



There Is Always a Better Way

ARIA POLYMER

General Compound Catalogue



THERE IS ALWAYS A BETTER WAY...



ARIA POLYMER is a multinational enterprise to provide technology research and manufacture top-notch additives and functional polymers, founded in 2009.

ARIA POLYMER is one of the few players in the region to develop series of products to meet domestic and international market needs, including:

- **MALEIC ANHYDRIDE GRAFTED POLYMERS** used as Coupling Agent and Compatibilizer, and
- **TIE LAYER ADHESIVES** used in Multilayer Structures, e.g., Multilayer Films, Pipes, Tubes, etc.;

In addition to these high-tech products, ARIA POLYMER manufactures a wide range of

- **ADDITIVE MASTERBATCHES** to improve specifications of different polymers.

Accordingly, our various products are widely used in:

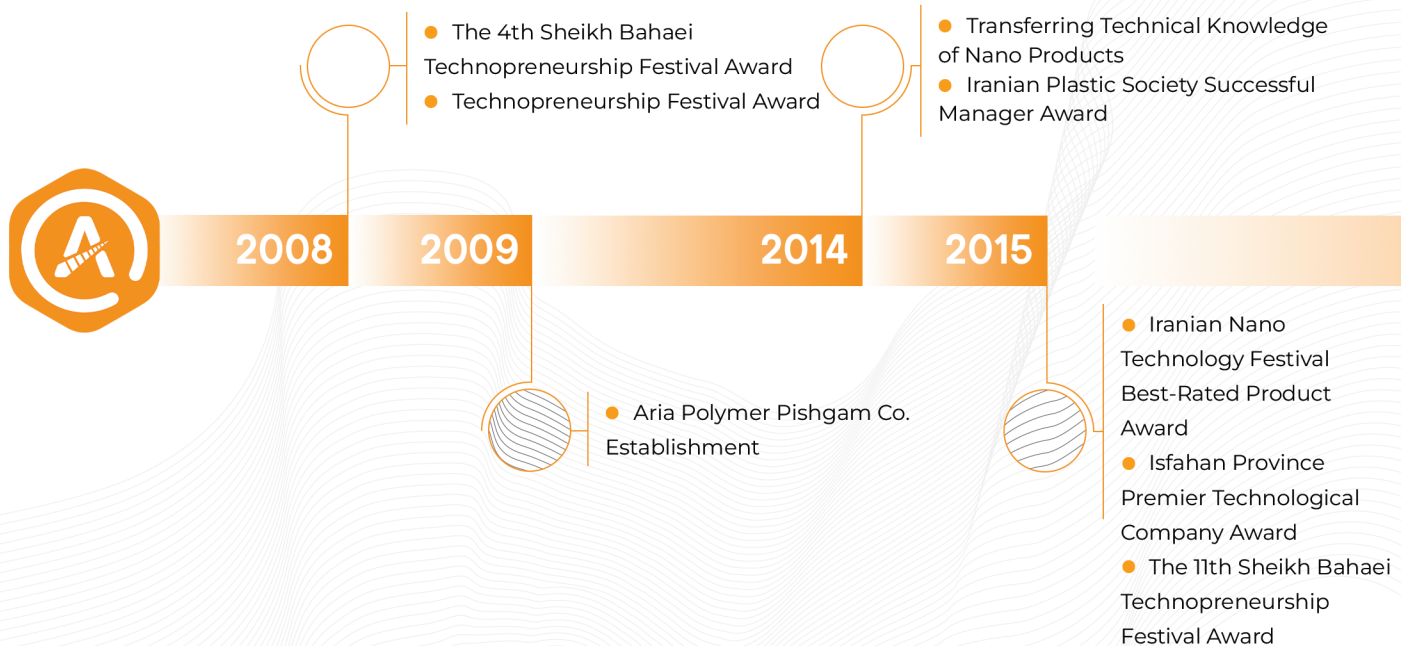
Automotive Compounds and Parts, Pipes, Packaging, Building and Civil Constructions, Medical Tools;
and Consumer Goods.

Holding **ISO 9001, ISO 10004 and ISO 17025**, Food and Drug Compliance, Oil Ministry Confirmation, being a member of different associations in Plastic and Polymer fields, having a well-equipped internal lab, accessing a wide range of petrochemical companies and a powerful supply chain, accessing university, knowledge poles and gifted graduated students, are all juxtaposed to enable ARIA POLYMER to provide the customers with state-of-the-art products.

And all these make us believe **THERE IS ALWAYS A BETTER WAY...**

Aria Polymer: from the Beginning to 2030

Timeline



2016



- Asian Science Park Association Grand Prize

2021



- Isfahan Province's Knowledge-Based Award
- Selected Exporter of Iran Polymer Industry

2022



- Selected Exporter of Iran Polymer Industry
- Excellence Award of Iran Polymer Industry

2030

70% Share of
Innovative Products
in Gross Sales

GENERAL COMPOUND

PE Compounds

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Download our specialized catalogue for high-tech polymer products including coupling agents (compatibilizers), tie-layer adhesives, masterbatches, and advanced compounds using the QR code below:





General Compound **ARIA GC PE**

ARIA GC PE is a group of polyethylene containing some regular fillers and/or additives, specifically designed to make PE final products more economic than regular raw materials.

Based on HDPE, LDPE and LLDPE, **ARIA GC PE** is widely used in blow molding, injection molding and rotational molding to produce packaging films, pipes, various plastic parts, water tanks, etc.



Linear Low Density Polyethylene

Aria GC 62N07

• Description

Aria GC 62N07 is a injection-moulding grade high density polyethylene. Good impact strength, easy processing, high rigidity and UV resistance make it especially suitable for usage in crates, pallets, seats and house holdware

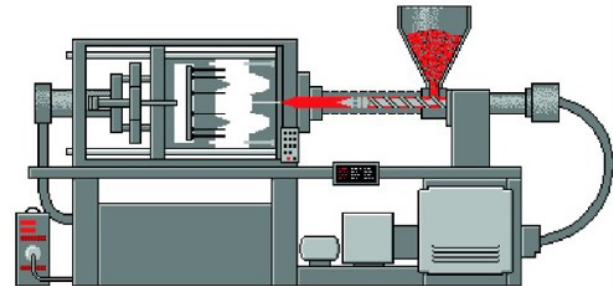
• Technical Specifications

Properties	Value	Method
Melt Index	7	D1238
Density	0.962	D1505
F/E Ratio	<30	ASTM D1238
Volatiles	<0.05	ASTM D1525
Tensile Stress at Yield	30	ASTM D638
Tensile Stress at Break	12	ASTM D638
Elongation at Break	850	ASTM D638
Flexural	1500	STM D790
Izod Impact Resistance	55	ASTM D256
Contamination	<40	BASEL MTM-17064 E

• Advantages

Injection Moulding Grade for Pallets, Boxes and Crates

Clamping Injection Cooling Ejection



Aria GC 52518

• Description

Aria Compound 52518 is a HDPE copolymer Blended with LLDPE for Injection Molding, Extrusion Coating & Rotomoulding. Injection molding for application requiring a good balance between easy of processability and flowability and mechanical properties are the special peruse of this grade



• Technical Specifications

Properties	Value	Method
Density	0.950 g/ml	ASTM 1505
Melt Flow Index @190°C /2.16kg	10±4 g/10min	ASTM 1238
Flexural Modulus	>1350 MPa	ASTM D790
Izod 23°C	>25 J/m	ASTM D256/A
Vicat	>122 °C	ASTMD1525



Aria GC HD-EX5

• Description

<<Aria GC HD-EX5>> is a high density polyethylene with 1-Butene as comonomer. It has a good toughness, high molar mass.

• Product Application

- Heavy duty sacks, agricultural films, liners
- Produce bags, stretch film

• Technical Specifications

Properties	Value	Method
Mass Density (23°C)	0.949	ISO 1183
Melt Flow Rate (190°C/5kg)	0.28	ISO 1133
Melt Flow Rate (190°C/2.16kg)	8	ISO 1133
FFR (5/21.6)	29	-



Aria GC HD-EX3

• Description

“Aria GC HD-EX3” is a natural colored high density polyethylene with Butene-1 as comonomer. The product is classified as PE100 and shows good stress crack resistance properties (ESCR) combined with good impact strength.

Stabilization: Ca-Stearate, ZN-Stearate, Irganox1010, Irgafos168

• Product Application

- Pipe Extrusion PE100 Class
- Pressure pipes
- Drinking water and gas pipes
- Discharge pipes
- Sewer pipes and fittings

• Technical Specifications

Properties	Value	Method
MFR (190°C/5kg)	0.45±0.05 g/10min	ISO 1133
MFR (190°C/2.16kg)	12±3 g/10min	ISO 1133
FRR21.6/5	28±4	-
Density	0.945±0.002 g/cm ³	ISO 1183
Notched Impact Strength	>12 mj/mm2	ISO 179/1eA
Pipe Evaluation Hydrostatic (80oc, 4N/mm2)	1000 min.	(DIN 8074 & DIN 8075 & ISO 1167)



Aria GC F7000

• Description

Aria Compound F7000 is a high-density polyethylene copolymer Blended with LLDPE, the design of the product, gives it an easy extrusion and high melt strength with strong physical Properties which makes it suitable for producing thin films with excellent strength

• Technical Specifications

Properties	Value	Method
Density	0.950 g/ml	ISO 1183A
Melt Flow Index @190°C /2.16kg	0.07 g/10min	ASTM 1238
Tensile Stress at Yield	24 MPa	ISO 527
Tensile Stress at Break	>22 MPa	ISO 527
Elongation at Break	>500 %	ISO 527
Vicat Softening temperature	122 °C	ISO 11357
Melting temperature	131 MPa	ISO 11357
Shore hardness	63 D Scale	ISO 868



Aria GC 5110

• Description

Aria Compound HFI 5110 is a high-density polyethylene copolymer Blended with LLDPE, specially developed for producing thin films with excellent strength and rigidity. This product is suitable for manufacturing of high strength grocery sacks, shopping bags and high-quality thin films for packaging

• Technical Specifications

Properties	Value	Method
Density	0.949 g/ml	ISO 1183A
Melt Flow Index @190°C /21.6kg	10 g/10min	ASTM 1238
Tensile Stress at Yield	25 MPa	ISO 527
Tensile Stress at Break	>30 MPa	ISO 527
Elongation at Break	>500 %	ISO 527
Vicat Softening temperature	125 °C	ISO 11357
Melting temperature	131 MPa	ISO 11357



Black High Density Polyethylene (HDPE)

Aria GC PE100 Black

• Description

Aria GC PE 100 black is a high density polyethylene with 1-Butene as co monomer for pipe extrusion PE 100 class, industrial and pressure pipe, gas pipe, drinking water pipe, relining, fittings applications

• Product Application

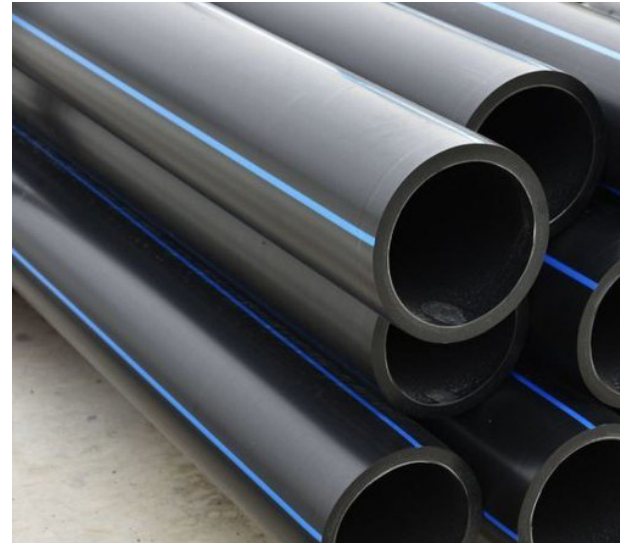
HDPE for Pipe

• Advantages

- Outstanding hydrostatic strength for PE 100 class
- Black with outstanding ESCR
- High impact strength

• Technical Specifications

Properties	Value	Method
Appearance	Black Granules	-
Density	0.96±0.02 g/cm ³	ASTM 1505
Carrier Resin	HDPE	-
Melt Flow Index @190°C/ 5Kg	0.25±0.2 g/10min	ASTM 1238
Carbon content	≥2 %	ISO 6964
OIT@200°C	≥30 min	ASTM D3895



Aria GC 3840 UA

• Description

"Aria GC 3840 UA" is a linear medium density 3840 polyethylene copolymers containing butane-1 as the comonomer with narrow molecular weight distribution. This resin designed to offer excellent processability, stiffness and fast grinding rate. This UV stabilized resin is ideally suited for application that requires good impact strength and ESCR along with excellent external and internal surface finish

• Technical Specifications

Properties	Value	Method
Density	0.938 g/cm ³	ISO 1183A
Melt Flow Index @190°C /2.16kg	3.7±0.3 g/10min	ASTM 1133
Flexural Modulus	900 MPa	ASTM D790
Tensile Stress at Yield	18 MPa	ASTM D638
Elongation at Break	900 %	ASTM D638
Charpy Impact Strength	18 Kj/M2	ASTM D256
Hardness	62 Shore D	ASTM D2240
ESCR, F50, 100%Igepal	400 hr	ASTM D1894
Anti-Oxidant	1 %	-
UV Stabilizer	1 %	-
Masterbatch	2 %	-
Antistatic	1 %	-



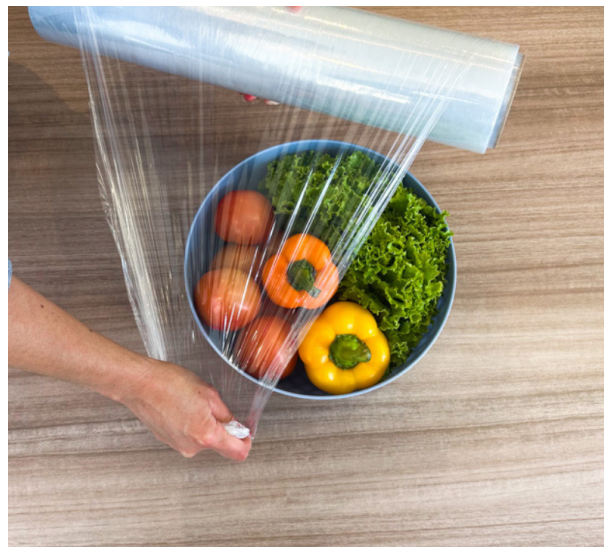
Aria GC BL3

• Description

Aria Compound BL3 is a high-density polyethylene copolymer Blended with LLDPE, the design of the product, gives it an easy extrusion and high melt strength with strong physical Properties which makes it suitable for producing thin films with excellent strength

• Technical Specifications

Properties	Value	Method
Density	0.952 g/ml	ISO 1183A
Melt Flow Index @190°C /2.16kg	24 g/10min	ASTM 1238
Melt Flow Index @190°C/5kg	1.3 g/10min	ASTM 1238
Notched Impact (23°C)	>9 mj/mm2	ISO 179/1eA



LDPE

Aria GC 2420

• Description

Aria Compound 2420E02 is a low-density polyethylene. It is a polymer with high clarity suitable for usage in cast and fine shrink films, and Polyethylene Foam

• Technical Specifications

Properties	Value	Method
Density	0.95±0.02 g/ml	ISO 1183A
Melt Flow Index @190°C /2.16kg	1.75±0.25 g/10min	ASTM 1133
Impact strength (23°C)	24 KJ/ M	ASTM D4272
Tear strength (TD)	22 KN/ M	ASTM D6383-2
Tear strength (MD)	50 KN/ M	ASTM D6383-2
Strain at break (TD)	450 %	ISO 527
Strain at break (MD)	150 %	ISO 527
Yield stress (TD)	10 MPa	ISO 527
Yield stress (MD)	12 MPa	ISO 527



10% Transparent Filler Filled LDPE

Aria GC 2102

• Description

Aria Compound 2102TX/10Filler is a low-density polyethylene containing 10% transparent filler, with natural high transparency and good dispersion. It is a polymer with high clarity suitable for usage in cast and fine shrink films, and Polyethylene Foam

• Technical Specifications

Properties	Value	Method
Density	0.95±0.02 g/ml	ISO 1183A
Melt Flow Index @190°C /2.16kg	1.75±0.25 g/10min	ASTM 1133
Impact strength (23°C)	24 KJ/ M	ASTM D4272
Tear strength (TD)	22 KN/ M	ASTM D6383-2
Tear strength (MD)	50 KN/ M	ASTM D6383-2
Strain at break (TD)	450 %	ISO 527
Strain at break (MD)	150 %	ISO 527
Yield stress (TD)	10 MPa	ISO 527
Yield stress (MD)	12 MPa	ISO 527
Ash content	10 %	-



Low Density Polyethylene

Aria GC 2119

• Description

Aria Compound 2119 is a low-density polyethylene, with excellent optical properties. This grade offers high output and excellent draw down ability during processing and specially designed for general-purpose thin films

• Product Application

- Blown film extrusion
- Packaging film
- lamination films

• Advantages

- Very good optical properties
- Good toughness
- Good melt strength

• Technical Specifications

Properties

Value

Method

Density	0.921 g/ml	ISO 1183A
Melt Flow Index @190°C /2.16kg	1.9 g/10min	ASTM 1133
Impact strength (23°C)	26 KJ/ M	ASTM D4272
Tear strength (TD)	25 KN/ M	ASTM D6383-2
Tear strength (MD)	60 KN/ M	ASTM D6383-2
Strain at break (TD)	>550 %	ISO 527
Strain at break (MD)	>150 %	ISO 527
Yield stress (TD)	11 MPa	ISO 527
Yield stress (MD)	13 MPa	ISO 527



Linear Low-Density Polyethylene

Aria GC 209

• Description

Aria Compound 209 is a LLDPE copolymer with butene as comonomer which contains antioxidant. It is recommended for general purpose applications

• Product Application

- Produce bags
- Stretch films
- Heave duty sacks
- Agricultural films, liners

• Advantages

- Higher tensile strength
- Good toughness
- Better sealing, higher puncture resistance

• Technical Specifications

Properties	Value	Method
Density	0.920 g/ml	ISO 1183A
Melt Flow Index @190°C /2.16kg	0.9 g/10min	ASTM 1133
Elongation at Break (TD)	840 %	ISO 527
Elongation at Break (MD)	620 %	ISO 527
Yield stress (TD)	10 MPa	ISO 527
Yield stress (MD)	11 MPa	ISO 527



General Compound **ARIA GC PP**

ARIA GC PP is a group of polypropylene containing some regular fillers and/or additives, specifically designed to make PP final products more economic than regular raw materials. **ARIA GC PP** is widely used in packaging films, pipes, textiles, automotive parts, serving dishes, etc.



10% Calcium Carbonate Filled Polypropylene

Aria GC PP/CaCO₃

• Description

Aria Compound PP L/CA is a 10% calcium carbonate filled polypropylene, which is suitable for usage in raffia, sacks and bags

• Product Application

Calcium Carbonate Filled Polypropylene

• Advantages

- Reduces costs
- Reduction in energy consumption
- Increases the mechanical performance
- Provide end-product's surface with good dispersion

• Technical Specifications

Properties	Value	Method
Appearance	Granules	-
Density	0.96±0.03 g/cm ³	ASTM D792
Melt Flow Index @230°C /2.16kg	5±2 g/10min	ASTM D1238
Melting Point , DSC	165 °C	ASTM D3417
Vicat Softening Point, 10N	154 °C	ASTM D1525
Tensile Strength at Yield	32 MPa	ASTM D638
Elongation at Break	7 %	ASTM D638



Aria GC HP-510L

• Description

“Aria GC HP-510L” is a polypropylene homo-polymer with good flow properties and is particularly suitable for the extrusion of film yarn, monofilaments, cast film and sheet. Moplen HP510L combines outstanding process ability with good mechanical properties. Aria GC HP-510L is particularly suitable to produce film yarn with the cast film process. Film yarn of Aria GC HP-510L is suitable for baler twins, packaging twins and ropes. Aria GC HP-510L is well suited for the production of monofilament used for instance in brush and broom filling and technical applications. Other applications of Aria GC HP-510L are monolayer or co-extruded film for packaging, thin sheet for stationary folders and sheets for thermoforming. Aria GC HP-510L is also used for the extrusion of straws

• Product Application

- Yarn
- Cast Film
- Monofilament
- Mono-Layer or co-extruded film
- Straw

• Technical Specifications

Properties

Value

Method

Melt Flow Index @230°C /2.16kg	6 g/10min	ASTM D1238
Vicat Softening Point, 9.8N	155 °C	ASTM D1525
H.D.T (0.46 MPa)	95 °C	ASTM D648
Flexural Modulus	1500 MPa	ASTM D790
Tensile Strength at Yield	35 MPa	ASTM D638
Elongation at Yield	13 %	ASTM D638
Izod Impact Strength (Notched) at 23 °C	40 J/m	ASTM D256



Aria GC HP-550J

• Description

“Aria GC HP-550J” is a polypropylene homopolymer particularly suitable for the extrusion of sheet for thermoforming, film yarn and monofilament. This grade combines outstanding processability with good mechanical properties. “Aria GC HP-550J” is designed for the production of films that can be converted into stretched tapes for weaving applications. Textile film yarns with a denier count of not more than 1100 to 1200 are used for the production of carpet backings, bags, industrial fabrics, mats and artificial grass. Film yarn with a denier count ranging from 3000 to 28000 is used for baler twines, packaging twines and ropes. “Aria GC HP-550J” is also suitable for food contact

• Technical Specifications

Properties	Value	Method
Melt Flow Index @230°C /2.16kg	3.2 g/10min	ASTM D1238
Density	0.9 g/cm ³	ASTM D1505
Flexural Modulus	1550 MPa	ASTM D790
Tensile Strength at Yield	35 MPa	ASTM D638
Tensile Elongation at Yield	12 %	ASTM D638
Izod Impact Strength (Notched) at 23 °C	55 J/m	ASTM D256
Rockwell Hardness	102 R Scale	ASTM D785
Vicat Softening Point, 10N	156 °C	ASTM D1525
H.D.T (0.46 MPa)	94 °C	ASTM D648
Accelerated Oven Ageing in Air at 150 °C	360 Hours	ASTM D3012

• Product Application

Stiff sheet for high quality thermoformings such as vending cups, packaging for dairy products and trays for fruit, biscuits and chocolates Film yarn, raffia, tapes, strapping Carpet backings, bags, industrial fabrics, mats and artificial grass Baler twines, packaging twines and ropes Brush and broom filling and technical applications Nets for various purposes



Aria GC Z30S

• Description

“Aria GC HP-Z30S” is a high melt flow homopolymer for the production of CF, BCF & staple fibres at medium to high spinning speeds. “Aria GC Z30S” is suitable for low denier staple fibres for nonwoven fabrics, diapers, medical-sanitary applications & wipes. Another typical application is high tenacity continuous filament for straps for backpacks, sport bags, bulk bags, and safety belts. Continuous filament with medium tenacity is used for upholstery & sportswear. Another typical application of “Aria GC Z30S” is the extrusion of nets for various purposes. “Aria GC Z30S” is also suited for the production of bulked continuous filament for carpets. “Aria GC Z30S” is also suitable for food contact

• Product Application

- Yarn
- Cast Film
- Monofilament
- Mono-Layer or co-extruded film
- Straw

• Technical Specifications

Properties

Value

Method

Melt Flow Index @230°C /2.16kg	25 g/10min	ASTM D1238/L
Vicat Softening Point, 10N	152 °C	ASTM D1525
H.D.T (0.46 MPa)	94 °C	ASTM D648
Flexural Modulus	1500 MPa	ASTM D790
Tensile Strength at Yield	32 MPa	ASTM D638
Elongation at Yield	13 %	ASTM D638
Notched Izod Impact @ 23 °C	30 J/m	ASTM D256
Rockwell Hardness	100 R Scale	ASTM D785
Oven Ageing at 150 °C	150 Hours	ASTM D3012



- Notes

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Catalogue**



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