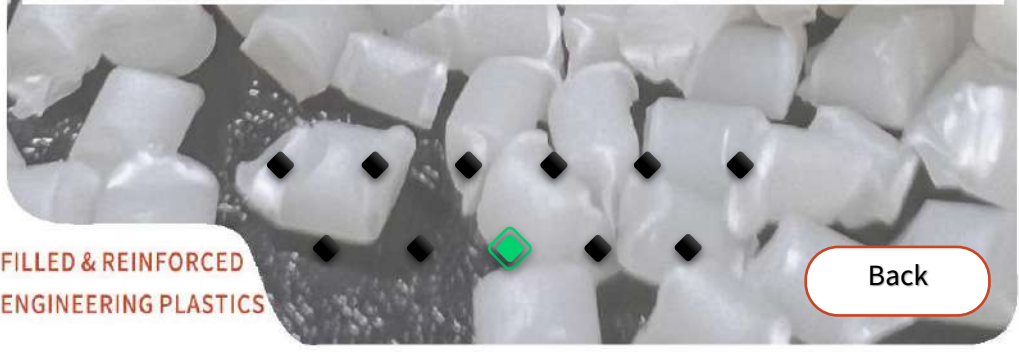
Product Description

66AN-115 is polyamide 66 resin offering superior mechanical properties, stiffness and thermal resistance. This product is used in automotive applications, electrical goods, home appliance industry and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.11	gr/cm^3	ISO 1183
Shrinkage	1.7-1.8	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	80	MPa	ISO 527
Tensile Strength @ Break	....	MPa	ISO 527
Elongation @ Break	≥ 25	%	ISO 527
Flexural Modulus	2300	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	3	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	80	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

66AN-153
Impact Modified Polyamide 66

Product Description

66AN-153 is polyamide 66 resin offering good balance of mechanical properties and toughness. This compound provides better impact resistance compared to typical polyamide 66 resin. This product is used in automotive applications, home appliance industry, electrical goods and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural
Flammability	•HB

Physical Properties	Value	Unit	Test Method
Density	1.14	gr/cm^3	ISO 1183
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	≥ 60	MPa	ISO 527
Tensile Strength @ Break	.....	MPa	ISO 527
Elongation @ Break	≥ 20	%	ISO 527
Flexural Modulus	2300	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	15	kj/m^2	ISO 180
Notched Izod Impact (-20°C)	...	kj/m^2	ISO 180
Thermal Properties	**Value**	**Unit**	**Test Method**
Durometer Hardness	80	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

66AN-Supertough
Polyamide 66

Product Description

66AN-Supertough is polyamide 66 resin offering good balance of mechanical properties and toughness. This compound provides very high impact resistance compared to typical polyamide 66 resin. This product is used in automotive applications, electrical goods, home appliance industry, and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.11	gr/cm^3	ISO 1183
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	≥ 40	MPa	ISO 527
Tensile Strength @ Break	...	%	ISO 527
Elongation @ Break	≥ 45	%	ISO 527
Flexural Modulus	1500	%	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	70	kJ/m^2	ISO 180
Notched Izod Impact (-20°C)	20	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Vicat Softening Point(50N/ 120°C/hr)	≥ 155	°C	ASTM D1525

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruPylene

This group consists of products based on polypropylene, produced in various grades (copolymer and homopolymer) and different colors, according to customer needs and the final usage of the product. The engineering blends of polypropylene are reinforced with glass fibers and various mineral fillers. This group of products include the following three categories:

- PP+CC
- PP+GF
- PP+Talc

Nirumand Polymer

PP+Calcium Carbonate

Blending polypropylene with calcium carbonate mineral filler offers several advantages to the product, including:

- Increased flexural modulus
- Enhanced dimensional stability
- Improved heat resistance
- Reduced shrinkage
- Enhanced processability
- Minimized surface defects
- Increased cost-effectiveness

The blending of polypropylene with calcium carbonate mineral filler finds application in diverse industries, including:

- Automotive
- Construction and sanitary products
- Household and office appliances
- Agriculture and gardening
- Electrical components (or parts)

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40CN-C30R-4311/1

P40CN-C40

P40CN-H40

P40CN-H50R-4277

P40CUW-2148

P40CUW-H60-4510

P50CN-H40R-2099

P60CN-H60

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40CN-C30R-4311/1

Copolymer Polypropylene Filled with Calcium Carbonate

Product Description

P40CN-C30R-4311/1 is recyceled copolymer polypropylene filled with 40% mineral powder by better toughness, mechanical properties, dimensional stability, good thermal and chemical resistance. This compound is used in appliance industry, automotive applications especially wheel cover, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.22	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	5	gr/10 min	ASTM D1238
Shrinkage	...	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	17	MPa	ISO 527
Tensile Strength @ Break	15	MPa	ISO 527
Elongation @ Break	≥ 20	%	ISO 527
Flexural Modulus	1600	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	7	kj/m^2	ISO 180
Notched charppy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	65	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40CN-C40

Copolymer Polypropylene Filled with Calcium Carbonate

Product Description

P40CN-C40 is copolymer polypropylene filled with 40% calcium carbonate offering better mechanical properties, dimensional stability, suitable stiffness, impact resistance, good thermal and chemical resistance. This compound is used in home appliance industry, electrical goods, automotive applications, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

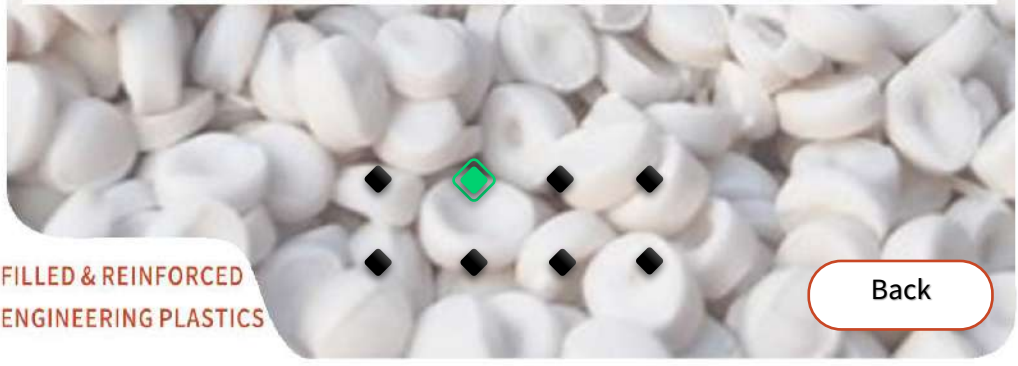
Physical Properties	Value	Unit	Test Method
Density	1.22	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	7	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	17	MPa	ISO 527
Tensile Strength@Break	16	MPa	ISO 527
Elongation@Break	15	%	ISO 527
Flexural Modulus	1500	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	≥7	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40CN-H40

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

P40CN-H40 is homopolymer polypropylene filled with 40% calcium carbonate offering better mechanical properties, dimensional stability, suitable stiffness, impact resistance, good heat and chemical resistance. This compound is used in home appliance industry, electrical goods, automotive applications, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

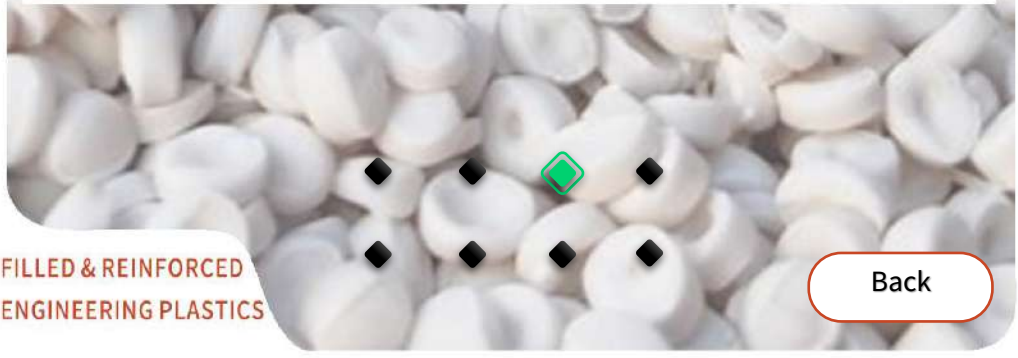
Physical Properties	Value	Unit	Test Method
Density	1.22	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	10	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	18	MPa	ISO 527
Tensile Strength@Break	17	MPa	ISO 527
Elongation@Break	20	%	ISO 527
Flexural Modulus	1900	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	4	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40CN-H50R-4277

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

P40CN-H50R-4277 is recyceled homopolymer polypropylene filled with 40% calcium carbonate. This compound is used in automotive applications, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.22	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	10	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	17	MPa	ISO 527
Tensile Strength@Break	15	MPa	ISO 527
Elongation@Break	12	%	ISO 527
Flexural Modulus	1600	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	3	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	.....	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40CUW-2148

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

P40CUW-2148 is homopolymer polypropylene filled with 40% calcium carbonate offering good stiffness and toughness balance, good thermal and chemical resistance. This compound is used in home appliance industry, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Ultra White

Physical Properties	Value	Unit	Test Method
Density	1.23	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	8	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	≥ 19	MPa	ISO 527
Tensile Strength@Break	.....	MPa	ISO 527
Elongation@Break	≥ 25	%	ISO 527
Elastic Modulus	.....	MPa	ISO 527
Flexural Modulus	1800	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	4	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40CUW-H60-4510

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

P40CUW-H60-4510 is homopolymer polypropylene filled with 40% calcium carbonate offering good stiffness and toughness balance, good thermal and chemical resistance. This compound is used in home appliance industry, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Ultra White

Physical Properties	Value	Unit	Test Method
Density	1.23	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	25	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	≥ 19	MPa	ISO 527
Tensile Strength@Break	.....	MPa	ISO 527
Elongation@Break	≥ 25	%	ISO 527
Elastic Modulus	.....	MPa	ISO 527
Flexural Modulus	1800	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	4	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P50CN-H40R-2099

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

P50CN-H40R-2099 is recycled homopolymer polypropylene filled with 50% calcium carbonate offering good balance of toughness and stiffness, dimensional stability, appropriate dye adhesion, good thermal and chemical resistance. This compound is used in automotive applications especially wheel cover, and other utility products. This grade is designed to be processed in injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.35	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	8	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	13	MPa	ISO 527
Tensile Strength@Break	12	MPa	ISO 527
Elongation@Break	4	%	ISO 527
Flexural Modulus	1700	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	4	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P60CN-H60

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

P60CN-H60 is homopolymer polypropylene filled with 60% calcium carbonate. This compound is used in building industry and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.5	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	.....	gr/10 min	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	16	MPa	ISO 527
Tensile Strength@Break	14	MPa	ISO 527
Elongation@Break	15	%	ISO 527
Flexural Modulus	1600	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	2.7	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	.....	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

PP+Glass Fiber

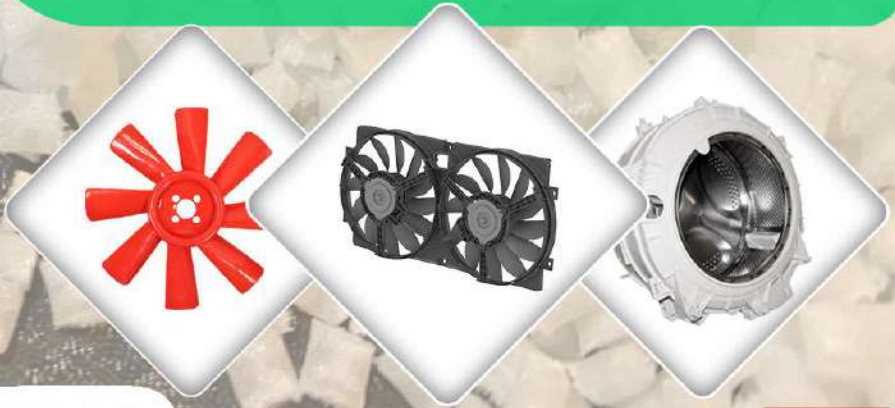
Blending polypropylene with glass fiber offers several advantages to the product, such as:

- Enhanced flexural modulus
- Improved impact resistance
- Greater dimensional stability
- Higher heat resistance
- Reduced creep
- Minimized shrinkage
- Diminished surface defects

This compound is commonly utilized in the production of various components, including:

- Automotive parts
- Construction materials
- Household and office appliances
- Electrical components or parts
- High-strength parts

Technical Data Sheet



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20GB-C40R

P20GN-C40

P20GN-H40

P30GB-C40R

P30GB-H40

P30GB-H40R

P30GN-C40

P30GN-C70

P30GN-H40

P35GN-H40

P40GB-H40

P40GN-H40

P50GB-C40R

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20GB-C40R

Copolymer Polypropylene Reinforced with Glass Fiber

Product Description

P20GB-C40R is recycled copolymer polypropylene reinforced with 20% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good thermal and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	...	gr/10 min	ASTM D1238
Shrinkage	< 0.4	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Yield	40	MPa	ISO 527
Elongation @ Break	6	%	ISO 527
Flexural Modulus	3200	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	≥ 10	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

P20GN-C40

Copolymer Polypropylene Reinforced with Glass Fiber

Product Description

P20GN-C40 is copolymer polypropylene reinforced with 20% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good heat and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	• Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.04	gr/cm3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	...	gr/10 min	ASTM D1238
Shrinkage	< 0.1	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Yield	60	Mpa	ISO 527
Elongation@Break	5	%	ISO 527
Flexural Modulus	3500	Mpa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	> 12	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20GN-H40

Homopolymer Polypropylene Reinforced with Glass Fiber

Product Description

P20GN-H40 is homoopolymer polypropylene reinforced with 20% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good heat and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties	
Material Status	• Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.04	gr/cm3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	...	gr/10 min	ASTM D1238
Shrinkage	< 0.1	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Yield	65	Mpa	ISO 527
Elongation@Break	5	%	ISO 527
Flexural Modulus	3700	Mpa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	10	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	75	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P30GB-C40R

Copolymer Polypropylene Reinforced with Glass Fiber

Product Description

P30GB-C40R is recycled copolymer polypropylene reinforced with 30% glass fiber. It provides a balance of toughness and mechanical properties, stiffness, surface hardness, better dimensional stability, good thermal and chemical resistance. This compound is used in appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.12	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	≤ 0.2	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	50	MPa	ISO 527
Tensile Strength@Break	50	MPa	ISO 527
Elongation @ Break	6	%	ISO 527
Flexural Modulus	4000	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	≥ 10	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P30GB–H40

Homopolymer Polypropylene Reinforced with Glass Fiber

Product Description

P30GB-H40 is homo polypropylene reinforced with 30% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good heat and chemical resistance. This compound is used in appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties	
Material Status	• Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.12	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	...	gr/10 min	ASTM D1238
Shrinkage	< 0.2	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Yield	75	Mpa	ISO 527
Elongation@Break	5	%	ISO 527
Flexural Modulus	5000	Mpa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	8	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	75	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P30GB-H40R

Homopolymer Polypropylene Reinforced with Glass Fiber

Product Description

P30GB H40R is Recycled Homopolymer Polypropylene reinforced with 30% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good heat and chemical resistance. This compound is used in homeappliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	• Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.12	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	< 0.4	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	67	Mpa	ISO 527
Elongation@Yield	4.5	%	ISO 527
Flexural Modulus	4500	Mpa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	6	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	75	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P30GN-C40

Copolymer Polypropylene Reinforced with Glass Fiber

Product Description

P30GN-C40 is copolymer polypropylene reinforced with 30% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimension stability, good heat and chemical resistance. This compound is used in appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	• Commercial: Active
Forms	• Pellets
Processing Method	• Injection molding
Color	• Natural

Physical Properties	Value	Unit	Test Method
Density	1.12	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	< 0.8	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	55	Mpa	ISO 527
Elongation@Break	5.5	%	ISO 527
Flexural Modulus	4300	Mpa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	≥ 12	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P30GN-C70

Copolymer Polypropylene Reinforced with Glass Fiber

Product Description

P30GN-C70 is copolymer polypropylene reinforced with 30% glass fiber. It provides high mechanical properties, stiffness, good impact resistance, surface hardness, better dimension stability, good heat and chemical resistance. This compound is used in appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.12	gr/cm^3	ISO 1183
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	70	Mpa	ISO 527
Elongation@Break	5.5	%	ISO 527
Flexural Modulus	4300	Mpa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	≥ 9	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P30GN-H40

Homopolymer Polypropylene Reinforced with Glass Fiber

Product Description

P30GN-H40 is virgin homopolymer polypropylene reinforced with 30% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good thermal and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.12	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	≤ 0.2	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@Break	75	MPa	ISO 527
Elongation @ Break	5	%	ISO 527
Flexural Modulus	5000	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	8	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	75	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P35GN-H40

Homopolymer Polypropylene Reinforced with Glass Fiber

Product Description

P35GN-H40 is homopolymer polypropylene reinforced with 35% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good thermal and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.16	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	≤ 0.2	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	80	MPa	ISO 527
Elongation @ Break	5	%	ISO 527
Flexural Modulus	5500	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	8	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	78	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40GB–H40

Homopolymer Polypropylene Reinforced with Glass Fiber

Product Description

P40GB-H40 is homopolymer polypropylene reinforced with 40% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good thermal and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.21	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	< 0.1	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	90	MPa	ISO 527
Elongation @ Break	5	%	ISO 527
Flexural Modulus	6000	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	> 9	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	80	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40GN-H40

Homopolymer Polypropylene Reinforced with Glass Fiber

Product Description

P40GN-H40 is homopolymer polypropylene reinforced with 40% glass fiber. It provides high mechanical properties, stiffness, surface hardness, better dimensional stability, good thermal and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.21	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	< 0.1	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	90	MPa	ISO 527
Elongation @ Break	5	%	ISO 527
Flexural Modulus	6000	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	> 9	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	80	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P50GB-C40R

Copolymer Polypropylene Reinforced with Glass Fiber

Product Description

P50GB-C40R is recycled copolymer polypropylene reinforced with 50% glass fiber. It provides good balance of toughness and stiffness, surface hardness, dimensional stability, good thermal and chemical resistance. This compound is used in automotive applications, home appliance industry, electrical goods, and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.33	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238
Shrinkage	< 0.1	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	67	MPa	ISO 527
Elongation @ Break	6	%	ISO 527
Flexural Modulus	8000	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	≥ 8	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	72	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

PP+Talc

What properties are improved by blending polypropylene with talc mineral filler?

- Increased tensile strength
- Improved flexural modulus
- Enhanced impact resistance
- Better dimensional stability
- Increased heat resistance
- Reduced creep
- Minimized shrinkage
- Diminished surface defects

In which industries is the blending of polypropylene with talc mineral filler commonly employed?

- Automotive
- Construction
- Household and office appliances
- Electrical components (or parts)

Technical Data Sheet

Nirumand Polymer

Technical Data Sheet

- P20TB-C40R
- P20TB-H46R
- P20TC-H40R-3099
- P20TC-H60-3091
- P20TN-H40
- P30TB-C40R
- P40TB-C40R*
- P40TB-H46R
- P40TN-C36
- P40TN-H40
- P50TW-C40-4348/1

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20TB-C40R

Copolymer Polypropylene Filled with Talcum Powder

Product Description

P20TB-C40R is recyceled copolymer polypropylene filled with 20% talc offering a good balance of toughness and mechanical properties, dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in automotive applications, appliance industry, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.04	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	9	gr/10 min	ASTM D1238
Shrinkage	1.3-1.4	%	Internal

Mechanical Properties	Value	Unit	Test
Tensile Strength@yield	≥ 18	MPa	ISO 527
Tensile Strength@Break	≥ 17	MPa	ISO 527
Elongation@Break	≥ 20	%	ISO 527
Elastic Modulus	.....	MPa	ISO 527
Flexural Modulus	1300	MPa	ASTM D790

Impact	Value	U nit	Test Method
Notched Izod Impact (23°C)	8	kj/m^2	ISO 180
Notched charppy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	67	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20TB-H46R

Homopolymer Polypropylene Filled with Talcum Powder

Product Description

P20TB-H46R is recyceled homopolymer polypropylene filled with 20% talc offering an appropriate balance of toughness and mechanical properties, dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in automotive applications, appliance industry and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.04	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	9	gr/10 min	ASTM D1238
Shrinkage	1.3-1.4	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	27	MPa	ISO 527
Tensile Strength@Break	23	MPa	ISO 527
Elongation@Break	24	%	ISO 527
Flexural Modulus	1600	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	8	kJ/m^2	ISO 180
Notched Izod Impact (-20°C)	0	kJ/m^2	ISO 180

Hardness	Value	Unit	Test Method
Durometer Hardness	63	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20TC-H40R-3099

Homopolymer Polypropylene Filled with Talcum Powder

Product Description

P20TC-H40R-3099 is recycled homopolymer polypropylene filled with 20% Talc powder offering better mechanical properties, dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in automotive applications, appliance industry, housewares and other utility products. This grade is designed to be processed in conventional injection molding technique.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Gray

Physical Properties	Value	Unit	Test Method
Density	1.04	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	9	gr/10 min	ASTM D1238
Shrinkage	1.3-1.4	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	27	Mpa	ISO 527
Tensile Strength@Break	23	Mpa	ISO 527
Elongation @ Break	24	%	ISO 527
Flexural Modulus	1700	Mpa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	3	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	66	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20TC-H60-3091

Homopolymer Polypropylene Filled with Talcum Powder

Product Description

P20TC-H60-3091 is homopolymer polypropylene filled with 20% talc powder offering better mechanical properties, dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in automotive applications, appliance industry, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Gray

Physical Properties	Value	Unit	Test Method
Density	1.04	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	27	gr/10 min	ASTM D1238
Shrinkage	1.3-1.4	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength @ Yield	28	MPa	ISO 527
Tensile Strength @ Break	24	MPa	ISO 527
Elongation @ Break	≥ 15	MPa	ISO 527
Flexural Modulus	1600	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	3	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20TN-H40

Homopolymer Polypropylene Filled with Talcum Powder

Product Description

P20TN-H40 is homopolymer polypropylene filled with 20% Talc powder offering better mechanical properties, dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in automotive applications, appliance industry, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.04	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	7	gr/10 min	ASTM D1238
Shrinkage	1.3-1.4	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	28	MPa	ISO 527
Tensile Strength@Break	24	MPa	ISO 527
Elongation @ Break	≥15	%	ISO 527
Flexural Modulus	2000	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	3.5	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	68	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

P30TB-C40R

Copolymer Polypropylene Filled with Talcum Powder

Product Description

P30TB-C40R is recycled copolymer polypropylene filled with 30% talcum powder by better mechanical properties, dimensional stability, stiffness, good heat and chemical resistance. This compound is used in automotive applications, appliance industry, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.13	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	9	gr/10 min	ASTM D1238
Shrinkage	1.2-1.3	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	> 16	Mpa	ISO 527
Tensile Strength@Break	> 14	Mpa	ISO 527
Elongation@Break	> 20	%	ISO 527
Elastic Modulus	.....	Mpa	ISO 527
Flexural Modulus	1700	Mpa	ISO 178

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	9	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	68	Shore D	ISO 868

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40TB-C40R*

Copolymer Polypropylene Filled with Talcum Powder

Product Description

P40TB-C40R* is recycled copolymer polypropylene filled with 40% talcum powder offering good balance of stiffness and toughness, dimensional stability, good thermal and chemical resistance. This compound is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.23	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	7	gr/10 min	ASTM D1238
Shrinkage	1.1-1.3	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	17	MPa	ISO 527
Tensile Strength@Break	15	MPa	ISO 527
Elongation@Break	7	%	ISO 527
Flexural Modulus	1800	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	6	kJ/m^2	ISO 180
Notched Charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40TB-H46R

Homopolymer Polypropylene Filled with Talcum Powder

Product Description

P40TB-H46R is recycled homopolymer polypropylene filled with 40% talcum powder offering good balance of mechanical properties and toughness, dimensional stability, medium flow, good thermal and chemical resistance. This compound is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	1.23	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	9	gr/10 min	ASTM D1238
Shrinkage	1.1-1.3	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	≥ 16	MPa	ISO 527
Tensile Strength@Break	15	MPa	ISO 527
Elongation@Break	5	%	ISO 527
Flexural Modulus	2000	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	3	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40TN-C36

Copolymer Polypropylene Filled with Talcum Powder

Product Description

P40TN-C36 is copolymer polypropylene filled with 40% talcum powder offering better mechanical properties, impact resistance, dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.23	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	6	gr/10 min	ASTM D1238
Shrinkage	1-1.2	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength @ yield	≥ 17	MPa	ISO 527
Tensile Strength @ Break	15	MPa	ISO 527
Elongation @ Break	≥ 15	%	ISO 527
Flexural Modulus	2000	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	≥ 8	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	66	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40TN-H40

Homopolymer Polypropylene Filled with Talcum Powder

Product Description

P40TN-H40 is homopolymer polypropylene filled with 40% talcum powder by better mechanical properties, better dimensional stability, stiffness, good heat and chemical resistance. This compound is used in home appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	• Commercial: Active
Forms	• Pellets
Processing Method	• Injection molding
Color	• Natural

Physical Properties	Value	Unit	Test Method
Density	1.23	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	8	gr/10 min	ISO 1133
Shrinkage	....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	≥ 19	Mpa	ISO 527
Tensile Strength@Break	....	Mpa	ISO 527
Elongation@Break	7	%	ISO 527
Flexural Modulus	2500	Mpa	ISO 178

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	3	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P50TW-C40-4348/1

Copolymer Polypropylene Filled with Talcum Powder

Product Description

P50TW-C40-4348/1 is copolymer polypropylene filled with 50% talcum powder offering better mechanical properties, toughness, dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in appliance industry, automotive applications, electrical goods, housewares and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•White

Physical Properties	Value	Unit	Test Method
Density	1.35	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	11	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	13	MPa	ISO 527
Tensile Strength@Break	12	MPa	ISO 527
Elongation@Break	10	%	ISO 527
Flexural Modulus	1900	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	≥ 7	kj/m^2	ISO 180
Notched charpy Impact (23°C)	....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	70	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruFlex

Nirumand Polymer Company manufactures NiruFlex products based on polypropylene in various grades, alloyed with elastomers, in a wide range of hardness levels, tailored to customer needs and suitable for diverse application .

What types of properties are enhanced by alloying the polymer with elastomers (EPDM)?

- Flexibility
- Impact resistance

In which parts is the alloying of the polymer with elastomer (EPDM) used?

- Bumpers, fenders, washers, gaskets
- Other industrial components requiring elastic properties

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V30DB-V8224-C20

V30DB-B301-C20

V35DB-B305-C20

V40DB-B4534-C20

V40DB-B310-C20

V54DB-X1203-C30

V57DB-BumperUV

V57DB-I4680-C54R(D)

V65AB-I210-C60

V65AB-I210-H40

V85AB-I226-H40

V85AB-X227-C10

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V30DB-V8224-C20

Copolymer Polypropylene Toughened with EPDM

Product Description

V30DB-V8224-C20 is copolymer polypropylene toughened with EPDM offering high flexibility and tear resistance. This compound is used in automotive applications and other utility products. This grade is designed to be processed in blow molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blow molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.95	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	< 2	gr/10 min	ASTM D1238
Shrinkage	.....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@ Break	10	MPa	ISO 527
Elongation @Break	≥ 350	%	ISO 527

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	.....	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	30	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V30DB-B301-C20

Copolymer Polypropylene Toughened with EPDM

Product Description

V30DB-B301-C20 is copolymer polypropylene toughened with EPDM offering good flexibility and tear resistance. This compound is used in automotive applications and other utility products. This grade is designed to be processed in blow molding and injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blow molding, Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.95	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	2	gr/10 min	ASTM D1238
Shrinkage	.....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@ Break	≥ 8	MPa	ISO 527
Elongation @Break	≥ 350	%	ISO 527

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	.....	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	30	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V35DB-B305-C20

Copolymer Polypropylene Toughened with EPDM

Product Description

V35DB-B305-C20 is copolymer polypropylene toughened with EPDM offering high impact strength. This compound is used in automotive applications and other utility products. This grade is designed to be processed in extrusion and blow molding techniques.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion, Blow molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.94	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	2	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@ Break	≥ 10	MPa	ISO 527
Elongation @ Break	≥ 350	%	ISO 527
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	.....	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	35	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V40DB-B4534-C20

Copolymer Polypropylene Toughened with EPDM

Product Description

V40DB-B4534-C20 is copolymer polypropylene toughened with recycled EPDM offering high tear resistance and impact strength. This compound is used in automotive applications and other utility products. This grade is designed to be processed in extrusion and blow molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion, Blow molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.94	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	2	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@ Break	≥ 10	MPa	ISO 527
Elongation @ Break	≥ 350	%	ISO 527

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	.....	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	40	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V40DB-B310-C20

Copolymer Polypropylene Toughened with EPDM

Product Description

V40DB-B310-C20 is copolymer polypropylene toughened with EPDM offering high tear resistance and impact strength. This compound is used in automotive applications and other utility products. This grade is designed to be processed in extrusion and blow molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion, Blow molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.94	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	2	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@ Break	≥ 10	MPa	ISO 527
Elongation @ Break	≥ 350	%	ISO 527
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	.....	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	40	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V54DB-X1203-C30

Copolymer Polypropylene Toughened with EPDM

Product Description

V54DB-X1203-C30 is copolymer polypropylene toughened with EPDM offering high mechanical strength, good toughness and suitable tear resistance. This compound is used in cable applications, hoses and other utility products.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion, Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.95	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	4	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	20	Mpa	ISO 527
Elongation @ Break	≥ 400	%	ISO 527

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	....	kj/m^2	ISO 180
Notched charppy Impact (23°C)	....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	54	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V57DB-Bumper UV

Copolymer Polypropylene Toughened with EPDM

Product Description

V57DB-Bumper UV is copolymer polypropylene toughened with EPDM and filled with mineral fillers offering high impact strength and UV resistance. This compound is used in automotive applications exposed to UV radiation especially bumper parts and other utility products. This grade is designed to be processed in conventional injection molding process.

Physical Properties	Value	Unit	Test Method
Density	0.9	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	10	gr/10 min	ASTM D1238
Shrinkage	< 1.7	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	≥18	MPa	ISO 527
Tensile Strength @ Break	....	MPa	ISO 527
Elongation @ Break	≥100	%	ISO 527
Flexural Modulus	900	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	≥ 30	KJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness (after 5 S)	57	Shore D	ISO 868

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V57DB-I4680-C54R(D)

Copolymer Polypropylene Toughened with EPDM

Product Description

V57DB-I4680-C54R(D) is recycled copolymer polypropylene toughened with EPDM offering good impact strength. This compound is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding molding .

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.97	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	11	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@ Break	≥ 17	MPa	ISO 527
Elongation @ Break	....	%	ISO 527
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	> 4	kj/m^2	ISO 180
Notched Izod Impact (-20°C)	....	kj/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	57	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V65AB-I210-C60

Copolymer Polypropylene Toughened with EPDM

Product Description

V65AB-I210-C60 is copolymer polypropylene toughened with EPDM offering high tear resistance and impact strength. This grade is designed to be processed in extusion and injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding, Extrusion
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.96	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	1	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@ Yield	3.5	MPa	ISO 527
Elongation @ Break	≥ 350	%	ISO 527
Elastic Modulus	.....	MPa	ISO 527
Flexural Modulus	.....	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	.....	kj/m^2	ISO 180
Notched charppy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	65	Shore A	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V65AB-I210-H40

Homopolymer Polypropylene Toughened with EPDM

Product Description

V65AB-I210-H40 is homopolymer polypropylene toughened with EPDM by high impact strength. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	3	gr/10 min	ASTM D1238
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@ Break	3	MPa	ISO 527
Elongation @ Break	≥ 350	%	ISO 527
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	NB	kj/m^2	ISO 180
Notched charppy Impact (23°C)	NB	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	65	Shore A	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V85AB-I226-H40

Homopolymer Polypropylene Toughened with EPDM

Product Description

V85AB-I226-H40 is homopolymer polypropylene toughened with EPDM by high impact strength. This compound is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding techniques.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.94	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	7	gr/10 min	ISO 1133
Shrinkage	...	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	6	Mpa	ISO 527
Tensile Strength@Break	6	Mpa	ISO 527
Elongation @ Break	≥ 250	%	ISO 527

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	N.B	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	85	Shore A	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

V85AB-X227-C10

Copolymer Polypropylene Toughened with EPDM

Product Description

V85AB-X227-C10 is copolymer polypropylene toughened with EPDM offering high impact strength and appropriate tear resistance.This compound is designed to be processed in extrusion process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.92	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	≤ 1.5	gr/10 min	ASTM D1238
Shrinkage	.....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength @ Break	≥ 7	MPa	ISO 527
Elongation @ Break	≥ 350	%	ISO 527
Flexural Modulus	.....	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	.....	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	85	Shore A	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruBlend

This group comprises products that are alloys of general and engineering polymers, manufactured by Nirumand Polymer Company.

What advantages do polymer alloys bring to the product?

- Improved mechanical properties
- Enhanced processability
- Cost reduction

In which parts are polymer alloys, such as PP alloyed with PA or PC alloyed with ABS, commonly used?

- Automotive parts
- Household appliances
- Irrigation pipes and fittings
- Special usages such as geomembrane sheets and...

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

- 6A30GN-A35-636
- 6AN-A142
- GM-100
- GM-R100
- P-C40R-3-1332
- P-C40R-3-1385
- P-C46R-3-1232(D)
- PC/ABS-AP26
- PC/ABS-AP26-B
- PE 40-Pipe

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

6A30GN-A35-636

Polyamide 6 Alloy Reinforced with Glass Fiber

Product Description

6A30GN-A35-636 is polyamide 6 alloy reinforced with 30% glass fiber. It provides a combination of high mechanical properties, stiffness and thermal resistance. This product is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.3	gr/cm^3	ISO 1183
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	100	MPa	ISO 527
Elongation @ Break	5	%	ISO 527
Flexural Modulus	6500	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	8	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	....	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

6AN–A142
Polyamide 6 Alloy

Product Description

6AN-A142 is polyamide 6 alloy offering good mechanical properties, stiffness and thermal resistance. This product is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.05	gr/cm^3	ISO 1183
Shrinkage	1.5-1.7	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength @ Yield	50	MPa	ISO 527
Elongation @ Break	20	%	ISO 527
Flexural Modulus	2000	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	9	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	75	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

GM-100
Polyethylene Geomembrane Grade

Product Description

GM-100 is a polymeric material of virgin polyethylene. This compound has high performance in the long term application and it is resistant to thermal degradation according to GRI- GM13 Standard Specification. This grade has been designed to be used for geomembrane sheet in general applications.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	> 0.932	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (190°C/2.16 kg)	1 >	gr/10 min	ASTM D1238
Carbon Black content	2 - 2.5	%	ASTM D1603
Carbon Black dispersion	< 3	....	ISIRI 20059
O.I.T (200 °C)	> 100	min	ISO 6-11357

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

GM–R100
Polyethylene Geomembrane Grade

Product Description

GM-R100 is a polymeric material of recycled polyethylene. This compound has high performance in the long term application and it is resistant to thermal degradation according to GRI- GM13 Standard Specification. This grade ia an economic compound and has been designed to be used for geomembrane sheet in general applications.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	> 0.932	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (190°C/2.16 kg)	1 >	gr/10 min	ASTM D1238
O.I.T (200 °C)	> 100	min	ISO 6-11357

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P-C40R-3-1332
Copolymer Polypropylene

Product Description

P-C40R-3-1332 is recycled copolymer polypropylene having a combination of good mechanical properties and toughness. This compound is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.9	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	9	gr/10 min	ASTM D1238
Shrinkage	1.6-1.7	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@ Yield	≥ 21	MPa	ISO 527
Tensile Strength@ Break	....	MPa	ISO 527
Elongation @ Break	≥ 50	%	ISO 527
Flexural Modulus	900	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	14	kJ/m^2	ISO 180
Notched Izod Impact (-20°C)	....	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	65	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P-C40R-3-1385
Copolymer Polypropylene

Product Description

P-C40R-3-1385 is recycled copolymer polypropylene toughened with EPDM offering appropriate impact strength and toughness. This compound is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.9	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	10	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@ Yield	19	MPa	ISO 527
Tensile Strength@ Break	17	MPa	ISO 527
Elongation @ Break	≥ 20	%	ISO 527
Flexural Modulus	900	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	18	kJ/m^2	ISO 180
Notched Izod Impact (-20°C)	....	kJ/m^2	ISO 180
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	63	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P-C46R-3-1232(D)
Copolymer Polypropylene

Product Description

P-C46R-3-1232(D) is recycled copolymer polypropylene toughened with EPDM by high impact strength. This compound is used in automotive applications and other utility products. This grade is designed to be processed in conventional injection molding molding.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.9	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	7	gr/10 min	ASTM D1238
Shrinkage	....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@ Yield	≥ 17	MPa	ISO 527
Tensile Strength@ Break	≥ 14	MPa	ISO 527
Elongation @ Break	≥ 50	%	ISO 527
Flexural Modulus	900	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	≥ 23	kJ/m^2	ISO 180
Notched Izod Impact (-20°C)	....	kJ/m^2	ISO 180

Hardness	Value	Unit	Test Method
Durometer Hardness	57	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

PC/ABS-AP26

Polycarbonate/Acrylonitrile-Butadiene-Styrene Alloy

Product Description

PC/ABS-AP26 is an alloy with good mechanical properties and high impact resistance.This product is used in automotive applications, electronic devices and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Melt Mass-flow Rate (MFR) (260°C/5 Kg)	18	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@Yield	50	MPa	ISO 527
Elongation @ Break	18	%	ISO 527
Flexural Modulus	2100	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	35	kJ/m^2	ISO 180

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

PC/ABS-AP26-B

Polycarbonate/Acrylonitrile-Butadiene-Styrene Alloy

Product Description

PC/ABS-AP26-B is an alloy with good mechanical properties and high impact resistance.This product is used in automotive applications, electronic devices and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Black

Physical Properties	Value	Unit	Test Method
Melt Mass-flow Rate (MFR) (260°C/5 Kg)	18	gr/10 min	ASTM D1238
Shrinkage	.....	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@Yield	50	MPa	ISO 527
Elongation @ Break	...	%	ISO 527
Flexural Modulus	2100	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	35	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	...	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

PE 40–Pipe

Polyethylene Pipe Grade

Product Description

PE 40-Pipe is a black polyethylene compound filled with well-dispersed carbon black through the polyethylene matrix. This compound has outstanding properties such as good strength in hydrostatic pressure and excellent environmental stress cracking resistance (ESCR) and is classified into PE 40 classification according to ISIRI 7607 and ISO 8779 standard. This grade has been designed to be used in pipe extrusion process for drip irrigation and swage water piping and other pipe applications.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Extrusion
Color	•Black

Physical Properties	Value	Unit	Test Method
Density	0.93	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (190°C/2.16 kg)	0.3-0.6	gr/10 min	ASTM D1238
Carbon Black content	2-2.5	%	ASTM D1603
Carbon Black dispersion	< 3	.....	ISIRI 20059
O.I.T (200 °C)	≥ 20	min	ASTM D3895
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Break	≥ 15	MPa	ISO 527
Elongation@Break	≥ 100	%	ISO 527
Flexural Modulus	≤ 300	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	N.B	kj/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kj/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	51	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruABS

This group comprises products based on ABS, manufactured by Nirumand Polymer Company.

What advantages does the ABS product group offer?

- High dimensional stability
- Good impact resistance
- Suitable strength
- Good glossiness

Where is the ABS product group used in industries?

- Automotive manufacturing
- Electrical components
- Other engineering parts

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

ABS-I1-1-FR

ABS-I1R-3

ABS-I2R-3

ABS-I3R-3

A20GN-4641

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

ABS-I1-1-FR

Flame Retardant Compound

Product Description

ABS-I1-1-FR is a special acrylonitrile- butadiene- styrene compound having self-extinguish ability making it much safer for the use in the electrical goods, housewares and home appliance complying with the UL-94 regulations, widely accepted fire safety standard. This grade with fine mechanical properties is applicable in injection molding process.

General Properties	
Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.3	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (220°C/10 kg)	....	gr/10 min	ASTM D1238
Flammability (3mm/ 6mm)	V-0	-	UL-94

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@Yield	28	MPa	ISO 527
Elongation @ Break	3	%	ISO 527
Flexural Modulus	1800	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	3	kJ/m^2	ISO 180

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

ABS-I1R-3

Acrylonitrile- Butadiene- Styrene

Product Description

ABS-I1R-3 is a recycled thermoplastic with good mechanical properties. This grade is used for a wide range of applications including auto parts, home appliances, electrical parts/fittings, telecommunication and electronic devices. This grade is designed to be used in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection
Color	•Black

Physical Properties	Value	Unit	Test Method
Melt Mass-flow Rate (MFR) (220°C/10 Kg)	18	gr/10 min	ASTM D1238
Shrinkage	.....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Yield	40	MPa	ISO 527
Elongation @ Break	...	%	ISO 527
Flexural Modulus	1900	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	3	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	...	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

ABS-I2R-3

Acrylonitrile- Butadiene- Styrene

Product Description

ABS-I2R-3 is a recycled thermoplastic with good mechanical properties. This grade is used for a wide range of applications including auto parts, home appliances, electrical parts/fittings, telecommunication and electronic devices. This grade is designed to be used in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection
Color	•Black

Physical Properties	Value	Unit	Test Method
Melt Mass-flow Rate (MFR) (220°C/10 Kg)	20	gr/10 min	ASTM D1238
Shrinkage	.....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Yield	33	MPa	ISO 527
Elongation @ Break	...	%	ISO 527
Flexural Modulus	2100	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	4	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	...	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

ABS-I3R-3

Acrylonitrile- Butadiene- Styrene

Product Description

ABS-I3R-3 is a recycled thermoplastic with good mechanical properties. This grade is used for a wide range of applications including auto parts, home appliances, electrical parts/fittings, telecommunication and electronic devices. This grade is designed to be used in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection
Color	•Black

Physical Properties	Value	Unit	Test Method
Melt Mass-flow Rate (MFR) (220°C/10 Kg)	20	gr/10 min	ASTM D1238
Shrinkage	.....	%	Internal
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@Yield	33	MPa	ISO 527
Elongation @ Break	...	%	ISO 527
Flexural Modulus	2100	MPa	ASTM D790
Impact	**Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	6	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	.....	kJ/m^2	ISO 179
Hardness	**Value**	**Unit**	**Test Method**
Durometer Hardness	...	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

A20GN-4641

Acrylonitrile- Butadiene- Styrene Reinforced with Glass Fiber

Product Description

A20GN-4641 is acrylonitrile - butadiene - styrene reinforced with 20% glass fiber with good mechanical properties, betterdimensionalstability and good heat resistance. This grade is intended for a wide range of applications including auto parts, home appliances, electrical parts/fittings, telecommunication and electronic devices.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Filler content	20 ± 2	%	ISO 3451/1

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@Yield	50	MPa	ISO 527
Elongation @ Break	3	%	ISO 527
Flexural Modulus	5000	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	5	kJ/m^2	ISO 180

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruThylene

These products, manufactured by Nirumand Polymer Company, are based on polyethylene (LDPE, LLDPE, HDPE) with mineral fillers (calcium carbonate). They are tailored to meet the specific needs of our customers.

What property improvements result from adding calcium carbonate mineral filler to polyethylene blends?

- Increased dimensional stability
- Enhanced heat resistance
- Reduced shrinkage
- Diminished surface defects
- Improved cost-effectiveness

In which industries is the blending of polyethylene with calcium carbonate mineral filler utilized?

- Automotive manufacturing
- Construction and sanitary products
- Agriculture

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

PE15CB-HD10-4325

PE30CN-HD60-4403

PE50CN-HD10-4243

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

PE15CB-HD10-4325

High Density Polyethylene Filled with Calcium Carbonate

Product Description

PE15CB-HD10-4325 is high density polyethylene filled with 15% calcium carbonate powder offering good balance of mechanical properties and dimensional stability, stiffness, good thermal and chemical resistance. This grade is designed to be processed in conventional thermoforming process.

General Properties

Material Status	• Commercial: Active
Forms	• Pellets
Processing Method	• Thermoforming
Color	• Black

Physical Properties	Value	Unit	Test Method
Density	1.06	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (190°C/2.16 kg)	≤ 0.5	gr/10 min	ASTM D1238
Shrinkage	3-5	%	Internal

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	21	MPa	ISO 527
Tensile Strength@Break	12	MPa	ISO 527
Elongation@Break	26	%	ISO 527
Elongation@yield	13	%	ISO 527
Flexural Modulus	1000	MPa	ASTM D790

Impact	Value	Unit	Test Method
Notched Izod Impact (23°C)	21	kJ/m^2	ISO 180
Notched charpy Impact (23°C)	...	kJ/m^2	ISO 179

Hardness	Value	Unit	Test Method
Durometer Hardness	60	Shore D	ASTM D2240

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

PE30CN-HD60-4403

High Density Polyethylene Filled with Calcium Carbonate

Product Description

PE30CN-HD60-4403 is high density polyethylene filled with 30% calcium carbonate powder offering good balance of mechanical properties and dimensional stability, stiffness, good thermal and chemical resistance. This compound is used in , home appliance industry, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•White

Properties	Value	Unit	Test Method
Density	1.2	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	20	gr/10 min	ASTM D1238
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

Appropriate miscibility with base resin

The excellent dispersion of filler in the matrix

Increase of productivity

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

PE50CN-HD10-4243

High Density Polyethylene Filled with Calcium Carbonate

Product Description

PE50CN-HD10-4243 is high density polyethylene filled with 50% calcium carbonate.This grade features excellent filler dispersion in polymer resin, good tensile strength and rigidity of produced film.This compound is used in film blowing, T-die casting film production and blow molding process. Moreover, it results in improving productivity and decreasing product costs.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film blowing, blow molding
Color	•White

Properties	Value	Unit	Test Method
Density	1.4	gr/cm^3	ISO 1183
Dispersion	Excellent	...	Internal Method
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of filler in the matrix
- Improve printability
- Increase of productivity
- Decrease finished product cost
- Increase rigidity of produced film
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruAdd

Nirumand Polymer Company manufactures additives that enhance and improve the properties and quality of final products.

What products are included in the NIRUADD product group?

- Various white masterbatches
- Various black masterbatches
- Gloss enhancer
- UV radiation absorber
- Flame retardant
- Anti-block
- Antioxidant

In which industries are NIRUADD products used?

- Packaging
- Household appliances
- Construction and sanitary products

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

- Niruadd-AB
- Niruadd-AO
- Niruadd-Black
- Niruadd-FR
- Niruadd-OB
- Niruadd-UV Absorber
- Niruadd-W20
- Niruadd-W40
- Niruadd-W60
- Niruadd-W70
- Niruadd-W70-UL
- Niruadd-Desiccant
- Niruadd-AntiBacterial
- Niruadd-AntiBacterial-PP-I

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Niruadd–AB

Anti Block Masterbatch

Product Description

Niruadd-AB is an anti block masterbatch is used to prevent sticking two layers. The addition of an anti blocking agent creates space between two plastic layers (surface roughness) and reduces eliminates blocking and sticking of polymeric films. It has been recommended for in PE, PP, PO blown film products, blow molding and casting processing. The addition of anti block masterbatch in film avoids blocking during wind-up, regulates the slip and anti-static properties of additive films and improve macginability at the converter and end-user.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, BOPP film processing, cast film
Appearance	•Translucent

Physical Properties	Value	Unit	Test Method
Density	1.01	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	.....	gr/10 min	ASTM D1238

Usage

The addition rate of the Niruadd-AB depends on thickness of the film and should be adjusted as following instruction:

Thickness (µm)	Niruadd-AB (%)
25	0.75
50	0.50
100	0.25

Special characteristics

Reduce the adhesion effects of plastic products distinctly

When the ratio is suitable, it will not affect the transparent property

Regulate slip and antistatic properties

Facilitates winding and unwinding of the film reels

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Niruadd-AO

Anti Oxidant Masterbatch

Product Description

Niruadd-AO is an anti oxidant masterbatch is used to provide protection against thermal degradation of polymer during process and improves product performance in the long term application. it can be used for the thermal stabilization of HDPE, LDPE, LLDPE, EVA and PP. It should be added during the extrusion process where high temperatures or high residence times cause degradation, cross linking, gel formation, carbonised particles and loss of mechanical properties. Niruadd-AO is the preferred stabilizer system for Blown Film, Profile Extrusion, Film Casting, etc. where the processing temperature does not exceed 280 °C.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Pipe extrusion, Extrusion blow molding, Profile and Sheet extrusion
Appearance	•Translucent

Physical Properties	Value	Unit	Test Method
Density	0.93	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (190°C/2.16 kg)	15	gr/10 min	ASTM D1238

Usage

The addition rate of the Niruadd-AO depends on the processing temperature and the residence time of the material in the machine.

Stabilization improvement: 1-2%

During recycling: 2-3%

Extrusion of rework: 2-3%

Special characteristics

Long term thermal stability

Protection against degradation of polymer during repeated processing

Improvement in ageing resistance-high temperature processing

Excellent dispersion

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Niruadd-Black
Black Masterbatch

Product Description

Niruadd-Black is a black colour masterbatch which is contained up to 40% carbon black. This masterbatch is applicable in high quality specialty applications such as film coating, pipe extrusion, molding for automotive and houseware parts and protectivity against UV light. This masterbatch has an excellent dispersion which is critical for an appropriate and homogeneous colour distribution of finished products.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Injection molding
Appearance	•Black

Physical Properties	Value	Unit	Test Method
Density	1.15	gr/cm^3	ISO 1183
Carbon Content	38 - 42	%	Internal
Carbon Black Dispersion	OK	-	Internal
Moisture Content	< 0.2	%	ASTM D570

Usage

Niruadd-Black can be added from 1 to 3% during processing of polymer products. The addition level will vary depending on the application of product.

Special characteristics

- Excellent dispersion
- Formulation suited for thick and thin wall molding applications
- Formulations in polyolefins and engineering resins
- Easy to incorporate
- Improves appearance of recycled polymers
- Glossy surface
- It gives protectivity against UV light

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-FR

Flame Retardant Compound

Product Description

Niruadd-FR is an especial PP compound having self-extinguishability making it much safer for the use in the electrical goods, housewares and home appliance applications complying with the UL-94 regulations, widely accepted fire safety standard. Niruadd-FR provides excellent balance of mechanical properties and processability within flame retardant properties.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Appearance	•Natural

Physical Properties	Value	Unit	Test Method
Density	2.3	gr/cm^3	ISO 1183

Usage

Niruadd-FR can be physically added to the neat PP. The recommended minimum quantity to obtain V-0 value of flame retardancy is about 10 % by wieght. The addition level will vary depending on the application of product and required self-extinguishability.

Special characteristics

The excellent dispersion of the additives in the base resin

Easy processing without affecting the mechanical properties of the finished product

Eliminate microscopic phase separation in finished products.

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Niruadd-OB

Optical Brightener Masterbatch

Product Description

Niruadd-OB is an optical brightener masterbatch which is called Fluorescent Whitening agents. This masterbatch is added in polymers to reduce yellowing, improve whiteness and to enhance the brightness of a product. This masterbatch works via absorbing light in the UV spectrum and emits light in the blue region of visible spectrum to yield a brighter and fresher appearance.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Cast film, Injection molding
Appearance	•Optical Green

Physical Properties	Value	Unit	Test Method
Density	0.93	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	....	gr/10 min	ASTM D1238

Usage

Niruadd-OB can be added from 0.1 to 1% during processing of polymer. The addition level will vary depending on the application of product.

Special characteristics

Brighten colors

Improve initial colors

Reduce yellowing of plastics

Get brilliancy of colored or black pigmented articles

Improve brightness of recycled polymers

Glossy surface

It gives smooth and glossy surface of film

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-UV Absorber
Light Stabilizer Masterbatch

Product Description

Niruadd-UV Absorber is a light stabilizer masterbatch is used to provide protection against UV-radiation of the sun which cause to initiate or accelerate chain scission and/or cross-linking reactions. This masterbatch is added in polymers to reduce loosing its properties and becoming brittle. This masterbatch contains additives with very low volatility and can be used in both cast and blown film processes for the manufacture of films with different thickness. It can be used with all types of polyolefines PE, PP, EVA and other copolymers.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	• Blown film, Cast film, Injection molding
Appearance	•Light yellow

Physical Properties	Value	Unit	Test Method
Density	0.9	gr/cm^3	ISO 1183
Color change (db) (after 9 hr of UV radiation)	< 5	-	Internal
Color change (db) (after 18 hr of UV radiation)	< 6	-	Internal

Usage

Niruadd-Anti UV can be added from 1.5 to 5% during processing of polymer. The addition level will vary depending on the application of product.

Special characteristics

The excellent dispersion of the additives in the base resin

Easy processing without affecting the mechanical properties of the finished product

Eliminate yellowing of plastics in exposed of sun light

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-W20

White Masterbatch

Product Description

Niruadd-W20 is an white colour masterbatch which is contained up to 20% pigment. This masterbatch is applicable in good quality specialty applications such as film coating, extrusion coating, molding for food contact, medical devices and products for photographic applications. This masterbatch has an excellent dispersion which is critical for an appropriate and homogeneous colour distribution of finished products.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Cast film, Injection molding
Appearance	•White

Physical Properties	Value	Unit	Test Method
Density	1.95	gr/cm^3	ISO 1183
Filler Content	79	%	ISO 3451/1
Pigment Content	20	%	-
Dispersion	OK	-	Internal
Moisture Content	< 0.25	%	ASTM D570

Usage

Niruadd-W20 can be added from 1 to 5% during processing of polymer products. The addition level will vary depending on the application of product.

Special characteristics

- Excellent dispersion
- Formulations in polyolefins and engineering resins
- Easy to incorporate
- Improve whiteness of recycled polymers
- Glossy surface
- It gives smooth and glossy surface of film

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-W40

White Masterbatch

Product Description

Niruadd-W40 is an white colour masterbatch which is contained up to 40% pigment. This masterbatch is applicable in good quality specialty applications such as film coating, extrusion coating, molding for food contact and products for photographic applications. This masterbatch has an excellent dispersion which is critical for an appropriate and homogeneous colour distribution of finished products.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Cast film, Injection molding
Appearance	•White

Physical Properties	Value	Unit	Test Method
Density	1.97	gr/cm^3	ISO 1183
Filler Content	79	%	ISO 3451/1
Pigment Content	40	%	-
Dispersion	OK	-	Internal
Moisture Content	< 0.25	%	ASTM D570

Usage

Niruadd-W40 can be added from 1 to 5% during processing of polymer products. The addition level will vary depending on the application of product.

Special characteristics

- Excellent dispersion
- Formulations in polyolefins and engineering resins
- Easy to incorporate
- Improve whiteness of recycled polymers
- Glossy surface
- It gives smooth and glossy surface of film

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-W60

White Masterbatch

Product Description

Niruadd-W60 is an white colour masterbatch which is applicable in high quality specialty applications such as film coating, extrusion coating, molding for food contact, medical devices and products for photographic applications. This masterbatch has an excellent dispersion which is critical for an appropriate and homogeneous colour distribution of finished products.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Cast film, Injection molding
Appearance	•White

Physical Properties	Value	Unit	Test Method
Density	1.56	gr/cm^3	ISO 1183
Pigment Content	45	%	ISO 3451/1
Caco3 Content	15	%	ISO 3451/1
Dispersion	OK	-	Internal
Moisture Content	< 0.25	%	ASTM D570

Usage

Niruadd-W60 can be added from 1 to 5% during processing of polymer products. The addition level will vary depending on the application of product.

Special characteristics

- Excellent dispersion
- Formulation suited for thick and thin wall molding applications
- Formulations in polyolefins and engineering resins
- Easy to incorporate
- Improve whiteness of recycled polymers
- Glossy surface
- It gives smooth and glossy surface of film

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-W70

White Masterbatch

Product Description

Niruadd-W70 is a super white colour masterbatch which is applicable in high quality specialty applications such as film coating, extrusion coating, molding for food contact, medical devices and products for photographic applications. This masterbatch has an excellent dispersion which is critical for an appropriate and homogeneous colour distribution of finished products.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Cast film, Injection molding
Appearance	•White

Physical Properties	Value	Unit	Test Method
Density	1.75	gr/cm^3	ISO 1183
Filler Content	70	%	ISO 3451/1
Pigment Content	55	%	-
Dispersion	OK	-	Internal
Moisture Content	< 0.25	%	ASTM D570

Usage

Niruadd-W70 can be added from 1 to 5% during processing of polymer products. The addition level will vary depending on the application of product.

Special characteristics

- Excellent dispersion
- Formulation suited for thick and thin wall molding applications
- Formulations in polyolefins and engineering resins
- Easy to incorporate
- Improve whiteness of recycled polymers
- Glossy surface
- It gives smooth and glossy surface of film

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-W70-UL
White Masterbatch

Product Description

Niruadd-W70-UL is an ultra white colour masterbatch which is contained up to 70% white pigment. This masterbatch is applicable in high quality specialty applications such as film coating, extrusion coating, molding for food contact, medical devices, injection molded parts and products for photographic applications. This masterbatch has superior dispersion which is critical for an appropriate and homogeneous colour distribution of finished products.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Blown film, Cast film, Injection molding
Appearance	•Ultra white

Physical Properties	Value	Unit	Test Method
Density	1.75	gr/cm^3	ISO 1183
Filler Content	70	%	ISO 3451/1
Pigment Content	70	%	-
Dispersion	OK	-	Internal
Moisture Content	< 0.25	%	ASTM D570

Usage

Niruadd-W70-UL can be added from 1 to 5% during processing of polymer products. The addition level will vary depending on the application of product.

Special characteristics

Excellent dispersion

Formulation suited for thick and thin wall molding applications

Formulations in polyolefins and engineering resins

Easy to incorporate

Improve whiteness of recycled polymers

Glossy surface

It gives smooth and glossy surface of film

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-Desiccant

Desiccant Masterbatch

Product Description

Niruadd-Desiccant is a moisture absorber masterbatch which is contained up to 80% filler. This compound is used in film blowing, T-die casting film production, blow molding, extrusion and injection molding process. Moreover, it results in improving productivity and saving the energy by eliminating the pre-drying.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film blowing, Blow molding, Cast film, Extrusion, Injection molding
Appearance	•Off-White

Physical Properties	Value	Unit	Test Method
Density	2.22	gr/cm^3	ISO 1183
Filler Content	80 ± 3	%	ISO 3451/1
Dispersion	OK	-	Internal
Moisture Content	≤ 0.3	%	ASTM D570

Stability Life Time	Value	Unit	Test Method
Stability life time after opening bag	48	Hour	-

Usage

Niruadd-Desiccant can be added from 1 to 5% during processing of polymer products. The addition level will vary depending on the application and moisture levels within the compound.

Special characteristics

Excellent dispersion

Compatible with polyolefins and engineering resins

Prevent blisters and bubbles in the finished product.

Decrease moisture of polymer compounds

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-Antibacterial

Antibacterial Masterbatch

Product Description

Niruadd-Antibacterial is an effective additive designed to enhance products with antibacterial properties. This masterbatch is approved in compliance with national standards 11070 and 10900. It is specially formulated for use with polyethylene, making it a versatile solution for a wide array of plastic-based applications.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film blowing, Cast film, Extrusion
Appearance	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.01	gr/cm^3	ISO 1183
Melt Mass-flow Rate (MFR) (190°C/2.16 kg)	≤ 2	gr/10 min	ASTM D1238

Usage

Niruadd-AntiBacterial can be added in the range of 8% to 12% during the processing of polymer products. The specific addition level will vary depending on the application and the desired level of bacterial protection.

Special characteristics

This product is specially formulated to inhibit the growth of Staphylococcus and Klebsiella pneumoniae bacteria on polyethylene surfaces.

Excellent dispersion of additives throughout the matrix

❖ Values shown are average & are not to be considered as product specifications.

Nirumand Polymer

Technical Data Sheet

Niruadd-Antibacterial-PP-I

Antibacterial Masterbatch

Product Description

Niruadd-Antibacterial-PP-I is an effective additive designed to enhance products with antibacterial properties. This masterbatch is approved in compliance with national standards 11070 and 10900. It is specially formulated for use with polypropylene, making it a versatile solution for a wide array of plastic-based applications.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection moulding
Appearance	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.01	gr/cm³	ISO 1183
Melt Mass-flow Rate (MFR) (230°C/2.16 kg)	6-10	gr/10 min	ASTM D1238

Usage

Niruadd-AntiBacterial can be added in the range of 8% to 12% during the processing of polymer products. The specific addition level will vary depending on the application and the desired level of bacterial protection.

Special characteristics

This product is specially formulated to inhibit the growth of Staphylococcus and Klebsiella pneumoniae bacteria on polypropylene surfaces.

Excellent dispersion of additives throughout the matrix

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruCalcit

This group comprises products based on polyethylene and polypropylene, manufactured by Nirumand Polymer Company in various grades, enhanced with the addition of calcium carbonate filler to meet customer specifications.

The incorporation of calcium carbonate filler in the Niru-Calcit product group offers several advantages, including:

- Cost reduction
- Improved processability
- Preservation of printability
- Dimensional stability

Moreover, the use of mineral filler allows these products to be classified as environmentally friendly.

The NiruCalcit product group finds applications in various industries, such as:

- Packaging
- Household appliances
- Sanitary products (or Personal care products)
- Gardening and agriculture

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit-H50

Nirucalcit-H60-CUW

Nirucalcit-HD20

Nirucalcit-I60

Nirucalcit-LD20

Nirucalcit-LLD10

Nirucalcit-Raffia

Nirucalcit-Raffia E

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit–H50

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

NIRUCALCIT-H50 is homopolymer polypropylene filled with calcium carbonate with increased stiffness and better dimensional stability. This grade features medium melt flow index and excellent filler dispersion in polymer resin. This compound is used in garden furniture, home appliance industries, automotive applications, toys, housewares and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•White

Properties	Value	Unit	Test Method
Density	1.99	gr/cm^3	ISO 1183
Filler Content	82	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of the filler in the matrix
- Medium melt flow index
- Increase of productivity
- Decrease product cost
- Increase stiffness and dimensional stability of finished product
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit-H60-CUW

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

NIRUCALCIT-H60-CUW is homopolymer polypropylene filled with calcium carbonate with increased stiffness and better dimensional stability. This grade features high melt flow index and snowy/shiny appearance in finished products. This compound is used in garden furniture, home appliance industries, sanitary, housewares, electrical goods and other utility products. This grade is designed to be processed in conventional injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Ultra White

Properties	Value	Unit	Test Method
Density	1.93	gr/cm^3	ISO 1183
Filler Content	80	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of the filler in the matrix
- High melt flow index
- Increase of productivity
- Increase stiffness and dimensional stability of finished product
- Snowy/shiny appearance in finished products
- No need to add white pigment

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit–HD20

High Density Polyethylene Filled with Calcium Carbonate

Product Description

NIRUCALCIT-HD20 is high density polyethylene filled with calcium carbonate. This grade features excellent filler dispersion in polymer resin, good tensile strength and rigidity of produced film. This compound is used in film blowing, T-die casting film production and blow molding process. Moreover, it results in improving productivity and decreasing product costs.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film blowing, blow molding
Color	•White

Properties	Value	Unit	Test Method
Density	2	gr/cm^3	ISO 1183
Filler Content	82	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of filler in the matrix
- Improve printability
- Increase of productivity
- Decrease finished product cost
- Increase rigidity of produced film
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit-I60

Low Density Polyethylene Filled with Calcium Carbonate

Product Description

NIRUCALCIT-I60 is low density polyethylene filled with calcium carbonate. It combines good toughness and stiffness, high flow and productivity of product. Moreover, it reduces raw materials cost. This grade is designed to be processed in injection molding process.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•White

Properties	Value	Unit	Test Method
Density	1.98	gr/cm^3	ISO 1183
Filler Content	80	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of filler in the matrix
- Improve impact resistance of neat polyethylene
- Increase of productivity
- Decrease finished product cost
- Increase stiffness and dimensional stability
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit–LD20

Low Density Polyethylene Filled with Calcium Carbonate

Product Description

NIRUCALCIT-LD20 is low density polyethylene filled with calcium carbonate. This grade features excellent filler dispersion in polymer resin, good tear resistance and flexibility of produced film. This compound is used in film blowing process. Moreover, it results in improving productivity and decreasing product costs.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film blowing
Color	•White

Properties	Value	Unit	Test Method
Density	2	gr/cm^3	ISO 1183
Filler Content	82	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of filler in the matrix
- Improve printability
- Increase of productivity
- Decrease finished product cost
- Increase tear resistance and flexibility of produced film
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit-LLD10

Linear Low Density Polyethylene Filled with Calcium Carbonate

Product Description

NIRUCALCIT-LLD10 is linear low density polyethylene filled with calcium carbonate. This grade features excellent filler dispersion in polymer resin, a balance of good tensile strength and flexibility of produced film and higher filler loading in base resin. This compound is used in film blowing process. Moreover, it results in improving productivity and decreasing product costs.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film blowing
Color	•White

Properties	Value	Unit	Test Method
Density	2	gr/cm^3	ISO 1183
Filler Content	82	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.25	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of filler in the matrix
- Provide a balance of tensile strength and flexibility of film
- Increase of productivity
- Decrease finished product cost
- Increase filler loading in base resin
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit-Raffia

Homopolymer Polypropylene Filled with Calcium Carbonate

Product Description

NIRUCALCIT-Raffia is homopolymer polypropylene filled with calcium carbonate. This grade features medium melt flow index, excellent filler dispersion in polymer resin and higher filament strength. This compound is used in thin cast films, PP multi-filament yarn production, fiber spinning and also can be used in conventional raffia application. This grade is designed to be processed in film casting and fiber spinning processes.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film casting, Fiber spinning
Color	•White

Properties	Value	Unit	Test Method
Density	1.93	gr/cm^3	ISO 1183
Filler Content	80	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.1	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of the filler in the matrix
- Medium melt flow index
- Increase of productivity
- Decrease product cost
- Increase extensional resistance of produced filament
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

Nirucalcit-Raffia E

Polyolefin Filled with Calcium Carbonate

Product Description

NIRUCALCIT-Raffia E is polyolefin filled with calcium carbonate. This grade features medium melt flow index, excellent filler dispersion in polymer resin and higher filament strength. This compound is used in thin cast films, PP multi-filament yarn production, fiber spinning and also can be used in conventional raffia application. This product is an economic grade and designed to be processed in film casting and fiber spinning processes.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Film casting, Fiber spinning
Color	•White

Properties	Value	Unit	Test Method
Density	1.93	gr/cm^3	ISO 1183
Filler Content	80	%	ISO 3451/1
Dispersion	Excellent	...	Internal
Moisture	≤ 0.2	%	ASTM D570

Special Characteristics

- Appropriate miscibility with base resin
- The excellent dispersion of the filler in the matrix
- Medium melt flow index
- Increase of productivity
- Decrease product cost
- Increase extensional resistance of produced filament
- White pigment saving

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

NiruBio

This group includes two categories of products: Bio-based and Biodegradable , manufactured by Nirumand Polymer Company.

- Bio-based products are based on polypropylene and include starch powder. They can be shaped using injection, thermoforming, and vacuum forming processes.
- Biodegradable products are based on polylactic acid (PLA) and polybutylene adipate terephthalate (PBAT), and they decompose completely in the environment. These products are well-suited for the film extrusion process.

Technical Data Sheet

FILLED & REINFORCED
ENGINEERING PLASTICS

Next page

Back

Nirumand Polymer

NiruBio

NiruBio products are environmentally friendly and serve as suitable alternatives to traditional polymer raw materials, leading to a reduction in the consumption of non-renewable petroleum-based resources and greenhouse gas emissions.

Where are NiruBio products typically used?

- Production of plant-based disposable containers such as food containers, spoons, forks, and cups
- Biodegradable films
- Application in 3D printers

Nirumand Polymer

Technical Data Sheet

P20SN-H30-4852

P20SN-H50-4852

P40SN-H30-4853

P40SN-H50-4853

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20SN-H30-4852

Biobased Compound

Product Description

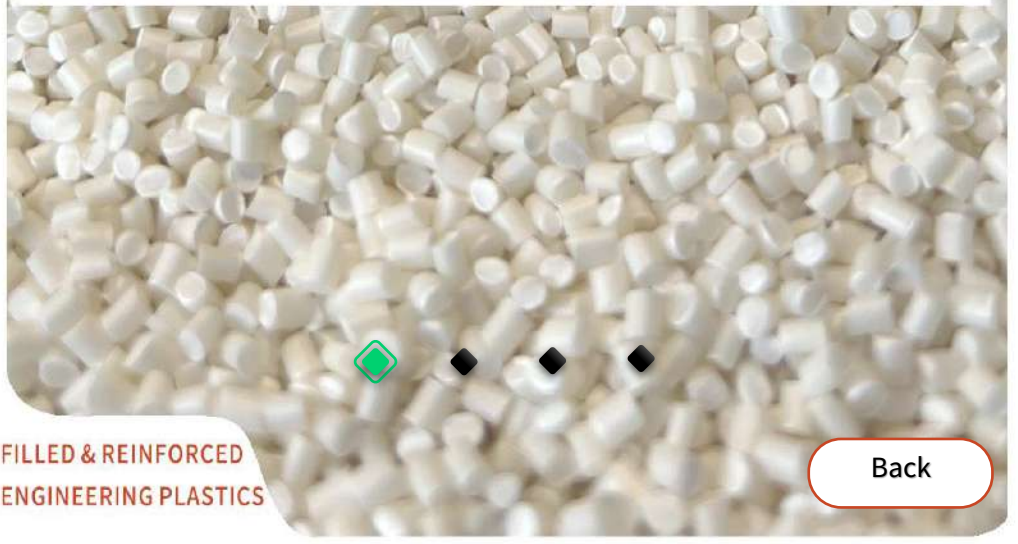
P20SN-H30-4852 is a bio-based compound filled with 20% starch that offers good balance of mechanical properties, good dimensional stability and excellent filler dispersion in polymer resin. This compound is used in disposable containers. The above grade is designed to be used in thermoforming process. These materials are environmentally friendly.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Thermoforming
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.44	gr/cm3	ISO 1183
Melt Mass-flow Rate (MFR)	7	gr/10 min	ASTM D1238
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	12	Mpa	ISO 527
Flexural Modulus	2000	Mpa	ASTM D790

❖ Values shown are average & are not to be considered as product specifications.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P20SN-H50-4852

Biobased Compound

Product Description

P20SN-H50-4852 is a bio-based compound filled with 20% starch that offers good balance of mechanical properties, good dimensional stability and excellent filler dispersion in polymer resin. This compound is used in disposable containers. The above grade is designed to be used in injection molding process. These materials are environmentally friendly.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	• Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.44	gr/cm3	ISO 1183
Melt Mass-flow Rate (MFR)	12	gr/10 min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength@yield	13	Mpa	ISO 527
Flexural Modulus	2200	Mpa	ASTM D790

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40SN-H30-4853

Biobased Compound

Product Description

P40SN-H30-4853 is a bio-based compound filled with 40% starch that offers good balance of mechanical properties, good dimensional stability and excellent filler dispersion in polymer resin. This compound is used in disposable containers. The above grade is designed to be used in thermoforming process. These materials are environmentally friendly.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Thermoforming
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.32	gr/cm3	ISO 1183
Melt Mass-flow Rate (MFR)	7	gr/10 min	ASTM D1238
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	11	Mpa	ISO 527
Flexural Modulus	1600	Mpa	ASTM D790

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Technical Data Sheet

P40SN-H50-4853

Biobased Compound

Product Description

P40SN-H50-4853 is a bio-based compound filled with 40% starch that offers good balance of mechanical properties, good dimensional stability and excellent filler dispersion in polymer resin. This compound is used in disposable containers. The above grade is designed to be used in injection molding process. These materials are environmentally friendly.

General Properties

Material Status	•Commercial: Active
Forms	•Pellets
Processing Method	•Injection molding
Color	•Natural

Physical Properties	Value	Unit	Test Method
Density	1.32	gr/cm3	ISO 1183
Melt Mass-flow Rate (MFR)	12	gr/10 min	ASTM D1238
Mechanical Properties	**Value**	**Unit**	**Test Method**
Tensile Strength@yield	11	Mpa	ISO 527
Flexural Modulus	1700	Mpa	ASTM D790

❖ Values shown are average & are not to be considered as product specifications.

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Services

- laboratory services
- laboratory tests
- laboratory equipment

FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

laboratory services

- Specialized laboratory facilities
- Free technical and specialized consultations to assist customers in selecting suitable raw materials.
- Providing a platform for industry collaboration with universities, fostering cooperation with talented researchers and students in developing new products and innovations in the polymer industry.
- Development of scientific and research projects in the polymer industry and engineering plastic parts.
- Conducting scientific and research projects in the polymer industry and development of engineering plastic parts.

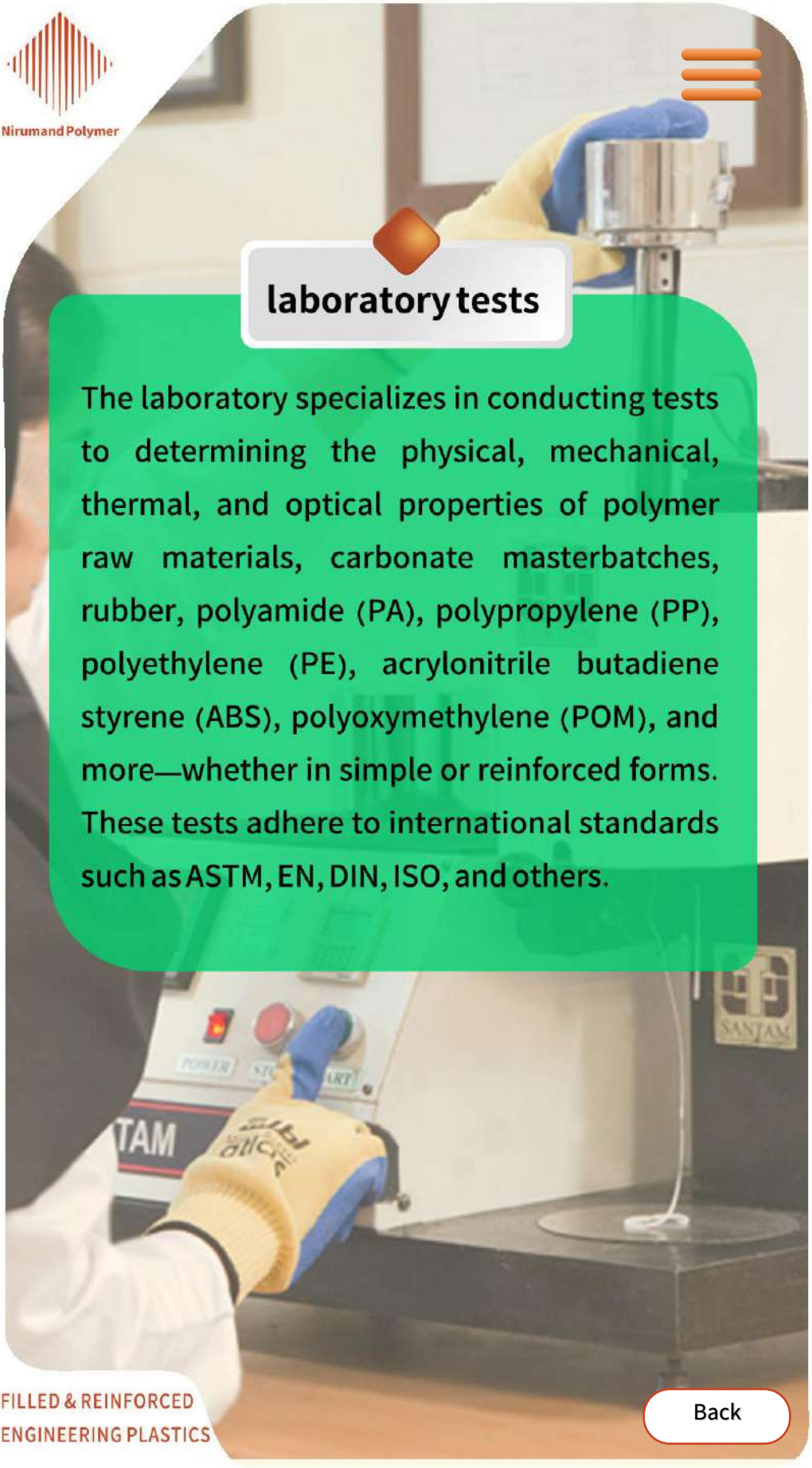
FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

laboratory tests

The laboratory specializes in conducting tests to determining the physical, mechanical, thermal, and optical properties of polymer raw materials, carbonate masterbatches, rubber, polyamide (PA), polypropylene (PP), polyethylene (PE), acrylonitrile butadiene styrene (ABS), polyoxymethylene (POM), and more—whether in simple or reinforced forms. These tests adhere to international standards such as ASTM, EN, DIN, ISO, and others.



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Laboratory equipment

The laboratory of Nirumand Polymer Company, with certificate number 17025, is equipped with modern and up-to-date facilities to conduct the following tests based on customer requests.

TEST	STANDARD
ISO 3451/1	FILLER CONTENT
ASTM D570	MOISTURE CONTENT
ASTM D2240	HARDNESS
ISO 180/ASTM D256	IZOD IMPACT STRENGTH
ISO 179	CHARPY IMPACT STRENGTH
ASTM D1238	MFI
ISO 1183	DENSITY
ASTM D790	FLEXURAL MODULUS
ISO 527	TENSILE
ASTM D92	FLASH POINT
ASTM D648/ISO 75	HDT
ASTM D1525	VICAT
ISO 11357-6	DSC.OIT
ASTM D1986	VISCOSITY

Nirumand Polymer

Why Nirumand Polymer?

If you are in search of a reputable and experienced company in the production of engineering and reinforced compounds, we recommend Nirumand Polymer Company for the following reasons:

- A leading manufacturer in the field of reinforced compounds.
- Boasting half a century of valuable experience.
- An innovative and knowledge-based company specializing in product manufacturing.
- Commitment to stability in quality and meticulous attention to details.
- Equipped laboratory with ISO/IEC 17025 accreditation from the National Accreditation Center of
- Application of engineering knowledge in line with the latest global technology.
- Use of modern and up-to-date equipment.
- A dynamic export unit.
- Commitment to environmentally friendly practices.
- Choosing Nirumand Polymer Company ensures that you benefit from a wealth of experience, cutting-edge technology, and a commitment to quality and environmental responsibility.

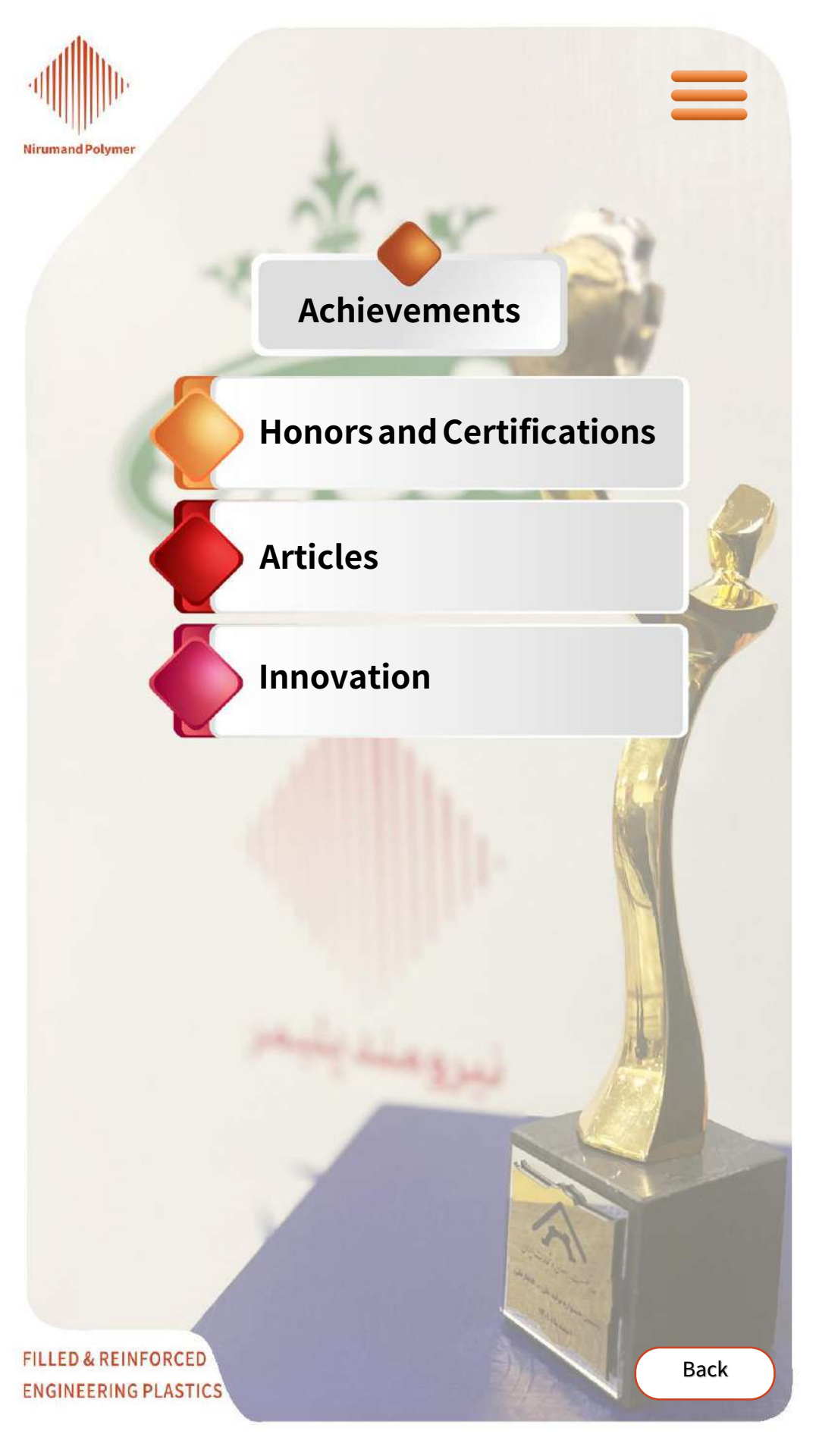
Nirumand Polymer

Achievements

Honors and Certifications

Articles

Innovation



FILLED & REINFORCED
ENGINEERING PLASTICS

Back

Nirumand Polymer

Achievements and Certifications

2016:

- Received a 3-star commendation from the Excellence Award.

2019:

- Attained the title of knowledge-based for 14 products manufactured by Nirumand Polymer.

2020:

- Received Research and Development Certification from the Ministry of Industry, Mine, and
- Trade.

  Selected as an export sample unit for small industries.

2021:

- Selected as a dynamic export unit in the Festival of the Iranian Polymer Industries Association.
- Chosen as an innovative company and awarded a one-star merit badge at the 4th National Innovation Conference in the polymer industry.
- Selected as the top knowledge-based export company in the Knowledge-Based Export Companies Club.

Nirumand Polymer

Achievements and Certifications

2022:

- Recognized as a four-star export company in the Knowledge-Based Export Companies Club.
- Awarded the top manufacturer badge at the National Production Festival - National Honor.
- Attained the title of dynamic exporter in the 2nd International Export Development Symposium for polymer industries.
- Successfully renewed the knowledge-based certificate.

Certifications:

- ISO 17025 for Lab Management

Nirumand Polymer

Articles

Research Articles by Nirumand Polymer Pars in the Masterbatch and Compound Conference:

Year	Title
2022	Effect of PEG on the Mechanical and Anti-Bacterial Properties of PLA in the presence of Nano-silver particles
2021	Modification of the Mechanical Properties of Recycled Acrylonitrile Butadiene Styrene (ABS) using Compatibilizers and Fillers
2019	A review of polyethylene breathable film applications and properties

FILLED & REINFORCED
ENGINEERING PLASTICS

Nirumand Polymer

Articles

Research Articles by Nirumand Polymer Pars in the International Seminar on Polymer Science and Technology (ISPST):

Year	Title
2022	Mechanical and electro conductive properties of glass fiber reinforced polyethylene filled with graphite
2022	Improvement of thermal properties of polypropylene and investigation of mechanical properties of Cyclic Copolymer/polypropylene blend
2020	Investigation of biodegradation behavior and mechanism, thermal degradation behavior and mechanical properties of biopolymers: A review

Nirumand Polymer

Articles

Research Articles by Nirumand Polymer Pars in the National Polymer Conference of Iran:

Year	Title
2021	**Review of Flame Retardant Classification, Mechanisms, and Investigation and Determination of Suitable Flame Retardants for ABS, PP, PC, PA Polymers.**

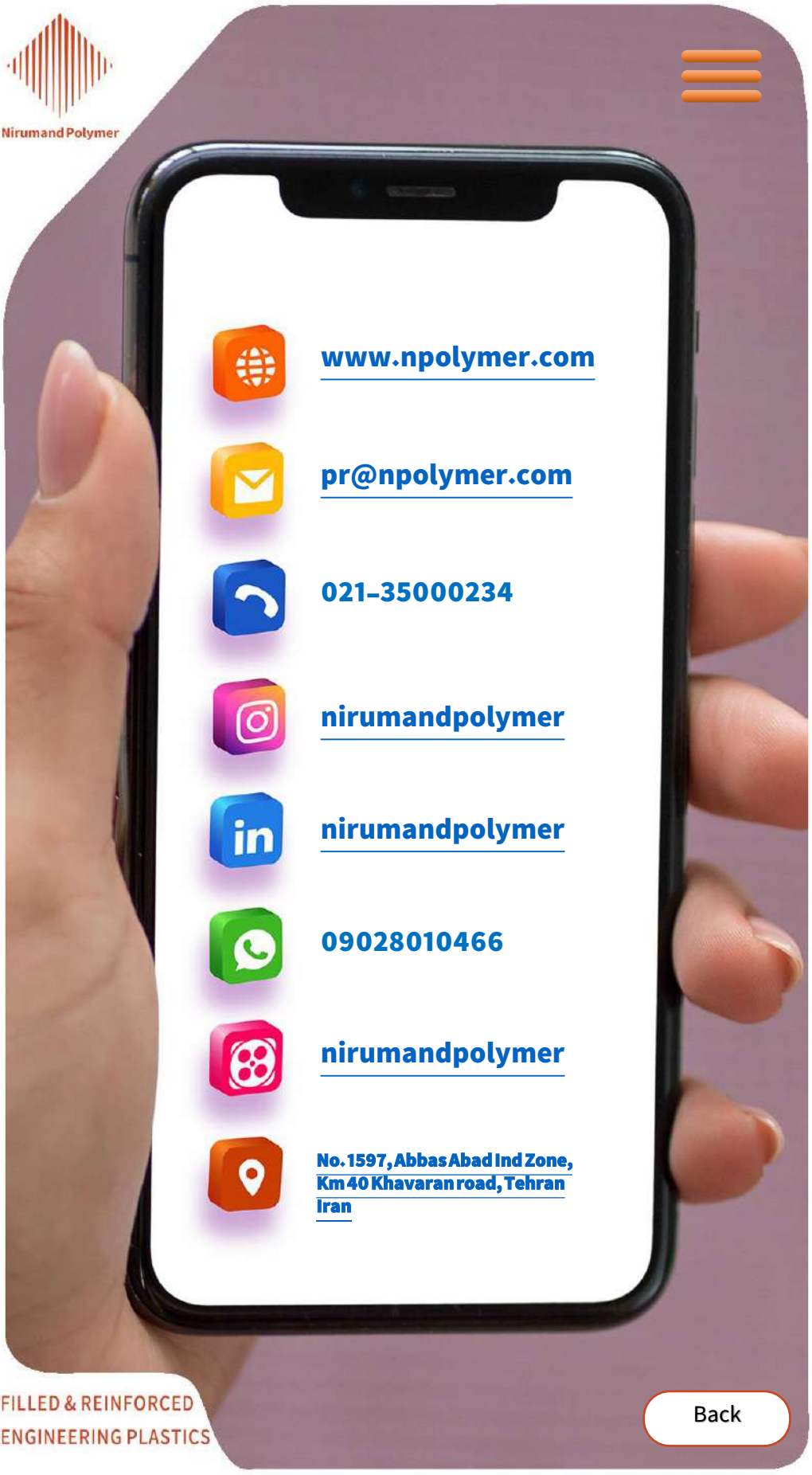
Nirumand Polymer

INNOVATION:

Innovation at Nirumand Polymer Company is driven by our dedicated and experienced teams, including our research team. Our goal is to continually expand our product portfolio and address customer needs in inventive ways. Some of the innovations in our manufactured products include:

- Production of Bio-based Compounds: We aim to reduce the dependence on non-renewable oil resources by manufacturing bio-based compounds. This initiative contributes to the production of environmentally friendly products.
- Production of Polymer Alloys : We create polymer alloys to optimize properties, enhancing the final product's performance while maintaining cost-effectiveness.
- Compounds with Electrical Conductivity: We produce compounds with electrical conductivity, particularly valuable in the manufacturing of certain automotive components.
- Improvement of properties: Our commitment extends to developing properties such as impact and scratch resistance in our products, ensuring durability and longevity.
- Use of Recycled Materials: In certain products, we incorporate recycled materials without compromising properties, thereby reducing costs and contributing to our commitment to reducing plastic waste and preserving the environment.
- Our dedication to innovation underscores our commitment to sustainability, cost-effectiveness, and meeting the evolving needs of our customers.

Nirumand Polymer



www.npolymer.com

pr@npolymer.com

021-35000234

nirumandpolymer

nirumandpolymer

09028010466

nirumandpolymer

No. 1597, Abbas Abad Ind Zone,
Km 40 Khavaran road, Tehran
Iran

FILLED & REINFORCED
ENGINEERING PLASTICS

Back