



There Is Always a Better Way

ARIA POLYMER

Product 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:

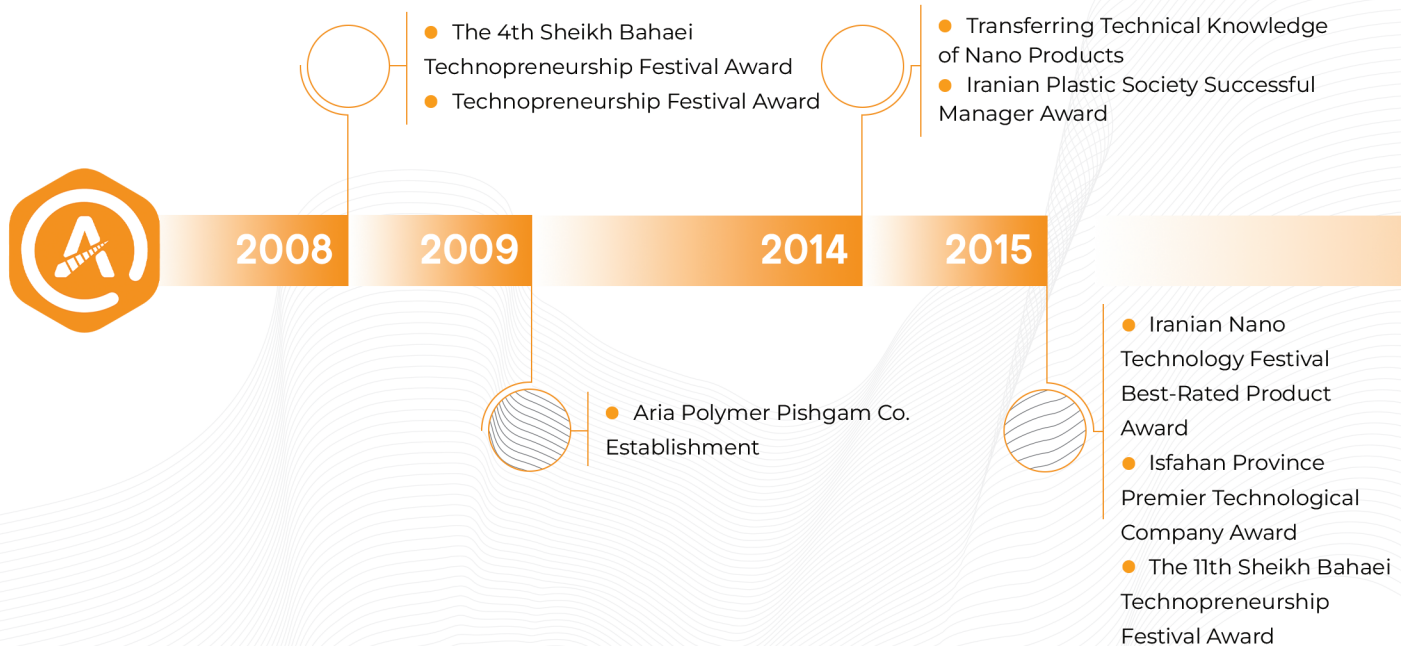
Automotive Compounds and Parts, Pipes, Packaging, Building and Civil Constructions, Medical Tools;
and Consumer Goods.

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

ADDITIVE MASTERBATCH

- 13 **Aria Add 2124**
Anti-Block Agent Masterbatch
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Anti-Block Agent Masterbatch
- 15 **Aria Add 2126**
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- 16 **Aria Add 2125**
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- 20 **Aria Add 2424**
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- 22 **Aria Add 2224T101**
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Anti-UV Masterbatch

Film & Packaging	Textile	Agriculture	Compound	Pipe	Injection Molding
					
					
					
					
					
					
					
					
					
					
					
					
					

ADDITIVE MASTERBATCH

		Film & Packaging	Textile	Agriculture	Compound	Pipe	Injection Molding
27	Aria Add 2191 Black Masterbatch						
28	Aria Add 2113-1 White Masterbatch						
29	Aria Add 2113-4 White Masterbatch						
30	Aria Add 2113-5 White Masterbatch						
31	Aria Add 2114 White Masterbatch						
32	Aria Add 2112 White Masterbatch						
33	Aria Add 2413 White Masterbatch						
34	Aria Add 2415 White Masterbatch						
35	Aria Add 2105 Processing Aid Masterbatch						
36	Aria Add 2130 Antioxidant Masterbatch						
37	Aria Add 2135 Antioxidant Masterbatch						
38	Aria Add 2161 Optical Brightener Masterbatch						
39	Aria Add 2162 Optical Brightener Masterbatch						
40	Aria Add 2445 MFI Modifier Masterbatch						

ADDITIVE MASTERBATCH

- 41 **Aria Add 2440T136**
MFI Modifier Masterbatch
- 42 **Aria Add 2115**
Anti-Static Masterbatch
- 43 **Aria Add 2215**
Anti-Static Masterbatch for CPP films
- 44 **Aria Add 2180**
Desiccant Masterbatch
- 45 **Aria Add 2451**
Dimensional Stabilizer Masterbatch
- 46 **Aria Add 2160**
Matting agent for CPP & BOPP films

Film & Packaging	Textile	Agriculture	Compound	Pipe	Injection Molding

ARIA COMPOUND

- 49 **Aria Comp 4203**
Impact Modifier and Stitching Improver Based Polyolefin
- 50 **Aria Comp 4410**
Impact Modifier Based Polypropylene
- 51 **Aria Comp 4329**
Polyolefin Compound (Injection Molding)
- 52 **Aria Comp 4368**
Black Polyethylene Coating Compound

Film & Packaging	Compound	Pipe	Injection Molding

COUPLING AGENT/ COMPATIBILIZER

		Compounding						
		Automotive	Wood Plastic	Biodegradable Tableware	Home Appliance	Wire & Cable	Film & Packaging	Injection & Blow Molding
55	Aria Couple 1433 Maleic Anhydride Grafted Polypropylene							
56	Aria Couple 1431 Maleic Anhydride Grafted Polypropylene							
57	Aria Couple 1432 Maleic Anhydride Grafted Polypropylene							
58	Aria Couple 1432T112 Maleic Anhydride Grafted Polypropylene							
59	Aria Couple 1432T188 Maleic Anhydride Grafted Polypropylene							
60	Aria Couple 5600 Maleic Anhydride Grafted Polypropylene							
61	Aria Couple 1946 High Amorphous Ethylene Copolymer Functionalized by Maleic Anhydride							
62	Aria Couple 1946T129 High Amorphous Ethylene Copolymer Functionalized by Maleic Anhydride							
63	Aria Couple 1947 High Amorphous Ethylene Copolymer Functionalized by Maleic Anhydride							
64	Aria Couple 1732 Maleic Anhydride Grafted Acrylonitrile Butadiene Styrene (ABS)							
65	Aria Couple 1141 Maleic Anhydride Grafted High Density Polyethylene							
66	Aria Couple 1142 Maleic Anhydride Grafted High Density Polyethylene							
67	Aria Couple 1196 Maleic Anhydride Grafted Linear Low Density Polyethylene							
68	Aria Couple 1125 Maleic Anhydride Modified Low Density Polyethylene							
69	Aria Couple 1937 Ethylene Copolymer Functionalized by Maleic Anhydride							

TIE LAYER ADHESIVE

ADHESIVE		PEX/PERT Pipe	SPC	Corrugated Pipe	Tube	Fuel System	Film	Composite Panel	Multilayer Container
73	Aria Adhesive 4100T301								
74	Aria Adhesive 4100T250								
75	Aria Adhesive 4100T304								
76	Aria Adhesive 4106								
77	Aria Adhesive 4107T242								
78	Aria Adhesive 4107T320								
79	Aria Adhesive 4407T134								
80	Aria Adhesive 4100T276								
81	Aria Adhesive 4107T305								
82	Aria Adhesive 4107T267								
83	Aria Adhesive 4100T319								
84	Aria Adhesive 4100T315								
85	Aria Adhesive 4100T328								
86	Aria Adhesive 4100T347								
87	Aria Adhesive 4100T346								

NANO ADDITIVE

89	Aria Nano 701 UPVC Pipe Nano Additive
90	Aria Nano 801 UPVC Fitting Nano Additive
91	Aria Nano 901 UPVC Profile Nano Additive
92	Aria Nano 4355 Polyolefin Nanocomposite (OTR)
93	Aria Nano 4365 Anti-Bacterial Nano Masterbatch

GENERAL COMPOUND

PE Compounds

95	Aria GC 62N07
96	Aria GC 52518
97	Aria GC HD-EX5
98	Aria GC HD-EX3
99	Aria GC F7000
100	Aria GC 5110
101	Aria GC PE100 Black
102	Aria GC 3840 UA
103	Aria GC BL3
104	Aria GC 2420
105	Aria GC 2102
106	Aria GC 2119
107	Aria GC 209

PP Compounds

109	Aria GC PP/CaCO3
110	Aria GC HP-510L
111	Aria GC HP-550J
112	Aria GC Z30S



Aria Add 2161
Optical Brightener
Masterbatch

Additive Masterbatch

ARIA ADD

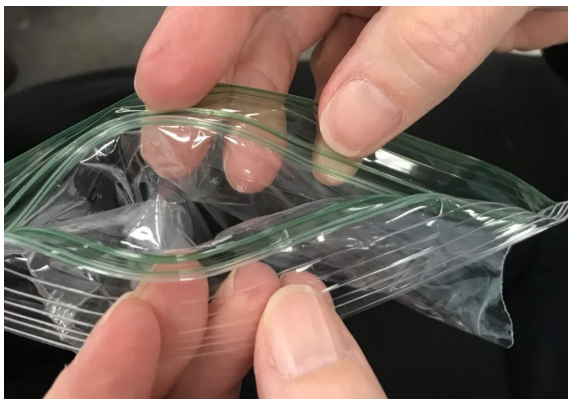
ARIA ADD is a category of concentrated mixture of additives dispersed in a carrier resin, designed to impart specific properties or functionalities to plastic products. These additives are incorporated during the manufacturing process to enhance the plastic's performance, durability, or appearance. Essentially, it's a convenient way to introduce desired characteristics into plastics without directly handling and dispersing the often difficult-to-process additives. **ARIA ADD** products are widely used in every typical plastic process, such as injection molding, blow molding and extrusion molding.

Anti-Block Agent Masterbatch

Aria Add 2124

• Description

Aria Add 2124 is an economical anti-block agent masterbatch, containing additives which create separation between the surfaces and improve performance characteristics in blown film and cast application. Typically, anti-block additives have low compatibility with the polymer, allowing migration to the film surface



• Product Application

Anti-block agent for blown film and cast application

• Advantages

- Increase separation of film layers
- Improve performance characteristic
- Melt flow control

• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PE	-
Active Ingredients	>10%	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	4.5±1.5 g/10min	ASTM D1238
Usage Level	0.5-5%	-

Anti-block Agent Masterbatch

Aria Add 2123

• Description

Aria Add 2123 is an economical inorganic anti-blocking agent masterbatch containing additives to create separation between the surfaces and improve performance characteristics in PE film, Cast, food packaging and FFS films.

• Product Application

Anti-block agent for PE film, Cast, and FFS films

• Advantages

- Increase separation of film layers
- Improve performance characteristic
- Enhanced Productivity



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PE	-
Active Ingredients	15%	-
Density	0.94±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	1±0.5 g/10min	ASTM D1238
Usage Level	0.5-2.5%	-

Slip Agent Masterbatch Aria Add 2126

• Description

Aria Add 2126 is an economical slip agent masterbatch based on polyethylene, containing additives which manage the coefficient of friction and create separation between the surfaces and improve performance characteristics in blown film and cast application

• Product Application

Slip agent for blown film and cast application

Mold release agent for injection molding

• Advantages

- Friction reduction, fast slip
- Increase separation of film layers
- Improve performance characteristic
- Melt flow control
- Improve surface finish
- Improve flow dispersion of filled polymers
- Reduce machine wear and cleaning time
- Increase production rate



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PE	-
Active Ingredients	>10%	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	4.5±1.5 g/10min	ASTM D1238
Usage Level	0.5-5%	-

Slip & Anti-Block Agent Masterbatch

Aria Add 2125

• Description

Aria Add 2125 is an economical slip agent masterbatch, containing additives which manage the coefficient of friction and create separation between the surfaces and improve performance characteristics in blown film and cast application

• Product Application

Slip & anti-block for blown & cast films

• Advantages

- Easily opening
- Improve melt flow control
- Lower coefficient of friction (COF)
- Enhance both appearance and function



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PE	-
Active Ingredients	>10%	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	4.5±1.5 g/10min	ASTM D1238
Usage Level	0.5-5%	-

Slip & Anti-Block Agent Masterbatch

Aria Add Mix 2126

• Description

Aria Add Mix 2126 is a slip and anti-block agent masterbatch, containing additives which manage the coefficient of friction and create separation between the surfaces and improve performance characteristics in blown film and cast application. It provides an optimal mix between the slip agent and the anti-block agent



• Product Application

Slip and anti-block agent for blown film and cast application

• Advantages

- Friction reduction, slow slip
- Increase separation of film layers
- Improve performance characteristic
- Melt flow control
- Polyethylene (PE) based slip & antiblock agent masterbatc

• Technical Specifications

Properties	Value	Method
Appearance	Milky Granules	-
Carrier Resin	PE	-
Active Ingredients	>10%	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	4.5±1.5 g/10min	ASTM D1238
Usage Level	0.5-5%	-

Slip & Anti-Block Masterbatch

Aria Add 2136

• Description

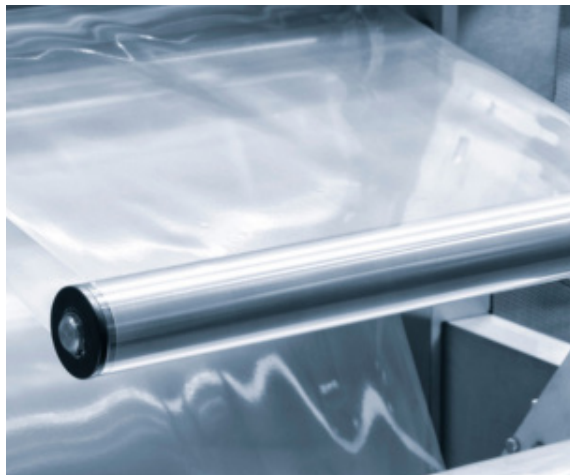
Aria Add 2136 is a slip & anti-block masterbatch agent, containing additives which manage an optimal mix between the slip agent and anti-block agent and improve the coefficient of friction and create separation between the surfaces

• Product Application

Slip & anti-block for blown & cast films

• Advantages

- High slip
- Friction reduction
- Improve melt flow control
- Excellent open-ability



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PE	-
Anti-Block Agent Content	>10%	-
Slip Content	>7%	-
Density	0.99±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	7±2 g/10min	ASTM D1238
Usage Level	0.5-2%	-

Slip Agent Masterbatch **Aria Add 2226**

• Description

Aria Add 2226 is an economical slip agent masterbatch based on polypropylene, containing additives which manage the coefficient of friction and create separation between the surfaces and improve performance characteristics in film and cast application



• Product Application

Slip agent for film and cast application

• Advantages

- Friction reduction
- Product processing: sheet, film & other extrusion processes (PP)
- Increase production rate
- Improve flow & dispersion of filled polymers

• Technical Specifications

Properties	Value	Method
Appearance	Milky Granules	-
Carrier Resin	PP	-
Active Ingredients	>10%	-
Density	0.91±0.01 g/cm ³	ASTM D792
Melt Flow Index @230°C /2.16kg	6±2 g/10min	ASTM D1238
Usage Level	0.5-2%	-

Anti-Block Agent for CPP & BOPP

Aria Add 2424

• Description

Aria Add 2424 is an inorganic anti-blocking agent masterbatch, containing additives which create separation between the surfaces and improve performance characteristics in CPP and BOPP application

• Product Application

Anti-block agent for CPP & BOPP films

• Advantages

- High clarity film properties
- Increase separation of film layers
- Polypropylene (PP) based masterbatch
- General purpose anti-block for plain films with excellent anti-blocking effect



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PP	-
Active Ingredients	>5%	-
Density	0.93±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	19±2 g/10min	ASTM D1238
Usage Level	2-4%	-

Slip & Anti-Block Agent Masterbatch

Aria Add 2236

• Description

Aria Add 2236 is a slip & anti-block agent masterbatch based on polypropylene and contains additives which manage an optimal mix between slip agent and anti-block agent and provide the coefficient of friction and create separation between the surfaces. It improves performance characteristics in blown film and cast applications

• Product Application

Slip & anti-block for blown and cast applications

• Advantages

- Friction reduction
- Melt flow control
- Increase separation of film layers
- Improve performance characteristic



• Technical Specifications

Properties	Value	Method
Appearance	White to Grayish Granules	-
Carrier Resin	PP	-
Active Ingredients	>15%	-
Density	0.92±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	6±2 g/10min	ASTM D1238
Usage Level	0.5-2.5%	-

Anti-Block for CPP & BOPP Metalizable Films

Aria Add 2224T101

• Description

Aria Add 2224T101 is an organic anti-block agent masterbatch, containing additives which create separation between the surfaces and improve performance characteristics in CPP & BOPP film

• Product Application

Anti-block agent for CPP & BOPP metalizable films

• Advantages

- Consistent low COF & high optics
- Suitable for heat-sealable metallizable films
- Non migratory Slip/Antiblock for BOPP films



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PP	-
Active Ingredients	>6%	-
Density	0.9±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	7.5±1 g/10min	ASTM D1238
Usage Level	1-5%	-

Anti-UV Masterbatch Aria Add 2173

• Description

ria Add 2173 is a polyethylene-based masterbatch designed to provide long-lasting protection for PE products. It is a light stabilizer masterbatch containing a mixture of HALS (Hindered Amide Light Stabilizer) & UV absorbers

• Product Application

UV protection, especially for PE films, sheets & parts

• Advantages

- Increasing product lifetime
- Increasing color stability
- Preserving physical and mechanical degradation



• Technical Specifications

Properties	Value	Method
Appearance	Yellowish Granules	-
Carrier Resin	LDPE	-
Active Ingredients	>20%	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	4.5±1 g/10min	ASTM D1238
Usage Level	0.5-10%	-

Anti-UV Masterbatch

Aria Add 2176

• Description

ria Add 2176 is a polyethylene-based masterbatch designed to provide longlasting protection for PE products. It is a light stabilizer masterbatch containing a mixture of HALS (Hindered Amide Light Stabilizer) & UV absorbers.

• Product Application

UV protection, especially for PE films, sheets & parts

• Advantages

- Increasing product lifetime
- Increasing color stability
- Preserving physical and mechanical degradation



• Technical Specifications

Properties	Value	Method
Appearance	Yellowish Granules	-
Carrier Resin	LDPE	-
Active Ingredients	>20%	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C /2.16kg	7±2.5 g/10min	ASTM D1238
Usage Level	0.5-10%	-

Anti-UV Masterbatch for Greenhouse Films

Aria Add 2177T103

• Description

AriaAdd2177T103 is a polyethylene based masterbatch, designed to provide long lasting protection for agricultural plastics. It is particularly resistant to solar radiation and chemical attacks by e.g. agrochemicals, pesticides, acid rains, etc.

• Product Application

Anti-UV masterbatch for PE greenhouse films

• Advantages

- Highly effective Light Stabilizer
- Excellent thermal and color stability
- Excellent resistance to agrochemicals
- Lower sensitivity to acidic environment



• Technical Specifications

Properties	Value	Method
Appearance	Granules	-
Carrier Resin	LDPE	-
Additives content	>24%	
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	7±2 g/10min	ASTM D1238
Usage Level	4-10%	

Anti-UV Masterbatch

Aria Add 2273

• Description

Aria Add 2273 is a polypropylene-based masterbatch designed to provide long-lasting protection for PP films, sheets & parts. It is a light stabilizer masterbatch containing a mixture of HALS (Hindered Amide Light Stabilizer) & UV absorbers



• Product Application

UV protection for PP parts, packaging, especially woven bags & nonwoven fabrics

• Advantages

- Increasing product lifetime
- Increasing color stability
- Preserving physical and mechanical degradation

• Technical Specifications

Properties	Value	Method
Appearance	Granules	-
Carrier Resin	PP	-
Active Ingredients	>20%	
Density	0.91±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	5±2 g/10min	ASTM D1238
Usage Level	1-5%	

Black Masterbatch Aria Add 2191

• Description

- Aria Add 2191 is a carbon black polyethylene based masterbatch, specially designed for coloring of polyethylene in injection molding and compounding applications, and also increase the UV-resistance of plastic products
- The black masterbatch based on a mixture of polyethylene filled with 40% carbon black is mainly used for any pipe productions, packaging film, and geomembrane industries



• Product Application

Black Masterbatch for pipe, packaging film, and geomembrane

• Advantages

- High dispersion
- High thermal stability
- Completely miscible vast range of plastic

• Technical Specifications

Properties

Value

Method

Appearance	Black Granules	-
Carbon Black Pigment	40±1%	ASTM D4218
Carrier Resin	PE	-
Density	1.1±0.1 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	15±3 g/10min	ASTM D1238
Absorption Moisture	<0.1%	ASTM D570
OIT (200°C)	40 min ≤ OIT	ISIRI 7186-6
Usage Level	According to condition and requirements	

White Masterbatch

Aria Add 2113-1

• Description

Aria Add 2113-1 is a white masterbatch containing 70% finely dispersed white pigment and PE carrier resin, which provides optimum opacity for blown and cast films, extrusion, and injection parts

• Product Application

White masterbatch for film, extrusion, tube, and injection

• Advantages

- Well Dispersed
- Very high color strength
- Excellent Whiteness
- Good Melt strength



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
White Pigment	70±2%	ASTM D4218
Carrier Resin	PE	-
Density	1.9±0.2 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	30±10 g/10min	ASTM D1238
Moisture	Max 0.1%	ASTM D644
Usage Level	According to condition and requirements	

White Masterbatch Aria Add 2113-4

• Description

Aria Add 2113-4 is a white masterbatch containing more than 60% finely dispersed white pigment, PE carrier resin, and Optical brightener, which provides optimum opacity for blown and cast films, extruded sheet, and injection or blow molded parts

• Product Application

White masterbatch for Film, Injection, and extruded sheet

• Advantages

- Well Dispersed
- Excellent Hiding Power
- Excellent Whiteness
- Good Melt strength



• Technical Specifications

Properties

Value

Method

Appearance	Bluish Color Shade Granules	
White Pigment	60±2%	ASTM D4218
Carrier Resin	PE	-
Density	1.8±0.1 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	45±10 g/10min	ASTM D1238
Moisture	Max 0.1%	ASTM D644
Usage Level	According to condition and requirements	

White Masterbatch

Aria Add 2113-5

• Description

Aria Add 2113-5 is a white masterbatch of 60% finely dispersed white pigment, which provides optimum opacity for Rotational molded parts, blown and cast films, and injection or blow molded parts

• Product Application

White masterbatch for Rotational molded parts

• Advantages

- Well Dispersed
- Excellent Hiding Power
- Excellent Whiteness
- Good Melt strength



• Technical Specifications

Properties	Value	Method
Appearance	Bluish White Granules	
White Pigment	60±2%	ASTM D4218
Carrier Resin	PE	-
Density	1.7±0.1 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	45±5 g/10min	ASTM D1238
Moisture	Max 0.1%	ASTM D644
Usage Level	According to condition and requirements	

White Masterbatch Aria Add 2114

• Description

- Aria Add 2114 is a well-dispersed polyethylene based masterbatch
- Aria Add 2114 has very high color strength and good flow properties

• Product Application

White masterbatch for PE

• Advantages

- Well Dispersed
- Excellent Hiding Power
- Excellent Whiteness
- Good Melt strength



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
White Pigment	70±2%	ASTM D4218
Carrier Resin	PE	-
Density	1.8±0.2 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	3±1 g/10min	ASTM D1238
Moisture	Max 0.1%	ASTM D644
Usage Level	According to condition and requirements	

White Masterbatch

Aria Add 2112

• Description

Aria Add 2112 is a white masterbatch containing 50% finely dispersed TiO₂, PE carrier resin, and Optical brightener, which provides optimum opacity for blown and cast films

• Product Application

White masterbatch for cast and blown film

• Advantages

- Well Dispersed
- Excellent Hiding Power
- Excellent Whiteness
- Good Melt strength



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
White Pigment (TiO ₂)	>50%	ASTM D4218
Carrier Resin	PE	-
Density	1.8±0.1 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	38±3 g/10min	ASTM D1238
Moisture	Max 0.1%	ASTM D644
Usage Level	According to condition and requirements	

White Masterbatch **Aria Add 2413**

• Description

Aria Add 2413 is a white masterbatch containing finely dispersed white pigment and polyolefin carrier resin, which provides optimum opacity for Raffia bags

• Product Application

White Masterbatch for Raffia Bags

• Advantages

- Easily processable
- Suitable for food packaging
- Excellent whiteness & dispersion
- Chemical stability, permanence, and high coloring ability



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
White Pigment	70±2%	ASTM D4218
Density	1.9±0.1 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	3.5±1 g/10min	ASTM D1238
Moisture	Max 0.2%	ASTM D644
Usage Level	According to condition and requirements	

White Masterbatch **Aria Add 2415**

• Description

Aria Add 2415 is a white masterbatch containing finely dispersed white pigment and polyolefin carrier resin, which provides optimum opacity for Raffia bags

• Product Application

White Masterbatch for Raffia Bags

• Advantages

- Easily processable
- Excellent whiteness & dispersion
- Chemical stability, permanence, and high coloring ability



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	
White Pigment	70±2%	ASTM D4218
Density	1.8±0.1 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	4±1 g/10min	ASTM D1238
Moisture	Max 0.2%	ASTM D644
Usage Level	According to condition and requirements	

Processing Aid Masterbatch

Aria Add 2105

• Description

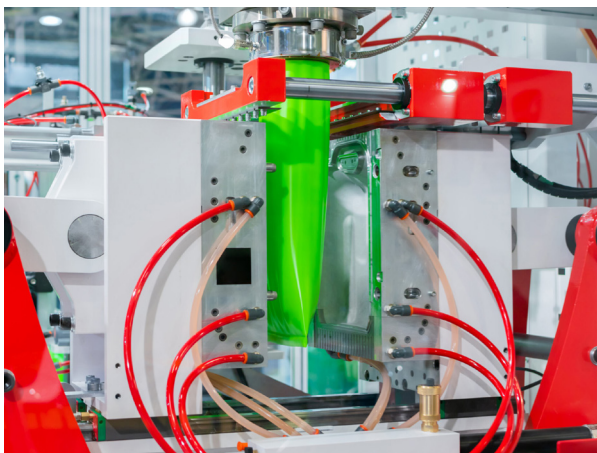
Aria Add 2105 is a processing aid (PPA) masterbatch, containing fluoropolymer (PVDF) based in a polyethylene carrier. It can improve PE processing and be recommended for polyolefin films, sheets, pipes, tubes, extrusion processes and stone paper

• Product Application

PPA for polyolefin films, sheets, pipes, tubes and paper stone

• Advantages

- Surface smoothness
- Less machine-direction drawing
- Improve the processability of recycled polymer
- Die build-up monitoring in Cast Film Line
- Improve processing lower MFI resins
- Melt fracture elimination
- Reduce operating pressure and temperature
- Increase output and energy saving



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PE	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2±1 g/10min	ASTM D1238
Usage Level	0.5-2.5%	-

Antioxidant Masterbatch

Aria Add 2130

• Description

Aria Add 2130 is an antioxidant masterbatch based on PE for the thermal stabilization of various polymers. This concentrate is containing a mixture of primary and secondary antioxidants

• Product Application

Antioxidant for general purpose applications

• Advantages

- Improve melt flow control
- Lower initial color and outstanding color maintenance
- Improved compatibility of additive with matrix
- Avoid oxidative degradation in higher temperatures

• Technical Specifications



Properties

Value

Method

Appearance	Milky Granules	-
Active Ingredients	>10%	-
Carrier Resin	HDPE	-
Density	0.94±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	7±3 g/10min	ASTM D1238
Usage Level	1-3%	

Antioxidant Masterbatch

Aria Add 2135

• Description

Aria Add 2135 is an antioxidant masterbatch based on PE for the thermal stabilization of various polymers. This concentrate is containing a mixture of primary and secondary antioxidants

• Product Application

Antioxidant for process and requiring superior stabilization

• Advantages

- Avoid oxidative degradation in higher temperatures
- Improved compatibility of additive with matrix
- Reduce the incidence of gel formation
- Better stabilization of the polymer during processing



• Technical Specifications

Properties	Value	Method
Appearance	Milky Granules	-
Active Ingredients	>8%	-
Carrier Resin	LLDPE	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	3±1 g/10min	ASTM D1238
Moisture	500 ppm	ASTM D7191-18
Oxidative-Induction Time (OIT)	>100 min	ASTM D3895
Usage Level	1-4%	-

Optical Brightener Masterbatch

Aria Add 2161

• Description

- Optical brightener masterbatch (fluorescent whitening agent) absorbs some part of the UV ray and re-emits it in the blue region of the visible spectrum.
- Aria Add 2161 is added in polymers to reduce yellowing, improve whiteness, and enhance the brightness of a product

• Product Application

PE films, sheets, parts and other extrusion processes

• Advantages

- Mask natural yellowing plastics
- Improve initial color
- Get brilliancy of colored articles
- It gives a smooth & glossy surface to film
- Absorbs UV radiation



• Technical Specifications

Properties	Value	Method
Appearance	Phosphoric Granules	
Carrier Resin	HDPE	-
Density	0.92±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	5±1 g/10min	ASTM D1238
Usage Level	0.2-1%	

Optical Brightener Masterbatch

Aria Add 2162

• Description

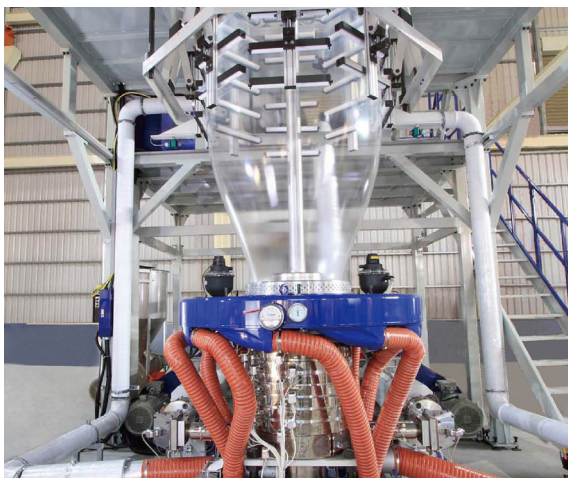
- Optical brightener masterbatch (fluorescent whitening agent) absorbs some part of the UV ray and re-emits it in the blue region of the visible spectrum
- Aria Add 2162 is added in polymers to reduce yellowing, improve whiteness, and enhance the brightness of a product

• Product Application

PE films, sheets, parts and other extrusion processes

• Advantages

- Mask natural yellowing plastics
- Improve initial color
- Get brilliancy of colored articles
- It gives a smooth & glossy surface to film
- Absorbs UV radiation



• Technical Specifications

Properties	Value	Method
Appearance	Phosphoric Granules	
Carrier Resin	HDPE	-
Density	0.92±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	5±1 g/10min	ASTM D1238
Usage Level	0.2-1%	-

MFI Modifier Masterbatch

Aria Add 2445

• Description

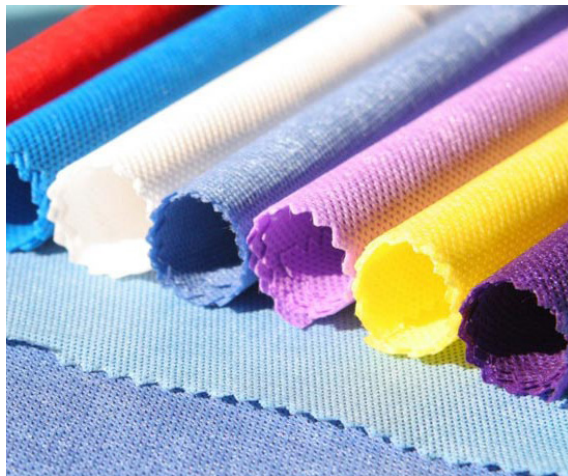
- Polypropylene based masterbatch reactive extrusion
- MFI modifier and viscosity reducer masterbatch

• Product Application

PP Melt Flow increase as masterbatch

• Advantages

- Enhance melt blown process
- Increase MFI of PP compounds
- Increase production rate
- Better and softer surface properties of melt blown products
- Reduce warpage
- Improve mixing of pigment/color and filler in PP matrix



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	PP	-
Density	0.9±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	>70 g/10min	ASTM D1238
Usage	0.5-10%	-

MFI Modifier Masterbatch

Aria Add 2440T136

• Description

- Polypropylene based masterbatch reactive extrusion
- MFI modifier and viscosity reducer masterbatch

• Product Application

PP Melt Flow increase as masterbatch

• Advantages

- Enhance melt blown process
- Increase MFI of PP compounds
- Increase production rate
- Better and softer surface properties of melt blown products
- Reduce warpage
- Improve mixing of pigment/color and filler in PP matrix



• Technical Specifications

Properties	Value	Method
Appearance	Phosphoric Granules	
Carrier Resin	PP	-
Density	0.9±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	≥100 g/10min	ASTM D1238
Usage Level	1-10%	-

Anti-Static Masterbatch

Aria Add 2115

• Description

Aria Add 2115 is anti-static masterbatch with anti-static additives for neutralizing the surface charges of polyethylene polymers. Anti-static additives can reduce or eliminate static electrical charges to prevent problems such as dust accumulation (which can ruin clarity and surface finish) and electronic static discharge damaging electronic equipment

• Product Application

Anti-static for PE films, PE sheets, and Injection molded parts

• Advantages

- Reduces Surface Resistivity of Plastics
- Prevents dust attraction to plastic parts
- Reduces Static charge built-up on plastics
- Prevents shock discharge during production and handling



• Technical Specifications

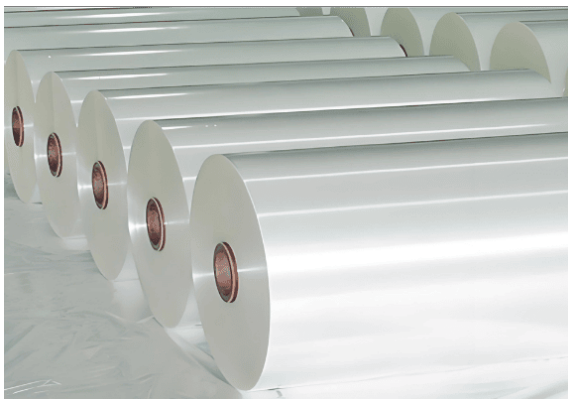
Properties	Value	Method
Appearance	Milky Granules	-
Active Ingredients	>10%	-
Carrier Resin	PE	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	4±2 g/10min	ASTM D1238
Usage	0.5-3%	-

Anti-Static Masterbatch for CPP films

Aria Add 2215

• Description

Aria Add 2215 is an anti-static masterbatch with anti-static additive for neutralizing the surface charges of polypropylene polymers. Anti-static additives can reduce or eliminate static electrical charges to prevent problems such as dust accumulation and electronic static discharge damaging electronic equipment



• Product Application

Anti-static for CPP films

• Advantages

- Reduces Surface Resistivity of Plastics
- Prevents dust attraction to plastic parts
- Reduces risk of electrical discharge causing fire or explosion

• Technical Specifications

Properties

Value

Method

Appearance	White Granules	-
Active Ingredients	>10 %	-
Carrier resin	PP	-
Density	0.9±0.01 g/cm ³	ASTM D792
Melt Flow Index @230°C/2.16kg	7±1 g/10min	ASTM D1238
Usage Level	2-10%	-

Desiccant Masterbatch

Aria Add 2180

• Description

Aria Add 2180 is a desiccant masterbatch designed to absorb the moisture in plastics and nylon in order to eliminate moisture-related problems

• Product Application

Desiccant masterbatch

• Advantages

- Improves product quality and yield
- Increase productivity and reduce energy consumption
- Reduce prevention of moisture-related problems, including lacing and porosity of the molded problem
- Minimizes down glossing and hazing under high humidity application conditions



• Technical Specifications

Properties	Value	Method
Appearance	Granules	-
Active Ingredients	>70%	-
Carrier Resin	PE	-
Density	1.9±0.1 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	1±0.5 g/10min	ASTM D1238
Usage	0.5-1.5%	-

Dimensional Stabilizer Masterbatch

Aria Add 2451

• Description

Aria Add 2451 is a special additive package containing nanoparticles and carriers.

It has been primarily designed to act as a dimensional stabilizer and PP clarifier

• Product Application

Dimensional stabilizer and PP clarifier

• Advantages

- Dimensional stabilizer in PP bag, fibers, and PP packaging, especially PP woven bags
- PP clarifier in PP injection parts



• Technical Specifications

Properties	Value	Method
Appearance	Glassy Granules	-
Carrier Resin	PP	-
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	10±2 g/10min	ASTM D1238
Usage Level	1-4%	-

Matting agent for CPP & BOPP films

Aria Add 2160

• Description

Aria Add 2160 is a matte compound utilized in the production of all types of PP films created through various extrusion processes (BOPP and CPP films) when strict final optical properties are required

• Product Application

Matting agent for CPP & BOPP films

• Advantages

- Low gloss and optimal haze
- Good co-extrusion features
- Matt compound special for matt film



• Technical Specifications

Properties	Value	Method
Appearance	White Granules	-
Carrier Resin	Polyolefin	-
Density	0.91±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2±1 g/10min	ASTM D1238
Usage	Matt Compound can be used 100%	



Compound **ARIA COMP**

ARIA COMP is a basic and widely-used category of polymers to enable the customers use their required material in the simplest possible way.

ARIA COMP includes a grade of **3LPE Top Coat Compound**, and some **Polyolefin Impact Modifiers**.



Impact Modifier and Stitching Improver Based Polyolefin

Aria Comp 4203

• Description

Aria Comp 4203 polymer resin is a polyolefin base compound. It has been primarily designed to act as an impact modifier of polypropylene and polyethylene containers and parts

• Product Application

- Containers and parts
- Sealant film
- PE film
- Stretch film

• Advantages

- Improving impact properties of polyolefin containers without changing in transparency
- Increase in film stretch and elongation



• Technical Specifications

Properties	Value	Method
Density	0.90±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.7±0.5 g/10min	ASTM D1238
Usage Level	1-5 %	-

Impact Modifier Based Polypropylene

Aria Comp 4410

• Description

Aria Comp 4410 polymer resin is a polypropylene base compound. It has been primarily designed to act as an impact modifier of polypropylene containers and parts

• Product Application

Containers and parts

• Advantages

- Improving impact properties of polyolefin containers without changing in transparency
- Scratch resistance of PP plastic containers



• Technical Specifications

Properties	Value	Method
Density	0.91±0.02 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.5±1 g/10min	ASTM D1238
Usage Level	3-7 %	-

Polyolefin Compound (Injection Molding)

Aria Comp 4329

• Description

Aria Comp 4329 polymer resin is a polyolefin base compound. It has been primarily designed to injection molding for parts

• Product Application

Injection molding for parts

• Advantages

- Good impact properties
- Proper processability



• Technical Specifications

Properties	Value	Method
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @230°C/2.16kg	9±3 g/10min	ASTM D1238
Melting Temperature	150±5 °C	ISO 113571
Vicat Softening Point	134±4 °C	ASTM D1525
Tensile Strain at Break(50mm/min)	>120 %	ASTM D638
Tensile Stress at Yield(50mm/min)	23±5 MPa	ASTM D638
Flexural Modulus	1500 MPa	ASTM D790
Izod Impact Strength (notched)	78 J/m	ASTM D256
at 23 °C		

• Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

200...210

...(°C)

200...210

Die(°C)

210...230

Black Polyethylene Coating Compound

Aria Comp 4368

Description

Aria Comp 4368 is a black polyethylene coating compound. It has been primarily designed for steel pipe coating

Product Application

Steel pipe Coating

Advantages

- Good Melt Strength
- Good Process ability
- Very good ESCR
- Superior Mechanical Properties at low and high temperature



Technical Specifications

Properties	Value	Method
Density	0.95±0.005 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	0.4±0.05 g/10min	ASTM D1238
Melting Temperature (DSC)	Min. 127 °C	ISO 11357-3
Hardness, Shore D	Min. 57	ASTM D2240
Tensile Stress at Yield	Min.18 MPa	ASTM D 638
Elongation at Break	Min. 700	ASTM D 638
Carbon Black Content	2-2.5 %	ASTM D1603
Carbon Black Dispersion	Max. 2.5	ISO 18553





Coupling Agent **ARIA COUPLE**

ARIA COUPLE has revolutionized numerous industries, due to its functionalized nature. It is a Maleic Anhydride (MAH) grafted polymer in granular form. These polar materials have been specifically designed to provide well dispersion and compatibility between non-polar polymers, e.g. polyolefins and fillers such as wood, glass fiber, ATH, Talc, etc. in addition, **ARIA COUPLE** is also used as an impact modifier in Polyamide compounds.

ARIA COUPLE includes various high-tech products based on **PE, PP, ABS and TPE**.

Maleic Anhydride Grafted Polypropylene

Aria Couple 1433

• Description

- Maleic anhydride functionalized polyolefin produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & wood plastic composites

• Product Application

COUPLING AGENT	In wood flour reinforced polymer composites (WPC)	1.5-3%
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• Advantages

DISPERSION	Achieve suitable dispersion and distribution of wood in polymer matrix
MECHANICAL PROPERTIES	Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus
OTHER	• Eliminate output variation • Increase permeability of polyolefin • Achieve dimensional stability • Increase surface smoothness of final products

• Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	15±5 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



Maleic Anhydride Grafted Polypropylene

Aria Couple 1431

Description

- Maleic anhydride functionalized polypropylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers, etc

Product Application

COUPLING AGENT FOR PP &

- Reinforcing materials e.g., GF in PP/GF compounds 1.5-2.5%
- Fillers e.g., CaCo3 polyolefin-based compounds 1.5-3%

COMPATIBILIZER BETWEEN PP &

- Polar polymers e.g., polyamide 1.5-3%

Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc. in non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in polyolefin & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	75±25 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



Maleic Anhydride Grafted Polypropylene

Aria Couple 1432

Description

- Maleic anhydride functionalized polypropylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers, etc.

Product Application

COUPLING AGENT FOR PP &

- Reinforcing materials e.g., GF in PP/GF compounds 1.5-2.5%
- Fillers e.g., CaCo3 polyolefin-based compounds 1.5-3%

COMPATIBILIZER BETWEEN PP &

- Polar polymers e.g., polyamide 1.5-3%

Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc. in non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in polyolefin & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	75±25 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



Maleic Anhydride Grafted Polypropylene

Aria Couple 1432T112

Description

- Maleic anhydride functionalized polypropylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers, etc.

Product Application

COUPLING AGENT FOR PP &

- Reinforcing materials e.g., GF in PP/GF compounds 1.5-2.5%
- Fillers e.g., CaCo3 polyolefin-based compounds 1.5-3%

COMPATIBILIZER BETWEEN PP &

- Polar polymers e.g., polyamide 1.5-3%

Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc. in non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in polyolefin & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	75±25 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



Maleic Anhydride Grafted Polypropylene

Aria Couple 1432T188

Description

- Maleic anhydride functionalized polypropylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers, etc.

Product Application

COUPLING AGENT FOR PP &

- Reinforcing materials e.g., GF in PP/GF compounds 1.5-2.5%
- Fillers e.g., CaCo3 polyolefin-based compounds 1.5-3%

COMPATIBILIZER PP &

- Polar polymers e.g., polyamide 1.5-3%

Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc. in non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in polyolefin & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	130±20 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



Maleic Anhydride Grafted Polypropylene

Aria Couple 5600

Description

- Maleic anhydride functionalized polyolefin produced by reactive extrusion
- Scratch resistance in talc & CaCO₃ filled polyolefin, TPE or rubber compounds

Product Application

ANTI-SCRATCH
MASTERBATCH IN

Talc & CaCO₃ filled
polyolefins compounds

Usage

1.5-3%

Advantages

DISPERSION

Achieve suitable dispersion and distribution of filler in polymer matrix

MECHANICAL
PROPERTIES

Mechanical properties improvement

OTHER

- No negative influence on color of part surfaces
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	17±5 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



High Amorphous Ethylene Copolymer Functionalized by Maleic Anhydride

Aria Couple 1946

Description

- Maleic anhydride functionalized high amorphous ethylene copolymer produced by reactive extrusion
- It has been primarily designed as an impact modifier for nylons and coupling agents in filled polyamide compounds with high mechanical properties

Product Application

COUPLING AGENT FOR PA	Fillers and reinforcing agents, e.g., GF and other mineral fillers in nylon compounds	1.5-5%
IMPACT MODIFIER	Polyamides (6 and 6,6) and their compounds	5-15%
COMPATIBILIZER	PA, PBT, and polyolefin compounds	1.5-5%



Usage

Technical Specifications

Properties	Value	Method
Density	0.9 g/cm ³	ASTM D792
Melt Flow Index @190°C/5kg	2-6 g/10min	ASTM D1238
Maleic Anhydride Graft Level	Very High*	Titration Method

* Medium 0.25-0.5 wt.%, High 0.5-0.7 wt.%, Very High 0.7-0.9 wt.%

Advantages

DISPERSION

- Functions as a coupling agent between reinforcing materials such as glass fibers, mineral fillers, and polyamide to achieve superior mechanical properties
- Functions as a coupling agent between PBT & glass fibers for high mechanical properties
- Functions as an impact modifier for toughening nylon products such as PA6, PA66 & etc.

MECHANICAL PROPERTIES

- Improve mechanical properties, e.g., tensile strength, impact resistance & flexural modulus in polyamide and also polyamides compounds

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

High Amorphous Ethylene Copolymer Functionalized by Maleic Anhydride

Aria Couple 1946T129

Description

- Maleic anhydride functionalized high amorphous ethylene copolymer produced by reactive extrusion
- It has been primarily designed as an impact modifier for nylons and coupling agents in filled polyamide compounds with high mechanical properties

Product Application

COUPLING AGENT FOR PA	Fillers and reinforcing agents, e.g., GF and other mineral fillers in nylon compounds	1.5-5%
IMPACT MODIFIER	Polyamides (6 and 6,6) and their compounds	5-15%
COMPATIBILIZER	PA, PBT, and polyolefin compounds	1.5-5%



Technical Specifications

Properties	Value	Method
Density	0.9 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2-6 g/10min	ASTM D1238
Maleic Anhydride Graft Level	Very High*	Titration Method

*Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%, Very High > 1.0wt%

Advantages

DISPERSION

- Functions as a coupling agent between reinforcing materials such as glass fibers, mineral fillers, and polyamide to achieve superior mechanical properties
- Functions as a coupling agent between PBT & glass fibers for high mechanical properties
- Functions as an impact modifier for toughening nylon products such as PA6, PA66 & etc.

MECHANICAL PROPERTIES

Improve mechanical properties, e.g., tensile strength, impact resistance & flexural modulus in polyamide and also polyamides compounds

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final Products

High Amorphous Ethylene Copolymer Functionalized by Maleic Anhydride

Aria Couple 1947

Description

- Maleic anhydride functionalized high amorphous ethylene copolymer produced by reactive extrusion
- This grade has been specifically developed to increase the impact resistance of polyamide compounds

Product Application

COUPLING AGENT

Fillers and reinforcing agents, e.g., GF and other mineral fillers in nylon and compounds

1.5-5%

IMPACT MODIFIER

For polyamide-based compounds

5-12%



Technical Specifications

Properties	Value	Method
Density	0.89 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	5-8 g/10min	ASTM D1238
Maleic Anhydride Graft Level	Very High*	Titration Method

* Medium 0.25-0.5wt%, High 0.5-0.7wt%, Very High 0.7-0.9 wt.%.

Advantages

DISPERSION

Low viscosity of this product reduces the size of its dispersed particle sizes in low impact resistant polymer matrix. It improves impact resistance while keeping other properties as good as raw material

MECHANICAL PROPERTIES

Enhance mechanical properties, e.g., tensile strength, impact resistance & flexural modulus in polyamide and polyamides compound

OTHER

- Eliminate output variation
- Increase permeability of product
- Achieve dimensional stability
- Increase surface smoothness of final products

Maleic Anhydride Grafted Acrylonitrile Butadiene Styrene (ABS)

Aria Couple 1732

Description

- Maleic anhydride functionalized ABS produced by reactive extrusion
- Coupling agent & compatibilizer between ABS & polar polymers, fillers and reinforcing agents

Product Application

COUPLING AGENT FOR ABS &

- Reinforcing Materials e.g., GF in ABS compounds 1.5-5%
- Fillers e.g., Talc, pigments and other additives 1.5-5%

COMPATIBILIZER BETWEEN ABS &

- Polar polymers e.g., Polycarbonate 3.5-7.5%

Advantages

DISPERSION

Function as a coupling agent between reinforcing materials such as glass fibers and ABS to achieve good mechanical properties

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in non-polar polymers & biodegradable containers

OTHER

Eliminate output variation and achieve imensional stability

Technical Specifications

Properties	Value	Method
Density	1.06 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	12±4 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



Maleic Anhydride Grafted High Density Polyethylene

Aria Couple 1141

Description

- Maleic anhydride functionalized polyethylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers and reinforcing agents

Product Application

COUPLING AGENT FOR PE OR PVC &

- Reinforcing materials e.g., wood in wood-plastic composites
- Fillers e.g., starch in biodegradable polyolefin compounds

1.5-5%

COMPATIBILIZER FOR PE &

- For polyamide-based compounds

5-12%

Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc. in non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in polyolefin & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of product
- Achieve dimensional stability
- Increase smoothness of final products

Technical Specifications

Properties	Value	Method
Density	0.945 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	5-8 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%



Maleic Anhydride Grafted High Density Polyethylene

Aria Couple 1142

• Description

- Maleic anhydride functionalized polyethylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers, and reinforcing agents

• Product Application

COUPLING AGENT FOR PE or PVC

- Reinforcing materials, e.g., wood in wood plastic composites 1.5-5%
- Fillers, e.g., starch in biodegradable polyolefin compounds 1.5-5%

COMPATIBILIZER BETWEEN PE &

- Polar polymers e.g., polyamide & PET especially in recycling applications 4-8%



• Technical Specifications

Properties	Value	Method
Density	0.945 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	5-8 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

*Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%

• Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc., in the non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties, e.g., tensile strength, impact resistance & flexural modulus in polyolefin & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

Maleic Anhydride Grafted Linear Low Density Polyethylene

Aria Couple 1196

Description

- Maleic anhydride functionalized polyethylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers, etc.

Product Application

COUPLING AGENT FOR PE OR PVC

- Fillers, e.g., starch in biodegradable polyolefin compounds 1.5-5%
- Reinforcing agents such as glass fiber, wood flour, and HFFR additives 1.5-6%
- Adhesion promoter for PE films or lamination coating 5-15%

COMPATIBILIZER PE

- Polar polymers e.g., Polycarbonate 1.5-5%



Technical Specifications

Properties	Value	Method
Density	0.93 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	0.5-1.5 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%

Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc., in the non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in non-polar polymers & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of product
- Achieve dimensional stability
- Increase smoothness of final products

Maleic Anhydride Modified Low Density Polyethylene

Aria Couple 1125

Description

- Maleic anhydride functionalized low density polyethylene produced by reactive extrusion
- Coupling agent & compatibilizer between polyolefin & polar polymers, fillers, etc.

Product Application

COUPLING AGENT FOR PE &

- Fillers e.g., starch in biodegradable polyolefin compounds 1.5-5%
- Reinforcing agent such as glass fiber & wood floor 1.5-4%
- Flame retardant fillers e.g., ATH & MDH in HFFR cable compounds 3-6%

COMPATIBILIZER PE &

- Polar polymers e.g., Polycarbonate 1.5-5%



Technical Specifications

Properties	Value	Method
Density	<0.93 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	1.2±0.5 g/10min	ASTM D1238
Maleic Anhydride Graft Level	High*	Titration Method

* Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%

Advantages

DISPERSION

Achieve optimum dispersion & distribution of polar polymer, fillers, starch, glass fiber, etc. in non-polar polymer matrix

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in polyolefin & biodegradable containers

OTHER

- Eliminate output variation
- Increase permeability of product
- Achieve dimensional stability
- Increase surface smoothness of final products

Ethylene Copolymer Functionalized by Maleic Anhydride

Aria Couple 1937

Description

- Maleic anhydride functionalized ethylene copolymer produced by reactive extrusion
- It has been primarily designed to use in adhesive formulation and in polar and non-polar polymer compound such as EVA/PE and PA/PE

Product Application

COUPLING AGENT FOR EVA &

Fillers and reinforcing agents
e.g., GF and other mineral
fillers in EVA compounds 3-15%

COMPATIBILIZER FOR POLYOLEFINES &

Polar polymers e.g., PA 1.3-5%

Advantages

DISPERSION

Function as a coupling agent between reinforcing materials such as glass fibers or mineral fillers and EVA to achieve superior mechanical properties

MECHANICAL PROPERTIES

Improve mechanical properties e.g., tensile strength, impact resistance & flexural modulus in EVA compounds

OTHER

- Eliminate output variation
- Increase permeability of polyolefin
- Achieve dimensional stability
- Increase surface smoothness of final products

Technical Specifications

Properties	Value	Method
Density	<0.94 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	0.5-1.5 g/10min	ASTM D1238
Maleic Anhydride Graft Level	Very High*	Titration Method

*Low <0.25wt%, Medium 0.25-0.5wt%, High 0.5-1.0wt%, Very High > 1.0wt%





Aria Coupling
Maleic Anhydride
Crafted Polyethylene





Tie Layer Adhesive

ARIA ADHESIVE

ARIA ADHESIVE is an inseparable part of many polymer-based multilayer structures. It is a Tie Layer Adhesive in granule and powder form to make a firm bond between polyolefin and non-polymer layers.

ARIA ADHESIVE is specifically designed to be used in vital industries, e.g. **Steel Pipe Coating, PEX and PERT Pipes, Reinforced Corrugated Pipes, Oxygen Barrier Packaging Films, Cosmetic and Hygienic Tubes, Plastic Fuel Tanks, Aluminum Composite Panels, etc.**

Tie Layer Adhesive

Aria Adhesive 4100T301

Description

Aria Adhesive 4100T301 is a LLDPE based adhesive resin designed as an intermediate layer between polyolefin layers with polar polymers in multilayer structure in flexible or rigid films in packaging and tube industry

Product Application

Adhesion Layer

- Multilayer structure in flexible or rigid films in packaging and tube industry
- Blown film, cast film, Sheet

Advantages

- High adhesion between PE layers and PA, EVOH and PET
- Transparent



Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	1.7±0.3 g/10min	ASTM D1238
Melting Temperature	130±5 °C	ISO 113571
Vicat Softening Point	85±3 °C	ISO 306
Tensile Strain at Break(50mm/min)	>600 %	ISO 527
Tensile Stress at Yield(50mm/min)	10 ±3 MPa	ISO 527
Tensile Stress at Break(50mm/min)	17±3 MPa	ISO 527
Hardness Shore	40±2 D Scale	ISO 868

Processing Condition Suggestion

Zone1(°C)

190

Zone2(°C)

190

Zone3(°C)

210

Zone4(°C)

210

...(°C)

210

Die(°C)

210

Tie Layer Adhesive

Aria Adhesive 4100T250

Description

Aria Adhesive 4100T250 is an LLDPE based adhesive resin designed as an intermediate layer between polyolefin layers with polar polymers in multilayer structure in flexible or rigid films in packaging and tube industry

Product Application

Adhesion Layer

Multilayer structure in flexible or rigid films in packaging and tube industry

Advantages

- High adhesion between PE layers and PA, EVOH and PET
- Transparent

Technical Specifications



Properties

Value

Method

Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.1±0.6 g/10min	ASTM D1238
Melting Temperature	130±3 °C	ISO 113571
Vicat Softening Point	83±3 °C	ISO 306
Tensile Strain at Break(50mm/min)	>600 %	ISO 527
Tensile Stress at Yield(50mm/min)	10±3 MPa	ISO 527
Tensile Stress at Break(50mm/min)	16±3 MPa	ISO 527
Hardness Shore	49±4 D Scale	ISO 868

Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

180...200

...(°C)

200...210

Die(°C)

200...230

Tie layer Adhesive (Aluminum-plastic Composite Panel) Aria Adhesive 4100T304

• Description

Aria Adhesive 4100T304 is a PE based adhesive resin designed as an intermediate layer between polyolefin layers with polar polymers in aluminum-plastic composite panel. This product has easy film blowing and high adhesion



• Processing Condition Suggestion

Zone1(°C)

140

Zone2(°C)

150

Zone3(°C)

160

Zone4(°C)

180

...(°C)

180

Die(°C)

180

• Product Application

Adhesion Layer

- Used for aluminum-plastic composite panel
- Multilayer structure

• Advantages

- Easy film blowing
- High adhesion between PE layers and Al

• Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.4 g/10min	ASTM D1238
Melting Temperature	107 °C	ISO 113571
Vicat Softening Point	80 °C	ISO 306
Tensile Strain at Break(50mm/min)	>800 %	ISO 527
Tensile Stress at Yield(50mm/min)	81 MPa	ISO 527
Tensile Stress at Break(50mm/min)	17 MPa	ISO 527

Grafted Polyethylene Adhesive

Aria Adhesive 4106

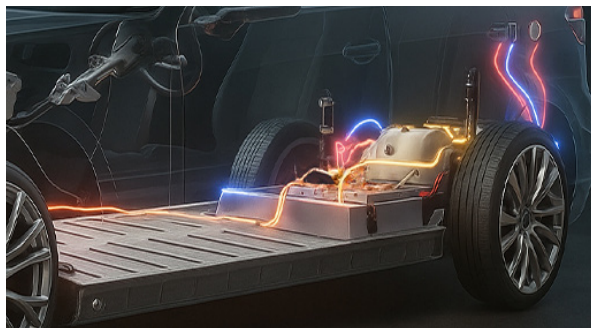
Description

Aria Adhesive 4106 is a maleic anhydride grafted adhesive designed for multilayer plastic fuel tanks (PFT) composed of PE and EVOH that is supplied in pellet form

Product Application

Adhesion Layer

Aria adhesive 4106 is primarily designed to use as a tie layer resin in integrated plastic fuel systems. This high-performance adhesive resin shows superior long-term adhesion, toughness, aging resistance and enables fuel tanks to deliver fuel components with low permeation and superior durability



Technical Specifications

Properties	Value	Method
Density	0.932 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	1.2 g/10min	ASTM D1238
Melting Temperature	130 °C	ISO 113571
Vicat Softening Point	104 °C	ISO 306
Tensile Strain at Break(50mm/min)	>500 %	ISO 527
Tensile Stress at Yield(50mm/min)	15.8 MPa	ISO 527
Tensile Stress at Break(50mm/min)	28 MPa	ISO 527
Hardness Shore	58 D Scale	ISO 868

Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

180...210

...(°C)

200...210

Die(°C)

210...230

Grafted Polyethylene Adhesive

Aria Adhesive 4107T242

• Description

Aria Adhesive 4107T242 is a maleic anhydride grafted polyethylene adhesive resin in pellet form. It has been primarily designed to act as a tie layer adhesive in multilayered structure pipes

• Product Application

Adhesion Layer

PEX or PE with polar layer
(Al, steel and ...) in pipe
structure

• Advantages

- High peel strength
- Compabilizing polar and nonpolar layers
- Improving properties of coated steel pipes



• Technical Specifications

Properties	Value	Method
Density	0.93 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.5±0.5 g/10min	ASTM D1238
Melting Temperature	141±3 °C	ISO 113571
Vicat Softening Point	102±4 °C	ISO 306
Tensile Strain at Break(50mm/min)	>300 %	ISO 527
Tensile Stress at Yield(50mm/min)	16±4 MPa	ISO 527
Tensile Stress at Break(50mm/min)	18±4 MPa	ISO 527

• Processing Condition Suggestion

Zone1(°C)

180-200

Zone2(°C)

180-200

Zone3(°C)

180-200

Zone4(°C)

200-210

...(°C)

200-210

Die(°C)

210-230

Grafted Polyethylene Adhesive

Aria Adhesive 4107T320

Description

Aria Adhesive 4107T320 is a maleic anhydride grafted polyethylene adhesive resin in pellet form. It has been primarily designed to act as a tie layer adhesive in multilayered structure pipes

Product Application

Adhesion Layer

PEX or PE with polar layer (Al, steel, etc.) in pipe structure

Advantages

- High peel strength
- Compabilizing polar and nonpolar layers
- Improving properties of coated steel pipes

Technical Specifications



Properties

Value

Method

Density	0.94 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.3±0.5 g/10min	ASTM D1238
Melting Temperature	139±3 °C	ISO 113571
Vicat Softening Point	106±4 °C	ISO 306
Tensile Strain at Break(50mm/min)	>300 %	ISO 527
Tensile Stress at Yield(50mm/min)	16±3 MPa	ISO 527
Tensile Stress at Break(50mm/min)	19±3 MPa	ISO 527

Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

200...210

...(°C)

200...210

Die(°C)

210...230

Grafted Polyethylene Adhesive

Aria Adhesive 4407T134

• Description

Aria Adhesive 4407T134 is a maleic anhydride grafted polypropylene adhesive resin in pellet form. It has been primarily designed to act as a tie layer adhesive in multilayer structure pipes



• Product Application

Adhesion Layer

PP with polar layer (Al, steel, etc.) in pipe structure

• Advantages

- High peel strength
- Compabilizing polar and nonpolar layers
- Improving properties of coated steel pipes

• Technical Specifications

Properties	Value	Method
Density	0.92±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	3.3±1.5 g/10min	ASTM D1238
Melting Temperature	144±5 °C	ISO 113571
Vicat Softening Point	110±5 °C	ISO 306
Tensile Strain at Break(50mm/min)	>300 %	ISO 527
Tensile Stress at Yield(50mm/min)	15±4 MPa	ISO 527
Hardness Shore D	63±5	ISO 868

• Processing Condition Suggestion

Zone1(°C)

190-210

Zone2(°C)

190-210

Zone3(°C)

210-230

Zone4(°C)

210-230

...(°C)

210-230

Die(°C)

220-240

Grafted Polyethylene Adhesive

Aria Adhesive 4100T276

Description

Aria Adhesive 4100T276 is a maleic anhydride grafted polyethylene adhesive resin in pellet form. It has been primarily designed to act as a tie layer adhesive in multilayered structure pipes

Product Application

Adhesion Layer

- PE with polar layer (Al, steel or EVOH) in pipe structure
- Spiral corrugated pipes

Advantages

- High peel strength
- Compabilizing polar and nonpolar layers
- Improving properties of coated steel pipes



Technical Specifications

Properties	Value	Method
Density	0.94 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.6±0.6 g/10min	ASTM D1238
Melting Temperature	140±3 °C	ISO 113571
Vicat Softening Point	104±4 °C	ISO 306
Tensile Strain at Break(50mm/min)	>600 %	ISO 527
Tensile Stress at Yield(50mm/min)	14±4 MPa	ISO 527
Tensile Stress at Break(50mm/min)	22±4 MPa	ISO 527
Hardness Shore	58±4 D Scale	ISO 868

Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

200...210

...(°C)

200...210

Die(°C)

210...220

Grafted Polyethylene Adhesive (Coating)

Aria Adhesive 4107T305

Description

Aria Adhesive 4107T305 is a maleic anhydride grafted polyethylene adhesive resin in pellet form. It has been primarily designed to act as adhesive layer in PE 3-layer coated steel pipes

Product Application

Adhesion Layer

- Tie layer adhesive in top coat PE in coated steel pipe (Fusion Bonded Epoxy)
- Operating temperatures from -45 °C to +90 °C

Advantages

Improving adhesion between epoxy layer (FBE primer) and the top coat polyethylene in 3-layer coated steel pipes



Technical Specifications

Properties	Value	Method
Density	0.941±0.01 g/cm ³	ISO 1183
Melt Flow Index @190°C/2.16kg	2±0.5 g/10min	ISO 1133
Melting Temperature	135±4 °C	ISO 113571
Vicat Softening temperature _{A50, (10N)}	105±3 °C	ISO 306
Tensile Strain at Break at (23 °C)	>600 %	ISO 527
Tensile Stress at Yield at (23 °C)	16±3 MPa	ISO 527
Tensile Stress at Break at (23 °C)	21±3 MPa	ISO 527

Processing Condition Suggestion

Zone1(°C)

180-200

Zone2(°C)

180-200

Zone3(°C)

180-200

Zone4(°C)

200-210

...(°C)

200-210

Die(°C)

210-230

Grafted Polyethylene Adhesive (Coating)

Aria Adhesive 4107T267

Description

Aria Adhesive 4107T267 is a maleic anhydride grafted polyethylene adhesive resin in pellet form. It has been primarily designed to act as adhesive layer in PE 3-layer coated steel pipes

Product Application

Adhesion Layer

- Tie layer adhesive in top coat PE in coated steel pipe (Fusion Bonded Epoxy)
- Operating temperatures from -45 °C to +90 °C

Advantages

Improving adhesion between epoxy layer (FBE primer) and the top coat polyethylene in 3-layer coated steel pipes



Technical Specifications

Properties	Value	Method
Density	0.942 g/cm ³	ISO 1183
Melt Flow Index @190°C/2.16kg	2.2±0.6 g/10min	ISO 1133
Melting Temperature	131 °C	ISO 113571
Vicat Softening temperature A50, (10N)	105±3 °C	ISO 306
Tensile Strain at Break at (23 °C)	>700 %	ISO 527
Tensile Stress at Yield at (23 °C)	12±3 MPa	ISO 527
Tensile Stress at Break at (23 °C)	18±3 MPa	ISO 527
Hardness Shore D	5I	ISO 868

Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

200...210

...(°C)

200...210

Die(°C)

210...230

Grafted Polyethylene Adhesive (Coating)

Aria Adhesive 4100T319

• Description

Aria Adhesive 4100T319 is a maleic anhydride grafted polyethylene adhesive resin in pellet form. It has been primarily designed to act as a tie layer adhesive in multilayered structure pipes



• Product Application

Adhesion Layer

Spiral corrugated pipes

• Advantages

- High peel strength
- Compabilizing polar and nonpolar layers
- Optimal processability in the long term

• Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.5±0.7 g/10min	ASTM D1238
Melting Temperature	136 °C	ISO 113571
Vicat Softening Point	101 °C	ISO 306
Tensile Strain at Break at (23 °C)	>700 %	ISO 527
Tensile Stress at Yield at (23 °C)	12±3 MPa	ISO 527
Tensile Stress at Break at (23 °C)	20±3 MPa	ISO 527
Haedness Shore	56±4 D Scale	ISO 868

• Processing Condition Suggestion

Zone1(°C)

160-180

Zone2(°C)

160-180

Zone3(°C)

160-180

Zone4(°C)

160-180

...(°C)

160-180

Die(°C)

180-200

Tie Layer Adhesive

Aria Adhesive 4100T315

• Description

Aria Adhesive 4100T315 is a LLDPE based adhesive resin designed as an intermediate layer between polyolefin layers with polar polymers in multilayer structure in tube industry

• Product Application

Adhesion Layer

- Multilayer structure in tube industry

• Advantages

- High adhesion between PE layers and PA, EVOH and PET
- Transparent



• Technical Specifications

Properties	Value	Method
Density	0.92 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	1.8±0.5 g/10min	ASTM D1238
Melting Temperature	124 °C	ISO 113571
Vicat Softening Point	100 °C	ISO 306
Tensile Strain at Break(50mm/min)	>600 %	ISO 527
Tensile Stress at Yield(50mm/min)	13 MPa	ISO 527
Tensile Stress at Break(50mm/min)	20 MPa	ISO 527
Hardness Shore	44 D Scale	ISO 868

• Processing Condition Suggestion

Zone1(°C)

160

Zone2(°C)

160

Zone3(°C)

180

Zone4(°C)

180

...(°C)

200

Die(°C)

200

Tie Layer Adhesive (Special Applications Like Double Bubble, Triple Bubble Blown Film)

Aria Adhesive 4100T328

• Description

Aria Adhesive 4100T328 is a Polyolefin based adhesive resin designed as an intermediate layer between PE and PA or EVOH in blown and cast film and especially double-bubble applications



• Product Application

Adhesion Layer

- Double, triple bubble Blown film
- Blown film, cast film, Sheet

• Advantages

- High adhesion between PE layers and PA, EVOH and PET
- Transparent

• Technical Specifications

Properties	Value	Method
Density	0.90 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.3±0.4 g/10min	ASTM D1238
Melting Temperature	106 °C	ISO 113571
Vicat Softening Point	68 °C	ISO 306
Tensile Strain at Break(50mm/min)	>600 %	ISO 527
Tensile Stress at Yield(50mm/min)	51 MPa	ISO 527
Hardness Shore	35 D Scale	ISO 868

• Processing Condition Suggestion

Zone1(°C)

160

Zone2(°C)

180

Zone3(°C)

180

Zone4(°C)

180

...(°C)

180

Die(°C)

200

Tie Layer Adhesive

Aria Adhesive 4100T347

• Description

Aria Adhesive 4100T347 is a LLDPE based adhesive resin designed as an intermediate layer between polyolefin layers with polar polymers in multilayer structure in intermediate bulk container (IBC)

• Product Application

Adhesion Layer

Multilayer structure in intermediate bulk container (IBC)

• Advantages

- High adhesion between PE layers and PA, EVOH and PET
- Transparent



• Technical Specifications

Properties	Value	Method
Density	0.91 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	2.3±0.4 g/10min	ASTM D1238
Melting Temperature	116 °C	ISO 113571
Vicat Softening Point	80 °C	ISO 306
Tensile Strain at Break(50mm/min)	>600 %	ISO 527
Tensile Stress at Yield(50mm/min)	7.4 MPa	ISO 527
Tensile Stress at Break(50mm/min)	20.5 MPa	ISO 527
Hardness Shore	38 D Scale	ISO 868

• Processing Condition Suggestion

Zone1(°C)

160

Zone2(°C)

180

Zone3(°C)

180

Zone4(°C)

180

...(°C)

180

Die(°C)

200

Tie Layer Adhesive

Aria Adhesive 4100T346

Description

Aria Adhesive 4100T346 is a LLDPE based adhesive resin designed as an intermediate layer between polyolefin layers with polar polymers in utililayer structure in Agro Chemical bottles



Processing Condition Suggestion

Zone1(°C)

160

Zone2(°C)

160

Zone3(°C)

180

Zone4(°C)

180

...(°C)

200

Die(°C)

200

Product Application

Adhesion Layer

- Rigid multilayer structure
- Agro Chemical bottles

Advantages

- High adhesion between PE layers and PA, EVOH and PET
- superior gas barrier properties
- slow permeation rate of chemicals

Technical Specifications

Properties	Value	Method
Density	0.92 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	1.8±0.5 g/10min	ASTM D1238
Melting Temperature	124 °C	ISO 113571
Vicat Softening Point	100 °C	ISO 306
Tensile Strain at Break(50mm/min)	>600 %	ISO 527
Tensile Stress at Yield(50mm/min)	13 MPa	ISO 527
Tensile Stress at Break(50mm/min)	20 MPa	ISO 527
Hardness Shore	44 D Scale	ISO 868



Nano Additives **ARIANANO**

ARIANANO has strengthened plastic industry. Nano Additives have a very significant role on improving different properties of plastics. Aria Nano can enhance impact resistance of UPVC, i.e. pipes, fittings, door/window profiles, as well as PE and PP. In addition, it promotes surface gloss, and increases vicat softening temperature.

UPVC Pipe Nano Additive **Aria Nano 701**

• Description

Aria Nano 701 is a special additive package containing nanoparticles and their carriers. It has been primarily designed as an impact modifier in UPVC pipe formulation

• Advantages

- Raise impact properties to about four times the standard
- Increase vicat softening point
- Improve surface brightness of UPVC pipe
- Improve degradation resistance of UPVC pipes in dichloromethane immersion test

• Why Aria Nano 701?

- **Mechanism:**
When we use nanoparticles, we have several cavities in the polymer matrix. When a part is hit, impact energy is dissipated by these cavities, and we have a ductile failure
- Good balance between properties and price



• Technical Specifications

Properties	Value	Method
Appearance	Powder	-
Color	Off White	-
Usage Level	0.8-1.75 %	-

Aria Nano 801

• Description

Aria Nano 801 is a special additive package containing nanoparticles and their carriers. It has been primarily designed to act as an impact modifier in UPVC fitting formulation

• Advantages

- Increase impact properties to about 5.5 times of standard
- Decrease degradation of UPVC fitting in injection point
- Increase vicat softening point

• Why Aria Nano 801?

• Mechanism:

When we use nanoparticles, we have several cavities in the polymer matrix. When a part is hit, impact energy is dissipated by these cavities, and we have a ductile failure

- Good balance between properties and price



• Technical Specifications

Properties	Value	Method
Appearance	Powder	-
Color	Off White	-
Usage Level	0.9-1.4 %	-

UPVC Profile Nano Additive

Aria Nano 901

• Description

Aria nano 901 is a special additive package containing nanoparticles and their carriers. It has been primarily designed to act as an impact modifier in UPVC door and window profile formulation

• Advantages

- Increase impact properties to about 3.5 times of standard
- Increase vicat softening point
- Improve gelation of polymeric melt and surface brightening

• Why Aria Nano 901?

• Mechanism:

When we use nanoparticles, we have several cavities in the polymer matrix. When a part is hit, impact energy is dissipated by these cavities, and we have a ductile failure

- Good balance between properties and price



• Technical Specifications

Properties

Value

Method

Appearance

Powder

-

Color

Off White

-

Usage Level

0.6-1.5 %

-

Polyolefin Nanocomposite (OTR)

Aria Nano 4355

Description

Aria Nano 4355 is an It is a polyolefin nanocomposite (PE and PP) to reduce oxygen permeability in food packaging films

Product Application

Polyolefin Compound

Reducing the rate of oxygen passage

Advantages

- Preventing food spoilage
- No negative effects on film properties



Technical Specifications

Properties	Value	Method
Density	0.95±0.01 g/cm ³	ASTM D792
Melt Flow Index @190°C/2.16kg	1.5±0.4 g/10min	ASTM D1238
Melting Temperature	125±3 °C	ISO 113571
Vicat Softening Point	103±2 °C	ASTM D1525
Tensile Stress (50mm/min)	19 MPa	ASTM D638

Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

200...210

...(°C)

200...210

Die(°C)

210...230

Anti-Bacterial Nano Masterbatch

Aria Nano 4365

• Description

Aria Nano 4365 is an It is a polyolefin nano masterbatch (PE and PP), enhancing antibacterial properties in food packaging films



• Technical Specifications

Properties	Value	Method
Density	$0.95 \pm 0.01 \text{ g/cm}^3$	ASTM D792
Melt Flow Index @190°C/2.16kg	$1.5 \pm 0.2 \text{ g/10min}$	ASTM D1238
Melting Temperature	$125 \pm 3 \text{ }^\circ\text{C}$	ISO 113571
Vicat Softening Point	$103 \pm 2 \text{ }^\circ\text{C}$	ASTM D1525
Tensile Stress (50mm/min)	19 MPa	ASTM D638

• Processing Condition Suggestion

Zone1(°C)

180...200

Zone2(°C)

180...200

Zone3(°C)

180...200

Zone4(°C)

200...210

...(°C)

200...210

Die(°C)

210...230

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

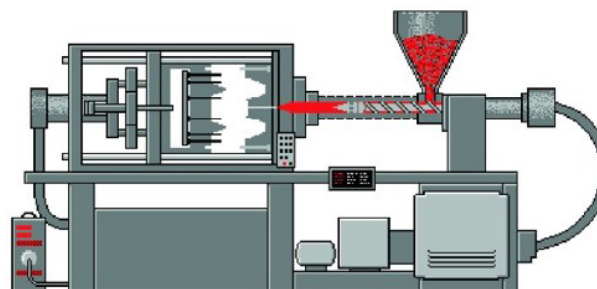
• Technical Specifications

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 PE 100 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

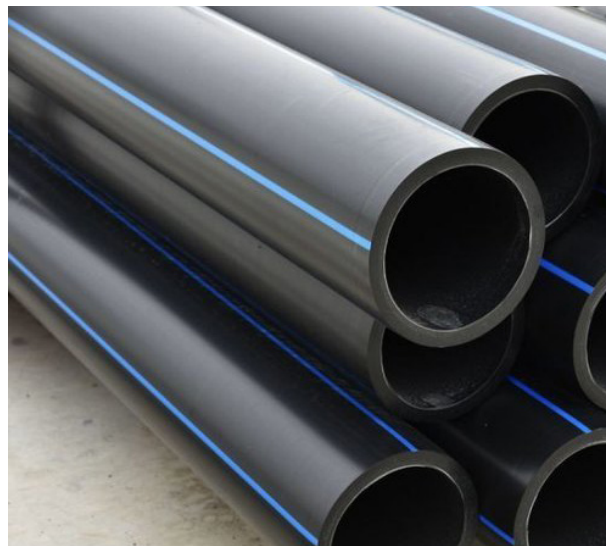
HDPE for Pipe

• 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 %	-



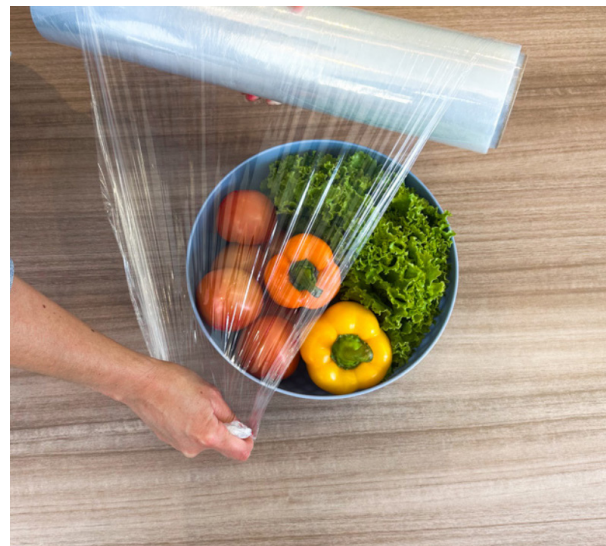
Aria GC BL3

• 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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