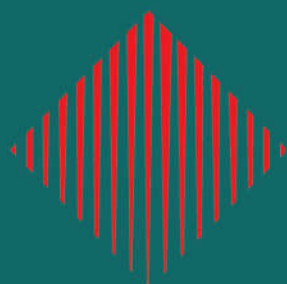


NIRUMAD POLYMER

YOUR TECHNICAL PARTNER !

Filled & Reinforced Engineering Plastics



Nirumad Polymer Pars
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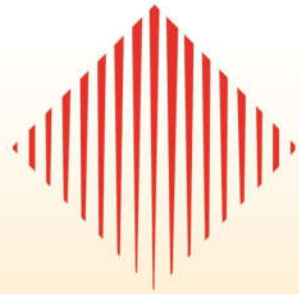
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NIRUMAND POLYMER

**Filled &
Reinforced
Engineering
Plastics**

We Reinforce Plastics!

PP Compounds

PA Compounds

PE Compounds

Special Compounds

Brief introduction

Nirumand Polymer Pars Co. Ltd. is an industrial company which received its establishment license from MOI (Ministry of Industry) in 1973. Nirumand Polymer started its work by producing plastic households and plastic auto parts. Back in early 1997, the company began to produce plastic and auto industrial panels, along with the production of filled and reinforced engineered plastics for auto part manufacturers and other industrial sectors (such as electronics, home appliances, sanitary, construction, pipes, film and packaging, woven-bag, etc.)

Our mission is to produce filled and reinforced engineering plastics based on customers' demands in various fields, especially automotive considering the international standards.

Since 2005, the quality assurance in Nirumand Polymer Pars Co. was established to meet the customer's satisfaction. This company has also received ISO/IEC 9001:2008 from URS-UK (UCAS), and Reach Compliance from ANAS-BNR in order to export its products to the European countries. Nirumand Polymer is the only company which has been awarded by Iran's Petrochemical Co. an Excellence Certificate 3 Stars.

In addition, the laboratory of Nirumand Polymer has been certified by ISO/IEC 17025:2005 from National Accreditation Center of Iran (NACI) and is capable of providing lab services to its customers based on ISO, ASTM and ISIRI standards.

Updating the quality standard systems, the process of achieving the certificate of ISO 9001:2015 and IATF 16949:2016 from the URS is ongoing.

We successfully have exported our products to Eastern Europe, Russia, Romania, and neighboring countries including Turkey, Iraq, Armenia, Azerbaijan, Afghanistan, Pakistan, Turkmenistan and Uzbekistan.



PP + Talc Powder

Nirumand Polymer Pars is one of the main producers of filled and reinforced polypropylene with various percentages of talc powder. Adding talc powder has the following advantages: better flexural strength, higher modulus, dimensional stability, improved thermal resistance, increase of creep resistance, lower shrinkage and cost reduction. PP+Talc compounds are applicable in constructional, electrical and automotive parts. Nirumand Polymer is capable of producing PP+Talc powder in various colors. This compound is better to be dried before injection.

Product	Application	Products	Application
P15TB-P8708	Heater Box	P20TN-C65	Heater Fan
P20TB-2441	Heater Box	P20TN-H40	Air Filter Box
P20TB-C40R	Steering Wheel Column	P22TB-P8719	Side Cladding (Peugeot 206)
P20TB-C40R	Canister Part	P25TB-1558	Badge Base
P20TB-H40	Bumper Brackets	P30TB-C40R	Heater Box
P20TB-H46R	Ventilator Box	P30TB-C40R	Gear Lever Box
P20TB-H46R	Air Conditioner Lid	P30TB-C40R	Radiator Fan Frame
P20TB-P8509	Air Filter Box	P30TW-H46	Ceiling Light Trim
P20TC-1618	Door Panel (Pride)	P40TB-H46R	Light Housing
P20TC-2049	Column Clouding	P40TB-H46R	Radiator container
P20TC-2347	Interior Parts	P40TC-2031	Light Housing
P20TC-H40	Console (Pride)	P40TN-B-H40	Canister
P20TW-H40	Flash Tank Body	P40TN-C40-UV	Wiper Frame

Product	Code	Features	Filler Content	Hardness (Shore D)	Melt Index (gr/10min)	Izod Impact Strength (kJ/m ²)	Density (gr/cm ³)	Shrinkage (%)	Tensile Strength @Break (MPa)	Elongation@Break (%)	Flexural modulus (MPa)
			ISO 3451/1	ASTM D2240	ASTM D1238	ISO 180	ISO 1138	ASTM D955	ISO 527	ISO 527	ISO 178
			750 °C 1hr	23°C	2.16kg 230°C	Notched 23°C	23°C	23°C	(50mm /min)	(50mm /min)	(mm /min)
			±2	±2	±2	±1	±0.015	±0.1	±2	±3	±200
PP + 20% T	P20TN-C40	high impact strength suitable for injection molded parts used in automotive industry	20	67	8	>13	1.05	1.2	≥16	≥25	1300
	P20TN-H40	High modulus and high tensile strength suitable for injection molded parts	20	70	7	3.5	1.04	1.3	24	15	2000
PP + 40% T	P40TN-C40	High impact strength, suitable for injection molded parts like automotive appliances	40	70	7	8	1.3	1.1	16	8	2000
	P40TN-H40	Good modulus and good strength, suitable for injection molded parts like automotive industry	40	70	8	3	1.3	1.1	≥19	6	2800

* The values shown are only for indication. They are not to be considered as product specifications.

* There are many other grades complying to the requirements by customer.



PP + GF

Nirumand Polymer Pars Co. is one of the main producers of polypropylene reinforced with glass fiber. PP+GF compound has high tensile strength, high modulus, high thermal resistance, high dimensional stability, reduced surface sink mark, high creep resistance, which makes it suitable for using it in automotive industry, electrical and construction parts as well as office furniture.

Product	Application
P20GB-C45	Gas Tank Lid
P30GB-H40	Window Roller Parts
P30GB-H40	Fan Radiator
P30GB-C40R	Condenser Fan/Frame
P30GN-C70	Bumper Retainer
P30GN-H40	Radiator Fan – Hydraulic Oil Container

Product	Code	Features	Glass Content	Hardness (Shore D)	Melt Index (gr/10min)	Izod Impact Strength (kJ/m ²)	Shrinkage (%)	Tensile Strength @Break (MPa)	Flexural modulus (MPa)
			ISO 3451/1	ASTM D2240	ASTM D1238	ISO 180	ASTM D955	ISO 527	ASTM D790
			750 °C 1hr	23°C	2.16kg 230°C	Notched 23°C	23°C	(50mm /min)	(1.3mm / min)
			±2	±2	±1	±1	-	±5	±200
PP + 30% GF	P30GN-H40	Homo-polymer matrix with good impact, high modulus, high tensile strength	30	77	6	8	≤ 0.5	75	5000
PP + 40% GF	P40GN-H40	Homo-polymer matrix with good impact, high modulus, high tensile strength	40	80	4	9	< 0.4	90	6500
PP + 50% GF	P50GN-H40	Homo-polymer matrix with good impact, very high modulus, high tensile strength	50	83	3	≥ 9	< 0.3	92	7500

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PP Compounds

PP + CC	P40CN-1694	Wheel Cover
	P50CN-2099	
PP Mix	P22G22TB-P8720 BOX	Battery Holder
	P25G15CB-P8724	Radiator Fan Tray
	P45GTB-P8717	
PP + Mineral	P15MB-L90 Side Cladding	L90 Side Cladding
	P30MB-2032	Light housing
	P40MB-H40R	Air Conditioner Parts
	Renault dashboard	L90 dashboard
	Renault Console	Renault Console
PP Compound	P-C20R-3-UTH	Engine Box Entry
	PC40-1076	Steering Wheel
	P-C64R-3-Bumper	Back Bumper (Peugeot 206)
	P-C70-I-Iron Floor	Iron Floor
	P-H70-I-IML	Floor Container
PP + Wollastonite	P20WN-Heater Fan	Heater Fan

PP / TPV

In order to increase impact strength and flexibility of polypropylene, it is blended with thermoplastic elastomers (such as EPDM). Alloy flexibility is inversely related to hardness. When hardness reduces, flexibility and impact strength increases. Nirumand Polymer Co. produces PP/vulcanized EPDM alloys (TPV) in wide range of hardness from 65 shore A to 57 shore D. this material is used in automotive parts and other industrial parts in various hardness such as bumper and sealing.

Product	Application
V65AB-I210-C60	Flexible Interior Parts – Injection Grade
V85AB-I-226-H40	Handle O-ring – Injection Grade
V85AB-X227-C10	Air Hose – Blow Moulding Grade
V30DB-B301	Flexible Suspension Parts
V40DB-1437	Bumper
V54DB-1203	Cord Cover
V57DB-206-I-Trim	Door Panel (Pegueot 206)
V57DB-Samand Bum	Bumper IKCO
V57DB-2197	Bumper

Code	Features	Filler Content	Hardness (Shore A, D)	Melt Index (gr/10min)	Izod Impact Strength (kJ/m ²)	Shrinkage (%)	Max. Tensile Strength (MPa)	Elongation @Break (%)
		ISO 3451/1 750 °C 1hr	ASTM D2240 23°C	ASTM D1238 2.16kg 230°C	ISO 180 Notched 23°C	ASTM D955 23°C	ISO 527 (50mm /min)	ISO 527 (50 mm / min)
V57DB	Polypropylene/elastomer compound with high impact strength and good dimensional stability, high weathering resistance and UV resistance, black color suitable for bumper of Peugeot 405 and Samand	±1	±2	±2	±1	±0.1	±5	-
V54DB	Polypropylene/elastomer compound with good balance of strength and flexibility suitable for automotive cable jacket	≤ 4	57 D	10	≥ 30	1.5	≥ 16	≥ 100
V85AN-I	Polypropylene/elastomer compound with high strength, high flexibility and good flow ability suitable for injection molding	-	57 D	2.5	-	1.8	20	≥ 400
V85AB-X	Polypropylene/elastomer compound with high strength, flexibility and good process ability suitable for extrusion molding	-	85 A	5	-	1.6	7	≥ 250
V65AN-I	Polypropylene/elastomer compound with high flexibility and good flow ability suitable for injection molding	-	85 A	≤ 1.5	-	1.5	≥ 7	≥ 350
V65AN-X	Polypropylene/elastomer compound with very high flexibility and good strength, good flow ability suitable for extrusion molding	-	65 A	4	-	1.5	3	≥ 350
V65AN-X	Polypropylene/elastomer compound with very high flexibility and good strength, good flow ability suitable for extrusion molding	-	65 A	< 2	-	-	≥ 3	≥ 350

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* There are many other grades complying to the requirements by customer.



PA COMPOUNDS

Polyamide compounds are widely used for manufacturing of engineering plastic parts due to its very good mechanical properties. Polyamides have high tensile strength and modulus and also good wear resistance. Nirumand Polymer Pars compounds PA6 with glass fiber, minerals and flame retardant in a wide range of percentages to improve its performance. Reinforced PA with glass fiber is applicable in home appliance, as well as auto parts.

Compound	Product	Application
PA6 + GF	6A30GB-747R	Ashtray, Mirror Bracket, Plastic Pins, Wheel Cover Part, Chair Legs, Light Socket
	6A30GN-768	Radiator Fan, High Speed Fan
PA6 Toughened	6AN-152	Plastic Pins, Cable Tie
PA66, Toughened	66AN-153	Plastic Pins, Cable Tie





PE+CC

PE+CC compound is used in packaging industry, gardening and agricultural industry as well as household appliances. Because of using mineral fillers in the formulation of this product, cost of the product is reduced, and also it could be considered as an eco-friendly product.

Product	Application
NC-HD20	Blown Films – PE Shopping Bags (based on HDPE) / Blow Moulding
NC-LLD10	Blown Films – PE Shopping Bags (based on LLDPE) / Blow Moulding
NC-LD20	Blown Films – PE Shopping Bags (based on LDPE) / Blow Moulding
NC-LD60	PE Injection Parts (bucket, basket)

Product	Code	Features	Suggested Dosage	Melt Index (gr/10min)	Density (gr/cm ³)
				ASTM D1238	ISO 1183
Extrusion/ Blow Molding	Nirucalcit LD20	LDPE filled with Calcium Carbonate for reduction of cost, process improvement, good tear resistance, decreasing film thickness, improvement of processability	10% - 50%	3	1.9
	Nirucalcit HD20	HDPE filled with Calcium Carbonate for reduction of cost, process improvement, good tear resistance, decreasing film thickness, improvement of processability	10% - 50%	3	1.9
	Nirucalcit LLD10	LLDPE filled with Calcium Carbonate for reduction of cost, process improvement, good tear resistance, decreasing film thickness, improvement of processability	10% - 50%	≤ 2	1.9
Injection	Nirucalcit LD60	Polypropylene filled with Calcium Carbonate with high flow ability, good impact resistance, better dimensional stability for reduction of cost and improvement of processability	10% - 50%	12 - 15	1.9

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* There are many other grades complying to the requirements by customer.



PE-PIPE GRADE

PE-PIPE is extensively used in irrigation, gardening, farm houses watering, chemical industries and water purification plants. The material is appreciated for high environmental resistance, durability, high strength and corrosion resistance.

Product	Application
PE40-PIPE GRADE	Soft Irrigation Pipes



PP + CC

Filled PP with Calcium Carbonate provides an excellent balance of stiffness and impact, and can enhance toughness of unfilled resins. It provides good appearance, reduced shrinkage and surface sink mark, increased dimensional stability and lower cost. These materials are commonly used in building and construction products, sanitary products, hollow sheet, woven bag fibers, automotive parts, garden furniture, and industrial applications where durability is necessary. This product can be considered an eco-friendly product as mineral materials are used in its formulation.

Product	Application
P20CW-H60	Iron Handle
P40CUW-2148	Electrical Parts
NC-H40, H60	Garden Furniture – Houseware
NC-H60-CUW	Flash Tank – Furniture – Sanitary
NC-Raffia 20	Profile – Sheet Extrusion
NC-Raffia 40, 60	Woven Bags – Jumbo Bags
NC-Fiber 70	Non-woven Bags

Product	Code	Features	Suggested Dosage	Melt Index (gr/10min)	Density (gr/cm ³)
				ASTM D1238	ISO 1183
Injection	Nirucalcit H40	Polypropylene filled with Calcium Carbonate for decreasing deformation and sink mark in injection molded products like plastic garden furniture, chairs and tables	10% - 40%	8	1.9
	Nirucalcit CUW-H60	Polypropylene filled with Calcium Carbonate for producing white and shiny injection molded parts like home appliances and construction-sanitary parts	10% - 40%	25	1.9
Extrusion	Nirucalcit – Raffia-60	Polypropylene filled with Calcium Carbonate for better dimensional stability and tensile strength, improving process ability in mono-filament fiber as well as injection parts	5% - 15%	20	1.9

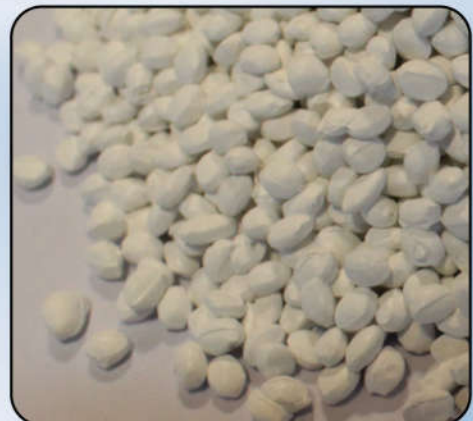
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Niruadd (Additives)

Additives are added to a polymer in order to improve its properties, process condition and polymer performance. We produce these additives in our company with the highest quality. Below is a list of these additives.

Product	Application
Niruadd AB	Anti Block, Preventing Sticking Two Layers, Slip Agent
Niruadd AO	Anti Oxidant, Protection Against thermal Oxidative Degradation
Niruadd Anti UV	Providing Protection Against UV-radiation
Niruadd FR	Flame Retardant And Self-extinguishing, specialized for electrical and home appliances
Niruadd OB	Optical Brightener, Reduce Yellowness, Improve Whiteness And Enhancing The Brightness Of Products
Niruadd W20	White Masterbatch Containing 20% White Pigment
Niruadd W40-UL	White Masterbatch Containing 40% White Pigment And Providing Glossy Surface
Niruadd W60	White Masterbatch Containing 60% White Pigment
Niruadd W70	White Masterbatch Containing 70% White Pigment
Niruadd W70-UL	White Masterbatch Containing 70% White Pigment And Providing Glossy Surface



LABORATORY

In our company's policy, quality control is considered as top priority. Awarded the ISO / IEC 17025:2005 certificate, the lab in Nirumand Polymer engineering company tests the quality of purchased raw materials, as well as our products. QC division not only is equipped with a good number of lab testing devices, but also has well experienced staff who test the required specifications of raw materials and all range of our products very carefully.

Our technical & Research division can provide consulting services about the problems our customers meet during their process. Our customers also enjoy the consulting provided by our Technical & Research group of engineering for reverse engineering of materials to propose suitable raw materials of them. The following tests are provided in our lab :

Test	Standard	Test	Standard
Filler Content	ISO 3451/1	Flexural Modulus	ASTM D790
Moisture Content	ASTM D570	UV Resistance	-
Hardness	ASTM D2240	Tensile	ISO 527
Izod Impact Strength	ISO 180/ASTM D256	Flash Point	ASTM D92
Charpy Impact Strength	ISO 179	HDT	ASTM D648/ISO 75
MFI	ASTM D1238	Vicat	ASTM D1525
Density	ISO 1183	DSC. OIT	ISO 11357-6
Shrinkage	-	Melting Point	ASTM D3814

