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DAN POLYMER

About us

Danpolymer

Dan Polymer produces a variety of products within the polymer industry. These products are part of the compound category and polymer masterbatches. Compounds are essential in determining the quality of the Final product. They determine how efficient machinery can work and how high the output will be.

By providing high-quality compounds and polymer masterbatches, Dan Polymer, one of the most advanced companies in Iran, manages to improve the quality of polymer products backed by more than four decades of experience. As a result of the technical knowledge, use of the latest technologies, quality control, advanced laboratories, and high production capacity, Dan polymer exceeds the high-quality demands within the industry.

Sustainable export is based on reliable quality, innovation, and dedication to sales and after-sales services. This is what we strive for in Dan Polymer through using our skills to meet our customer's needs in the most efficient way possible.

Experience without waste

Our market has expanded to South Korea, Russia, China, Pakistan, Tajikistan,Iraq, Uzbekistan, Kyrgyzstan, Turkmenistan, Azerbaijan, Armenia, Turkey, Afghanistan, North Africa, and India.

Polyamide compound

- polyamide compound is one of the world's most widely used engineering polymers, which provides very desirable properties after compounding.

PA compound		
Product	**Process**	**Application**
PA6	Injection- Extrusion	Automobile, Electrical parts, Textiles, Polymer fiber production, Sewing thread production, Pump production, Sports equipment production, Optical fiber cables, etc.
Impactable PA6		
Super impact PA6		
PA6 reinforced with 30% glass fibers.		
PA6 reinforced with 40% glass fibers.		
PA6 reinforced with 50% glass fibers.		
PA6,6		
Impactable PA6,6		
Super impact PA6,6		
PA6,6 reinforced with 30% glass fibers		
PA6,6 reinforced with 40% glass fibers		
PA6,6 reinforced with 50% glass fibers		

Advantages:

Polyamide compounds increases crack resistance, wear resistance, chemical resistance, thermal strength, impact strength, and mechanical strength both during the production and in the final product.

Polypropylene Filled with calcium carbonate

This compound is based on polypropylene and calcium carbonate. It is used as a filler and for reinforcement. It helps reducing the production cost by increasing the quality of the product during production.

compound PP/CaCO3		
Product	**Process**	**Application**
PP reinforced with 10% calcium carbonate	Injection Extrusion Blown molding	Automobiles Household appliances Furniture Electrical appliances Agriculture etc.
PP reinforced with 20% calcium carbonate		
PP reinforced with 30% calcium carbonate		
PP reinforced with 40% calcium carbonate		
PP reinforced with 50% calcium carbonate		

Advantages:
Polypropylene Filled with calcium carbonate compounds improves physical properties, dimensional stability, printability, smoothness, hardness, and stiffness in products. It also reduces shrinkage.

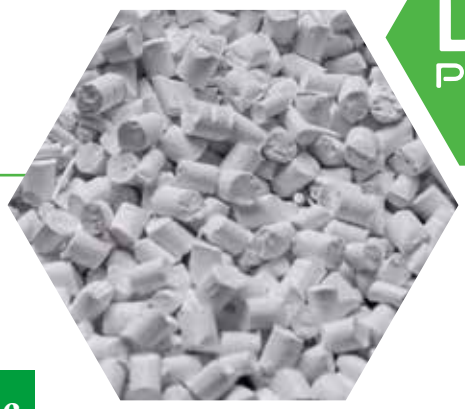
Polyethylene Filled with Calcium Carbonate

This compound contains polyethylene, modified calcium carbonate, and other additives. Masterbatches of calcium carbonate have become increasingly popular in many industries due to improving the production process and lowering costs. Furthermore, this product is environmentally friendly since it uses minerals in its composition.

compound PE/CaCO3		
Product	**Process**	**Application**
PE reinforced with 10% calcium carbonate	Injection Extrusion Blown molding	Automobiles Household appliances Furniture Electrical appliances Agriculture etc.
PE reinforced with 20% calcium carbonate		
PE reinforced with 30% calcium carbonate		
PE reinforced with 40% calcium carbonate		
PE reinforced with 50% calcium carbonate		

Advantages:

Polyethylene Filled with Calcium Carbonate compounds improves processability, mechanical strength, dimensional stability, and print quality in products. It also reduces production cost by reducing shrinkage after cooling process.



Polypropylene Filled with Talc

Talc is one of the most popular fillers. Adding talc to polypropylene compounds increases their modulus of elasticity and makes them stiffer. Due to its advantages, it has a growing popularity in the industry.

pp/talk		
Product	**Process**	**Application**
PP reinforced with 20% talc	Injection Extrusion Blow and Blown molding	Automobiles Household appliances - Furniture Electrical appliances construction supplies - Agriculture etc.
PP reinforced with 30% talc		
PP reinforced with 40% talc		
PP reinforced with 50% talc		

Advantages:

Polypropylene Filled with Talc compounds improves mechanical properties (Tensile strength, Modulus), creep resistance, thermal resistance, chemical resistance, scratch resistance, and production efficiency. It also reduces shrinkage and cooling cycle time.

Polypropylene Filled with Glass fiber

Polypropylene reinforced with glass fibers provides a good balance between cost and properties.

PP/GF compound		
Product	**Process**	**Application**
PP reinforced with 20% glass fiber	Injection Extrusion	Automobiles Household appliances Electrical appliances etc.
PP reinforced with 30% glass fiber		
PP reinforced with 40% glass fiber		
PP reinforced with 50% glass fiber		

Advantages:

Polypropylene Filled with Glass fiber compounds improvs mechanical properties, thermal resistance, dimensional stability, creep resistance, and chemical resistance. It also reduces shrinkage and cooling cycle time.

Polypropylene Filled with EPDM

Polypropylene is compounded with EPDM to increase its impact resistance and flexibility. Polypropylene/EPDM compounds are widely used to manufacture flexible and impact-resistant parts.

PP/EPDM compound			
Product	**Property**	**Process**	**Application**
PP reinforced with EPDM	Hardness 45 Shore A	Injection Extrusion Blow molding	Wires and cables Household appliances etc.
PP reinforced with EPDM	Hardness 55 Shore A		
PP reinforced with EPDM	Hardness 65 Shore A		
PP reinforced with EPDM	Hardness 75 Shore A		
PP reinforced with EPDM	Hardness 85 Shore A		
PP reinforced with EPDM	Hardness 30 Shore D		
PP reinforced with EPDM	Hardness 35 Shore D		
PP reinforced with EPDM	Hardness 40 Shore D		
PP reinforced with EPDM	Hardness 57 Shore D		

Advantages:

Polypropylene/EPDM compounds improves impact resistance, flexibility, resistance to UV and ozone gas, weather resistance, printability, fatigue resistance, and insulation for heat and electricity.

Polypropylene and polyamide alloy reinforced with glass fibers

Coatings and adhesives do not adhere well to polypropylene. Therefore its colourability is not suitable. In order to improve the dyeability of polypropylene, it is combined with polyamide, which has good mechanical properties and dyeability.
Additionally, these two polymers are immiscible, and glass fibres improve the interface between them.

Advantages:
Polypropylene/Polyamide/Glass fiber compounds improves mechanical properties, colourability, wear resistance and dimensional stability.

Application:
Automobile, industrial Patrs

Polymer Alloys

- Polymer alloys are the combination of multiple polymers to achieve multiple performances.

Product	Process	Application
Polycarbonate and Acrylonitrile- Butadiene -Styrene compound	Injection	Automobiles Industrial parts

Advantages:

Polymer alloys reduces the cost by improving processability, and mechanical properties.

Polyethylene compound for tanks

- This compound is used for rotational molding tanks can be provided in powder format or granules format, depending on the customer's requirements.

Advantages:

Polyethylene compound for tanks is suitable for the manufacturing of hollow plastic parts. It makes it easy to remove parts from the molds. It also makes it economically efficient to manufacture parts with three and two layers with high strength, impact resistance, chemical and physical resistance. It also helps reducing plastic waste. This compound is mostly used for manufacturing containers for water and chemical products, plastic tanks and tubs, kayaks, mobile cabins, boxes, crates.

Application:

Containers for water and chemical products, plastic tanks and tubs, kayaks, mobile cabins, boxes, crates, etc.

Polyethylene compound for pipes and fittings

This compound is one of the most famous options used for water supply pipes. Adding carbon black to polyethylene, increases the resistance to sunlight, makes the pipes lighter than concrete or cement pipes and increases their production speed. Compared to metal pipes, these pipes are lighter and more resistant to corrosion and various fluids, such as acids and alkalis.

Advantages:

Polyethylene compound for pipes and fittings improves processability and sunlight resistance. By using this compound, smooth and polished surface can be achieved on the inner and outer walls of the pipe. Compared to metal pipes, polymer pipes are lighter and more resistant to corrosion and various fluids, such as acids and alkalis. In fact, polymer pipes are cheaper than stainless steel, cast iron, and galvanized iron pipes. Polyethylene compound is used in manufacturing drip irrigation pipes, Pressure pipes, Piping connections, water supply systems.

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Polypropylene compound for pipes and fittings

Product	Property	Application
Pipe compound based on homopolymer	Increasing chemical resistance and mechanical properties	Industrial piping, etc
Pipe compound based on random copolymer	Increased resistance to temperature and internal pressure	Domestic hot and cold water pressure piping systems, etc
Pipe compound based on block copolymer	Increasing hardness, Impact strength, Excellent abrasion and chemical resistance	Sewage and drainage, etc

Experience without waste

Polypropylene compound for silent pipes

Silent pipes and fittings are a system consisting of pipes and accessories designed to reduce the noise caused by the discharge of sewage and rainwater. Generally, silent pipes consist of three layers: an outer layer made from impact-resistant polypropylene, an inner layer made of wear-resistant and chemical-resistant polypropylene and a middle layer made of polypropylene compound filled with sound-resistant minerals.
Pressure pipes, Piping connections, water supply systems.

Advantages:
Polypropylene compound for silent pipes improves wear resistance, and chemical resistance. It reduces noise and waste and it is usually used in the middle layer of the pipes.

Cross-linked PE compound

The cross-linking of polyethylene improves polyethylene's physical, mechanical, and thermal properties. This product can be used for a wide range of applications such as PE cable, high pressure pipe, etc.

Advantages:

Cross-linked PE compound improves temperature resistance, chemicals and chlorine resistance, oxidation resistance, rack growth resistance, abrasion resistance, strength at high temperatures, tolerance to slow crack growth, and electrical properties. This compound is used in the coating of cables under low and medium pressures, pipes under high pressures, gas transmission lines, and floor heating systems.

ABS self-coloring compounds

- This compound can be used directly with it's special formulation which has dyes, additives and ABS.

Advantages:

The ABS self-coloring compounds have better color quality than combination of virgin ABS and masterbatch. The cost and waste are decreased by using these compounds.

Application:

Home appliance, Automobile, Electrical, etc.

Calcium carbonate masterbatch

Compounds containing calcium carbonate are used by many industries to produce films, polyethylene bags, blow and injection molding part. The compounds contain different amounts of polyethylene or polypropylene according to the kind of consumption and the needs of the customer. They also contain a high amount of calcium carbonate.

Grade	Product	Process	Application	advantages
HDPE LLDPE LDPE	Polyethylene filled with calcium carbonate (≥%80)	Injection Extrusion Blow and Blown molding	Polyethylene films Blow parts injection products etc	Reducing cost, Improving printability and dimensional stability, Improving processability, Packaging, Increasing strength, etc
H-PP R-PP B-PP	Polypropylene filled with calcium carbonate (≥%80)	Injection Extrusion Blow and Blown molding	Household appliances, kitchen, jumbo, sacks based on polyolefins, etc	Reducing cost, Increasing printability, Increasing strength, Packaging, Dimensional stability.

XPS compound

Cross-linked Polystyrene is abbreviated as XPS. It is widely used as insulating sheets in construction and industry. Extrusion of General-Purpose Polystyrene (GPPS) with foaming agents and cross-linking agents produces this product.

Advantages:

This compound can improve insulation and mechanical properties (Tensile strength, corrosion resistance). It decreases density, water absorption and cost as well.

Application:

In-home insulation systems, cold storage, camps, warehouses, workshops, modern buildings, apartments and office buildings, packaging, etc.

Adhesive compound for edge band

One of the most widely used types of glue is glue granule. This glue is hot-melt, in this way, it is melted during a process by receiving heat, and after hardening and drying, it connects two pieces together. These granules of glue are available in different forms, such as spheres, lenses, rods, etc. This glue is commonly used in the edge banding machine for adhering strips to PVC, MDF, and chipboard.

This glue is based on ethylene vinyl acetate (EVA), polyolefin (PO) and polyurethane (PU) adhesives, each of them has a different melting point depending on the compounds and chemicals used in them.

Advantages:

This compound is Lightweight, has excellent elastic resistance and strong adhesion. It can apply easily and remelting after cooling. It does not cause any environmental pollution. It reduces odors, waste and fire hazards.

White masterbatch

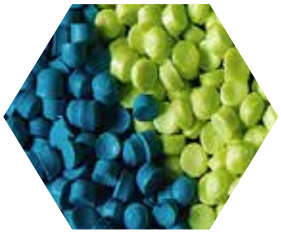
White masterbatch is produced based on the best titanium dioxides in order to whiten the appropriate surface of the final product, and based on polyethylene, polypropylene and ABS with different percentages (30 to 70% of titanium dioxide).

Advantages:

The chemical stability, best dispersion, high color quality are specifications of this masterbatch. This masterbatch can improve mechanical properties as well.

Application:

Films, Pipes, Household appliances, Injectable parts, Blow molding part.



Color Masterbatch

This product has best color dispersion with lowest usage in formula. It improves and modifies physical and mechanical properties in addition to achieving the desired color.

Advantages:

High color quality, best dispersion and color stability are specifications of these masterbatches. The formulation's cost and masterbatch consumption will be decreased by using this product.

Application:

Automobiles, Textiles, Electronics, Toys, Packaging, etc.

Additional Masterbatch

Nucleating masterbatch for PP

Polypropylene nucleating masterbatch is called clarifying agent. The clarity and transmittance will improve.

Advantages:

This compound causes transparency of injected parts, dimensional stability and improvement of warping, Tensile strength, Impact resistance. The Injection time, turbidity will be decreased by using this masterbatch.

Application:

Production of Polypropylene products, Including disposable containers, Films, Sheets, Injection parts, Blow molding, etc.

Optical Brightener Masterbatch

This masterbatch increase the transparency of transparent products and glossiness of non-transparent products by using clarifying/fluorescent agents in its formula.

Advantages:

Yellowness in transparent products, Turbidity in non-transparent products will be reduced by using this masterbatch.

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Whitening masterbatch

This masterbatch improves glossiness and whiteness of the polymer product's surface, due to it's good fluorescent properties. Additionally, this masterbatch reduces surface yellowness and turbidity.

Advantages:

Improvement of primary color, brightness and glossiness of the product, smoothing the surface, whiteness of recycled polymers, etc.

Application:

Injection products, Thin and normal films, Agricultural films, Cotton sacks, Jumbo bags, Packaging, Consumer products by extrusion, injection and fibers.

Antioxidant masterbatch

Antioxidant masterbatches are one of the most important additives in the plastic industry. Plastics usually age rapidly under the influence of light, oxygen, and heat, leading to loss of strength, stiffness, flexibility, discoloration, scratching, and loss of clarity. Consequently, when antioxidant masterbatch is added to polymers in the production process, they are stabilized against oxidizing agents, preventing the degradation of the polymer at high temperatures as well as improving the environmental resistance and recycling performance.

Advantages:

This masterbatch improves impact resistance, life of polymer components, mechanical properties (such as Elongation, Tensile Strength), melt properties at high process temperatures, shine and transparency.

Application:

Films, Agricultural films, Sacks, jumbos, Plastic cartons, Foam, Fibers, PP injection Products, Pipes, Profiles, Films, Geomembranes, Injection parts, Blow molding part, etc.

Antistatic Masterbatch

Antistatic Masterbatch is used to create antistatic properties and preventing of dust accumulation on the surface of plastic products.

Advantages:

Printability is improved by using this masterbatch. On the other hand, static electricity accumulation, dust absorption, electrical surface resistance is reduced.
It prevents sparks as well.

Anti-UV masterbatch

UV radiation from the sun and oxygen in the air can break chemical bonds in plastics and eventually cause them to degrade and the plastic's appearance changes (color, gloss, or whiteness), loss of mechanical and physical properties, and formation of visible defects such as cracks.
Therefore, Anti-UV masterbatch is used to saving optical stability and increase the life of products.

Advantages:

Optical stability, product brightness, mechanical properties, product life in the external and internal environment is improved by this masterbatch. This masterbatch decreases degradation of polymer against sunlight and ultraviolet radiation, color changes in the product against sunlight

Application:

Automotive, Packaging, Greenhouse Film, Pipe and Fittings, Jumbo Bags, etc.

Desiccant masterbatch

A desiccant masterbatch is a new type of applied masterbatch designed to dehumidifying polyethylene, recycled PP, and polyamide. It also solves the moisture problem when masterbatch filler (an additive to reduce costs) is used much more than usual.

Advantages:

This masterbatches causes incorporating more filler, glossiness in the surface, mechanical properties improvement and boosting production rates.

Flame retardant masterbatch

Flame retardant masterbatch prevents and delays the ignition of plastics. Usually, this masterbatch is produced on different bases such as PE, PP, PC, ABS and PVC.

Advantages:

It increases plastic resistance to combustion and formula achieves high levels of efficiency by adding a small Amount of it. The mechanical properties is improved as well. On the other hand, it reduces flame spread speed, smoke and vapors produced by burning and heat produced by fire.

Application:

Automotive, Electrical industries such as wires and cables, Construction industries such as flooring, Home appliances, Pipes, Fittings, etc.

Slip Masterbatch

It is common to use slip masterbatches to reduce the resistance of the film to slip on the equipment or itself. Friction on polymeric surfaces is often a problem when winding film rolls, producing bags, packaging, and releasing molds during production and use.

Advantages:

The production waste, adhesion between the surface of the film, accumulation of materials on mold surface is reduced and output is increased by using this masterbatch in formula.

Application:

A wide range of products are produced, Including PE, PP, PET products, Thin films, Thick films, Agricultural films, etc.

Polyethylene wax

The polyethylene wax is odorless and colorless, transparent and solid crystal material. The main feature of polyethylene wax is the lubrication property, this property leads to the separation of the melt from the metal and the lubrication of the surface between the metal and the polymer. In addition, it has a special effect on the glossiness of the product. It is used in a wide variety of food, cosmetic, and health products because it is non-toxic.

Application:

Use as base material or additive, Improvement and modification in the properties of the final product, Use as a dispersant for pigments and additives for inks and coatings, plastics, cosmetics, toners and adhesives, Use as an external lubricant in plastics, for example in the process of PVC extrusion and calendering, Due to its impermeability to water and only oxygen passage, as a coating for food products, cosmetics, packaging industries, furniture, etc.


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POLYMER COMPOUNDS
& MASTERBATCH
Net Weight: 25 kg ± 50 gr
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info@danpolymer.com

Product	Application
Low Density PE for film	Film, Shrink film, Cast Film, Blow Film, Bags
Liner Low Density PE	Stretch film, Shopping Bags, Agricultural Films, Heavy duty sacks
Low Density for injection	Caps, Toys, Household Appliances, Masterbatch making
High Density PE for extrusion	Pressure pipes, Pipes, Drinking water and gas Pipes, Sheets, Sewer pipes and their fittings, For injection molding and extrusion process
High Density PE grade film	Blown film with the same quality as paper, Suitable for shopping bags, Sheets and wrapping films
High Density PE for injection	Milk and liquid containers, Household appliances, ultra-thin films, Garbage bags, Shopping bags and clothing
High Density for rotational	Septic tanks, Conventional containers, Rotationally molded items of suitable hardness
High Density PE for blown	Sheets for thermoforming, Bottles, Packaging, Containers or small volumes of milliliters up to 10 liters General uses such as household appliances, Toys and hygiene items, Containers up to 20 liters
Polypropylene homopolymer for textiles	Woven fabrics, Diapers, Medical hygiene applications and appropriate wet wipes
Polypropylene copolymer for pipes	Pipes, Profiles, Automobile parts, Sheets, Disposable Dontainers, Tool boxes
Acrylonitrile Butadiene -Rubber (ABS)	Automobile parts, Electrical and electronic products, Household appliances, Office supplies, Refrigerator parts

Engineering services

Dan Polymer Group offers a wide range of engineering services to customers regarding the consumption of raw materials as well as solutions that ensure that the production rate is appropriate and optimal.

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Laboratory

We equipped our laboratories with all experimental machines and equipment which are needed for testing of products in industrial and experimental scale. MFI (melt flow index test), Tensile, Ash furnaces, Optical Microscopes, DSC, Rheometers, Roll mills, Dynamic Ovens, Laboratory Extruders, Lab-scale sheet production lines, Injection Machine, Experimental Extruders, Hardness Testing Machine, Colorimeter are equipment of our laboratory.

General properties	
Test Description	**Method**
MFI	ASTM D1238
Viscosity	ASTM D1986
Filler content	ISO 3451/1
Moisture content	ASTM D570
Density	ISO 1183
Flash Point	ASTM D92

Thermal Tests	
Test Description	**Method**
DSC	ISO 11357
OIT	ISO 11357
VICAT	ASTM D1525

Mechanical Tests	
Test Description	**Method**
Tensile Strength	ISO 527
Elongation	ISO 527
Flexural Modulus	ASTM D790
Impact Strength IZOD	ISO 180
Impact Strength Charpy	ISO 179
Hardness Shore A/D	ASTM D2240

Optical Properties & Flammability	
Test Description	**Method**
(Colorimetry (L,A,B,YI)	ASTM E313
Flammability	UL94

Why Dan Polymer

Quality and consistency of quality
Advanced manufacturing infrastructure
Modern laboratory, research and development facilities
High accuracy of quality control
Accompanying customer services
Sales and after-sales service
Commitment to maintaining quality and accountability
Technical and engineering consulting
On time delivery
Customer needs assessment
High production capacity
Commitment to protecting the environment
Competitive price
Supplying raw materials from the best reputable brands in the world
Signing contracts with the most well-known brands in the world


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