#### Who We Are

Based in Tehran, Periodan's Santh Free Version, which is established by fully experienced experts in 2005. We are committed to finding effective sustainable solutions in the world of trading raw materials all over the world. Petrobon offers a full-line product portfolio of industrial and specialty chemicals. Our vast distribution network enables customers to procure products locally and globally, including exceptional service and high-standard safety and quality management.

In a dynamic global trading environment, we make practical and effective use of our global partnerships to ensure our customers receive consistently reliable, on-time deliveries while remaining dedicated to operational standards and adhering to strict risk management processes.

The journey to produce high-quality final products with us starts from consulting with our experienced fully skilled experts based on your field and ends when you satisfy with the process.

Thanks to our long-term cooperation with trusted partners who share our commitment to high international standards of operation, we are able to bring cost-effective solutions and value to our customers. So, concerning these benefits, and affordable prices via an integrated supply network, we have sales in more than 20 countries from CIS, South East Asia, and Asia to The Middle East and North Africa.

Besides our export business, we have built up a very stable importing section for both chemicals and petrochemicals in the last years, enabling us to offer a broader range of products to our customers. And this is just the beginning. We will continue to take advantage of innovative solutions, cutting-edge technologies, and our cooperation with trusted strategic partners to become more powerful in satisfying our customers' needs.

#### **Our Services**

- Consulting
- Financina
- Supplying Packaging
- Logistics
- Trading Through International Commercial Terms
- Providing Essential Documents
- Inspection and Laboratory Tests
- Delivering On Time and Reliably



#### **Our Mission**

Simplifying the process for interesting by for customers regarding with trusted purchase, safe and on time freight.

#### **Our Values**

















# **Polymeric Materials**

Polymer is a CONE CORID RESEARCH EARS YES FIOR parts. "Poly" means several and "mer" means repeated. Polymers are a group of repeated Molecular Chains that are found abundantly in nature. Probably the most familiar natural polymer around us is DNA which placed all human creation data in itself.

Synthetic polymers are a group of materials that are often produced by chemical processes as raw materials for industrial applications. The production of synthetic polymers is a three-step process.

In the first step, a monomer molecule is fractured and defective by radiation or heat. In the second step, the fractured molecule will make a connection with other molecules to remove the existing

deficiency. This operation continues so that two flawed molecules are connected and complete their chain. In this step, the primary molecules will create a synthetic polymer.

Among the most popular artificial polymeric materials which are known as high-consumption plastics can be pointed to

- Polyethylene
- Polypropylene
- · Polyvinyl chloride
- ABS
- Polystyrene
- PET (Polyesters)
- Polycarbonate
- Epoxy Resin
- SBR
- Polybutadiene Rubber

Petrobon group's mission is to simplify the process of raw materials supplying for its customers in the way of having reliable purchases and trusted fast freight.





RAW MATERIAL SUPPLIER





## POLYVINYL CHLORIDE | PVC

Third-most work Grander SSIME, PSI White inhird is a high-strength thermoplastic material widely used in applications, such as pipes, medical devices, wire, and cable insulation, etc.

Vinyl chloride monomer (VCM) is produced from the chlorination of ethylene and pyrolysis of the resulting ethylene dichloride (EDC) in a cracking unit. PVC (glass transition temperature: 70-80°C) is produced by polymerization of vinyl chloride monomer (VCM).

The popular methods used to manufacture PVC commercially are:

# **Emulsion PVC (E-PVC)**

Emulsion PVC is a fine particle size PVC which is produced by spray drying process. Emulsion PVC require much more energy for production and is considerably expensive as compared to suspension resin.

# Suspension PVC (S-PVC)

Suspension Polymerization accounts for 80% of PVC production worldwide. Suspension Polyvinyl Chloride is widely available in two broad categories: Flexible and Rigid. But there are more types like CPVC, PVC-O, and PVC-M.



#### Right PVIpressor Free Version

Rigid PVC is a stiff and cost-effective plastic with high resistance to impact, water, weather, chemicals and corrosive environments. This type of PVC is also known as UPVC, PVC-U or uPVC. The most crucial parameter of PVC, K value, shows the molecular weight of PVC, Which identify the process and suitableapplications. This kind of PVC can be used for processing via extrusion, calendaring and injection molding.

#### Applications of Rigid grades of SPVC

K value	Our Suppliers	Application
S 57	Abadan, Ghadir	Rigid Films and Rigid injection molding artifacts such as pipe fittings
S60	Abadan, Bandar Imam	Rigid & semi-rigid profiles and sheets such as three layered foam boards
S65	Abadan, Arvand, Ghadir, Bandar Imam	Rigid extrudate artifacts such as pipes, profiles, sheets, window profiles, sheets





# Rigid Grade Analysis

Parameters	Test Method		Grades					
rarameters	Test Method	S57	S60	S65				
K Value	IS01628-2	56-58	59-61	64-66				
Viscosity (ml/g)	IS01628-2	79-86	84-92	101-109				
Bulk Density (g/l)	ISO 60	540-600	520-580	550-610				
Porosity (%wt)	ISO 4608	14-27	16-22	19-25				
Volatile Matter (%wt)	ISO 1269	<0.3	<0.3	<0.3				
Dark Resin (con/250g)	BFG 1064	≤20	≤20	≤10				
Fish Eyes (con/25cm2)	BFG 909-F	≤5	≤5	≤20				
Suppliers		Abadan, Ghadir	Abadan, Bandar Imam	Abadan, Arvand, Ghadir, Bandar Iman				



#### Flexible PVC

Flexible PVC is Computers star district Netroin and its plasticizers to PVC which lower the crystallinity. These plasticizers act like lubricants resulting in a much clearer and flexible plastic. This type of PVC is sometimes called as PVC-P.

#### Applications of Flexible grades of SPVC

K value	e Our Suppliers Application			
S65	Abadan, Arvand, Ghadir, Bandar Imam	Plasticized PVC artifacts such as shoe sole, tubes, films, sheets (Injection Molding and Extrusion)		
S70	Abadan, Arvand,Bandar Imam	Plasticized film and profiles, cable insulation and sheathing, Plasticized injection molded parts, shoe sole.  (Injection Molding and Extrusion)		

#### Flexible Grade Analysis

Section 1995	m - 11 - 1	Gra	des
Parameters	Test Method	S65	S70
K Value	IS01628-2	64-66	69-71
Viscosity (ml/g)	IS01628-2	101-109	120-129
Bulk Density (g/l)	ISO 60	550-610	450-510
Porosity (%wt)	ISO 4608	19-25	29-35
Volatile Matter (%wt)	ISO 1269	<0.3	<0.3
Dark Resin (con/250g)	BFG 1064	≤10	≤20
Fish Eyes (con/25cm2)	BFG 909-F	≤20	≤2



Emulsion (E-PVC)

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PVC powder obtained is mixed with plasticizers to produce a paste which is further used for coatings, dipping, spraying. The particle size of these PVC are by far less than SPVC.

#### Applications of EPVC grades

K value	Our Suppliers	Application
E60	Arvand	Wall Covering
E66	Arvand	Foam Leather, Flooring, Wall Covering
E68	Arvand	Rigid foam flooring, Sealing, Coating, laminating compounds, leather fabrics
E72	Arvand	Leather, Toys, Molding, Wall Covering, Gloves, Marking Film
E75	Arvand	Leather, Metal Coating, Molding, Toys, Wall Covering, Gloves, Marking Film

**EPVC Grade Analysis** 

Danamatana	Total Marked	Grades						
Parameters	Test Method	E7544	E7244	E6834	E6644	E60		
K Value	IS01628-2	74-76	71-73	67-69	64-66	59-61		
Sieve Analysis(%),63µ	ISO 656	1.5≥	1.5≥	2.0≥	1.5≥	1.5≥		
Volatile matter (%)	ISO 1269	0.3≥	0.3≥	0.3≥	0.3≥	0.3≥		
Methanol extract (%)	ISO 6427	2.5≥	2.5≥	2.2≥	2≥	2.5≥		
Residual VCM (ppm)	ISO 6401	1≥	1≥	2≥	1≥	1≥		
Thermo Stability (min)	Vinnolit THMA 180	20≤	20≤	15≤	15≤	15≤		
Paste Viscosity @1 hour	ISO 3219	5≥	5≥	6≥	7≥	13≥		







# Polyethylene | PE

# Polyethylene | PE

Polyethylene (FE) is one of the most popular thermoplastic materials. It is available in different crystalline structures, referred to as HDPE, LDPE, and LLDPE. This commodity plastic is produced by addition or radical polymerization. It is used in a large array of applications: plastic containers, bottles, bags, plastic toys, pipes,etc.

# **Common Types of Polyethylene (PE)**

Depending on its density and branching, different polyethylene grades can have a very different performances from one another.

**Low-Density Polyethylene (LDPE)** – highly flexible and generally used to manufacture bottles, tubing,

pharmaceutical caps and closures, films for food packaging, laminations, pipes, hoses, and plastic bags,

including shopping bags and trash bags.

LDPE

Linear Low-Density Polyethylene (LLDPE) – an improvement over LDPE because it is very flexible, has high impact strength, good chemical resistance, and good water vapor and alcohol barrier properties. It is also much more resistant to stress and cracks. Used for a wide range of film applications, including stretch film, garment packaging, and agricultural film.

LLDPE

**High-Density Polyethylene (HDPE)** – usually made into a stiff plastic yet can be flexible.

It is weather-resistant, has excellent electrical insulating properties, and holds up at low temperatures. Used to manufacture trash and industrial containers, milk and detergent containers, cutting boards, toys, ropes, housewares, and much more.

HDPE





# Films & Packaging PDF Compressor Free Version







#### HDPE & LLDPE Film Grades and Suppliers

700	TWO COMPANY OF THE		MFR		Equivalent	
Type	Application	Grade (190°C)		Our Suppliers	Sabic	QAPCO (Lotrene)
Carrier Bags, Bags & Pouches, Wrapping Films, Heavy Duty Bags, Sealant Films	Carrier Bags Bags	7000F	0.04(2.16kg)	Mehr, Ilam, Miandoab	F00950/F00952	
	& Pouches,	HFI 5110	10 (21.6kg)	Arya Sasol	BM1052	
	HFI 3713	13 (21.6kg)	Arya Sasol			
	Sealant Films	EX5	8 (21.6kg)	Amirkabir, Bakhtar, Jam, Shazand, Marun	F00851	
Ca Pac LLDPE Heavy Lamin	Stretch Films, Garment Packaging,	LL0209AA	0.9(2.16kg)	Amirkabir, Tabriz, Shazand	926NT/ 726QE/ 726NE/ 6821NJ/	Q2018C
	Heavy Duty Bags, Lamination Film, Agricultural Films	LL235F6	0.6(2.16kg)	Jam	6118NSF/ 6118LE/ 518NJ	
	ArtificiaiGrass/Turf	22B02, 22402	2 (2.16kg)	Mahabad, Lorestan		







# Films & Packaging

#### PDF Compressor Free Version







# LDPE Film Grades and Suppliers

m			MFR		Equivaler	nt
Type	Application	Grade	(190°C)	Our Suppliers	Sabic	QAPCO (Lotrene)
	Shopping Bags, Trash Bags, Food Packaging,	LH0075	0.85 (2.16kg)	Bandar Imam	2101NOW/ 2201HOW/ 2201HO/ 2201H1W/ 220154	FB5026 FE8004
		2420H	1.9(2.16kg)	Amirkabir	2402H3W	FD0270
		2420D	0.3(2.16kg)	Amirkabir	2100N0	FB3003 FE3000
		LFI 2119	1.9 (2.16kg)	Arya Sasol	2602H0W	FD0274
LDPE	Shrink Bundling, General Purpose	LF0200	1.8(2.16kg)	Bandar Imam	2402H0	FD0274
	Bags, Shrink Films, Agricultural Films	2047	4.7(2.16kg)	Arya Sasol	HP4024WN/ P4024ZN	FD0474 FD0374 FD0274
		2130 0.3(2.16kg)	Arya Sasol	2100N0/ 2100N0W/ 2200H0/ HP0322NN/ HP0323NN	FB3003 FB3000	
		2102TX00	1.9 (2.16kg)	Laleh	2602H0W	FD0274







# **Pipes**

#### Pipe Grades and Suppliers

Type	Grade MFR (190°C/5kg)		Grade MFR (190°C/5kg) Our Suppliers	
10	EX3	0.22	Amirkabir, Ilam, Bandar Imam, Shazand, Jam	Sabic
HDPE	CRP 100N	0.22	Jam	F10750
	CRP 100B	0.22	Shazand, Jam	1 10700



# CRP100 Black Grade Analysis

Parameters	Test Method	Value	Unit
Melt flow rate (190°C/5kg)	ASTM D1238	0.22	g/10min
Melt flow rate (190°C/21.6kg)	ASTM D1238	6.2	g/10min
Density	ISO 1183-1	0.957	g/cm³
Carbon Black Content	ASTM D4218	2.3	%
Carbon Black Dispersion	BS-2782	Max. 3	Rating
Charpy Impact Strength (@ 23°C)	ISO 179	>20	mJ/mm²
Hydrostatic Strength (80°C/5.5MPa)	ISO 11677	>165	hr
Volatile Content	Basell Method	349	ppm
Oxidation Induction Time (OIT) (210°C)	ASTM D3895	>25	min
DSC Melting Point	1.51	130	°C
Shore Hardness (Shore D)	ASTM D2240	63	

# **Blow Molding**

#### Blow Molding Grades and Suppliers

Туре	Application	Grade	MFR (190°C/5kg)	Our Suppliers	Equivalent
	Drums, Container,	HB 0035	0.35	Bandar Imam	Sabic B1054/ B5210/ B5308
HDPE	Bottle, Pharmaceutical	BL3	1.2	Jam, Shazand, Marun, Bakhtar	Sabic B5822
9		HBM 5510	0.22	Arya Sasol	







# **BL3 Grade Analysis**

Parameters	Test Method	Value	Unit
Melt flow rate (190°C/5kg)	DIN 53735	1	g/10min
Density	DIN 53479	0.954	g/cm³
Notched Impact Flexural Test	DIN 53453	>6.5	mJ/mm²
ESCR, plax (70°C, 0.5bar)	Hoechst HDPE 19	>2	hr

# **Injection Molding**

#### Injection Molding Grades and Suppliers

Туре	Application	Grade	MFR (190°C/5kg)	Our Suppliers	Equivalent
	Houseware,	52518	18	Jam	Sabic M200050
HDPE	Crates and Pallets,	5030 SA	2.2	Tabriz	Sabic CC254
	Caps & Closures	6040UA	3.9 (2.16kg)	Tabriz, Lorestan	Sabic CC453



## HDPE 52518 Grade Analysis

Parameters	Test Method	Value	Unit
Melt flow rate (190°C/5kg)	ASTM D1505	18	g/10min
Density	ASTM D1238	0.952	g/cm³
Flexural Modulus	ASTM D790	1350	MPa
Notched Izod Impact Strength	ASTM D256	25	J/m
Vicat Softening Point	ASTM D1525	122	°C

# **Rotomolding**

# Rotomolding Grades and Suppliers

Туре	Application	Grade	Our Suppliers	Equivalent
MDPE	Dumpsters,Recreation & Toys	3840UA	Tabriz	Sabic M40060S/ CC453



#### 3840UA Grade Analysis

Parameters	Test Method	Value	Unit
Melt flow rate (190°C/2.16kg)	ASTM D1505	4	g/10mir
Density	ASTM D1238	0.938	g/cm³
Tensile Strength at Yield	ASTM D638	15	MPa
Tensile Elongation at Break	ASTM D638	900	%
Notched Charpy Impact Strength	ASTM D256	25	J/m
ESCR	ASTM D1693	350	h
Vicat Softening Point	ASTM D1525	122	°C

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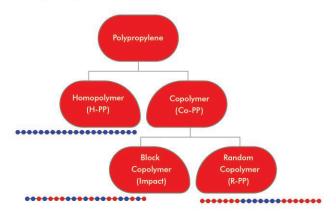
# Polypropylene | PP

# Polypropylene | PP

Polypropylene (PP) is a rough, rigid, and crystalline thermoplastic. It is produced from propene (or propylene) monomer via chain-growth polymerization. This linear hydrocarbon resin is the lightest polymer among all commodity plastics.

PP comes either as a homopolymer or as a copolymer and can be greatly boosted with additives.

### Types of Polypropylenes



**Polypropylene Homopolymer** (H-PP) is the most widely utilized general-purpose grade. It contains only propylene monomer. Main applications include textiles, packaging, healthcare, automotive and electrical applications.

**Polypropylene Random Copolymer** is produced by polymerizing together ethene and propene. It features Ethene units, incorporated randomly in the polypropylene chains. These polymers are flexible and optically clear and they have superb creep and chemical resistance.

Polypropylene Block Copolymer (Impact Copolymer), has blocks of ethene arranged in a regular pattern (or blocks) between bigger blocks of propene. The regular pattern hence makes thermoplastic tougher and less brittle than the random co-polymer. These polymers are suitable for applications requiring high impact strength, such as industrial usages, automotive, pipe applications, houseware, etc.

#### **Textile and Fiber**

- FibersPDF Compressor Free Version
- Staple Fibers
- Spunbonds Nonwovens
- · Yarns (BCF & CF)

#### Textile & Fiber Grades and Suppliers

Туре	Some of Important Grades	Our Suppliers
	552R	Polypropylene Jam, Shazand, NavidZar
Homopolymer Polyropylene	Z30S	Marun
(HPP)	RG 1101S	Regal
	P-YI-250	Polynar







Textile & Fiber Generic Analysis

Parameters	Test Method	Value	Unit
Melt flow rate (230°C,2.16kg)	ASTM D1238	25	g/10min
Density	ASTM D1505	0.9	g/cm³
Flexural Modulus	ASTM D790	1500	MPa
Tensile Strength @ Yield	ASTM D638	32	MPa
Tensile Elongation @ Yield	ASTM D638	13	%
Izod Impact Strength (notched, @ 23°C)	ASTM D256	30	J/m







# Raffia, Sheets, Thermoforming, and BOPP Film

- Raffia, Tappe Computessor Free Version
- · Sheets and Thermoforming
- BOPP Films

#### Raffia, Sheets, Thermoforming, and BOPP films Grades and Suppliers

Туре	Some of Important Grades	Our Suppliers
	C30S	Marun
	510L	Polypropylene Jam, Shazand, NavidZar
Homopolymer Polyropylene	RG 1102	Regal
(HPP)	P-SF-060	Polynar
	525J	Polypropylene Jam, NavidZar
	550J	Polypropylene Jam, NavidZar







#### Raffia, Sheets, Thermoforming and BOPP films Generic Analysis

Parameters	Test Method	C30S,510L	525J	Unit
Melt flow rate (230°C,2.16kg)	ASTM D1238	6	3.2	g/10min
Density	ASTM D1505	0.9	0.9	g/cm³
Flexural Modulus	ASTM D790	1500	1400	MPa
Tensile Strength @ Yield	ASTM D638	35	32	MPa
Tensile Elongation @ Yield	ASTM D638	12	12	%
Izod Impact Strength (notched, @ 23°C)	ASTM D256	40	50	J/m







# **Injection Molding**

#### PDF Compressor Free Version Injection Molding Grades and Suppliers

Туре	Some of Important Grades	Our Suppliers
Harris Baltiman dans	552R, 510L	Polypropylene Jam, Shazand, NavidZar
Homopolymer Polypropylene (H-PP)	Z30S, C30S, V30G	Marun
g,	RG 1102	Regal
Block Copolymer Polypropylene	548R, 440L, 548T, 332L	Polypropylene Jam, NavidZar
(Block Co-PP)	3130UV	Polypropylene Jam
Random Polypropylene	340R	Polypropylene Jam, NavidZar
(R-PP)	345S	Polypropylene Jam





#### Injection Molding Most Common Grades Analysis

Parameters	120.0	H	-PP	Block Co-PP					R-PP
	Unit	552R Z30S	C30S 510L	548R 440L 332L 548T 3130					340R
Melt flow rate (230°C,2.16kg)	g/10min	25	6	25	6	7.5	50	10.5	25
Density	g/cm³	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Flexural Modulus	MPa	1500	1500	1100	1300	1200	1450	900	1100
Tensile Strength @ Yield	MPa	32	35	28	25	27	26	19	28
Tensile Elongation @ Yield	%	13	12	10	6	9	5	6	10
Izod Impact Strength(notched, @ 23°C)	J/m	30	40	500	200	>100	65	500	55





# **Pipes**

- Sewage PDE Compressor Free Version
- Hot and Cold Water Piping

# Pipe Grades and Suppliers

Туре	Grade	Our Suppliers
Random Polypropylene	MR230	Marun
(R-PP)	ZR230	NavidZar
Block Copolymer Polypropylene	EP332C	Polypropylene Jam
(Block Co-PP)	ZB332C	NavidZar





#### Pipe Grades Analysis

Parameters	Unit	Test Method	Block Co-PP 332C	Random Co-PP MR230, ZR230
Meit flow rate (230°C,2.16kg)	g/10min	ASTM D1238	0.35	0.3
Density	g/cm³	ASTM D1505	0.9	0.89
Flexural Modulus	MPa	ASTM D790	1100	1000
Tensile Strength @ Yield	MPa	ASTM D638	27	28
Tensile Elongation @ Yield	%	ASTM D638	15	15
Izod Impact Strength (notched, @ 23°C)	J/m	ASTM D256	750	700









**PET** Polyethylene terephthalate

# POLYETHYLENE TERPHTHALATE | PET

PET (also abbreviated PETE) is short for polyethere terephthalate, the chemical name for polyester. The basic building blocks of PET are ethylene glycol and terephthalic acid, which are combined to form a polymer chain. The resulting spaghetti-like strands of PET are extruded, quickly cooled, and cut into small pellets. The resin pellets are then heated to a molten liquid that can be easily extruded or molded into items of practically any shape.

PET is a clear, strong, and lightweight plastic that is widely used for packaging foods and beverages, especially convenience-sized soft drinks, juices and water which is around 30% of PET global demand.

The majority of the PET production in the world is used for synthetic fibers such as clothing, bedsheets, curtains, blankets, pillowcases and mouse pads.



#### Analysis of PET Bottle Grades

Viscosity	District Co.	10n			
	Diethylene	Color P	arameter	Application	
(dL/g)	amount	L	b	Application	
0.73±0.03	≤1.5	≥95	≤1	One-ply yarn	
0.73±0.03	≤1.8	≥90	≤2	One pry yarri	
0.780±0.02	≤1.5	≥95	≤1	Mineral water bottles & food packaging	
0.780±0.02	≤1.8	≥90	≤2	films by thermoforming method	
0.8±0.02	≤1.5	≥95	≤1	Payerages and liquid all battles	
0.8±0.02	≤1.8	≥90	≤2	Beverages and liquid oil bottles	
0.82±0.02	≤1.5	≥95	≤1	Liquid oils bottles, carbonated drinks, containers	
0.82±0.02	≤1.8	≥90	≤2	for hygienic and detergent products	
0.84±0.02	≤1.5	≥95	≤1	Large containers to store liquids	
0.84±0.02	≤1.8	≥90	≤2	Large containers to store liquids	
( (	0.73±0.03 0.73±0.03 0.780±0.02 0.780±0.02 0.8±0.02 0.8±0.02 0.82±0.02 0.82±0.02 0.82±0.02	0.73±0.03 ≤1.5 0.73±0.03 ≤1.8 0.780±0.02 ≤1.5 0.780±0.02 ≤1.8 0.8±0.02 ≤1.5 0.8±0.02 ≤1.8 0.82±0.02 ≤1.8 0.82±0.02 ≤1.8 0.82±0.02 ≤1.5 0.82±0.02 ≤1.5	(11/g) amount L  0.73±0.03 ≤1.5 ≥95  0.73±0.03 ≤1.8 ≥90  0.780±0.02 ≤1.5 ≥95  0.8±0.02 ≤1.5 ≥95  0.8±0.02 ≤1.5 ≥90  0.8±0.02 ≤1.5 ≥90  0.8±0.02 ≤1.8 ≥90  0.8±0.02 ≤1.8 ≥90  0.8±0.02 ≤1.8 ≥90  0.8±0.02 ≤1.5 ≥95	Carry   Amount   L   b	



# Analysis of Polyester yarn (POY) Grades

Grade Supplier: STPC	Thread Score	Thread Score	Oil content (%)	Application
120/36	130-136	36	0.32	
160/36	174-180	36	0.35	Textures for yarn, sportswear
160/48	174-180	48	0.4-0.5	underwear, knitwear, stroller
250/48	270-280	48	0.4-0.5	fabric, curtain fabric
500/96	540-560	96	0.4-0.55	







#### Analysis of PET Staple Grades

Grade Supplier: STPC	Formidability	Lengthening (%)	Cut Length (mm)	Number of folds (N/cm)	Application
PSFA	≥6.1	≤30	38±1	4±0.5	Cotton, Textile, clothing,
PSFB	≥5.5	≤35	38±3	4±1	Non-woven products





# Analysis of PET Fiber Grades

Grade	Viscosity	Diethylene Glycol	Color Parameter		TiO2 Content	Application	
Supplier: STPC	(dL/g)	content (wt%)	6) L b		(wt%)	Application	
TG-640 S	0.64±0.01	0.9≤DEG≤1.2	≥95	≤3.5	0.3±0.05	Vors Fabria	
TG-640 N	0.64±0.015	0.9≤DEG≤1.4	≥90	≤4.5	0.3±0.05	Yarn, Fabric	
TG-640(SB) S	0.64±0.01	0.9≤DEG≤1.2	≥85	≤2.5	*	Yarn, Fabric, clothing	
TG-640(SB) N	0.64±0.015	0.9≤DEG≤1.4	≥75	≤4.5	*	Tarri, Fabric, Clothiri	





PETROBON



Polystyrene | PS

### Polystyrene | PS

Polystyrene (PF) is a white Strong the hydrocure polymer synthesized by free radical polymerization of styrene monomer. Polystyrene applications include a wide range of products, from toys to packaging materials to refrigerator liners. Due to its versatility, it is one of the most widely used plastics. Polystyrene is available as solid plastic, rigid foam, and polystyrene films.

## **Types of Polystyrene**

- General Purpose Polystyrene(GPPS)
- High impact Polystyrene(HIPS)
- Expanded Polystyrene(EPS)

## General Purpose Polystyrene | GPPS

It is a homopolymer made from styrene, which is also known as crystal clear polymer.

#### **Applications**

It's a cost-effective and easy-to-process resin and has a variety of applications. Its transparency makes it a popular food packaging material. It is also used to make toys, CD cases, etc.

#### Analysis and Grades of GPPS

Our Suppliers	Grade	MFI gr/10min (200°C/5KG)	Vicat Softening Point (50°C/hr-1kg) (°C)	Tensile Strength @ Break MPa	Elongation @ Break %	Tensile Modulus Mpa
	1540B	11	91	42	2	3100
	1160	2.5	105	48	3	3200
	1540	11	91	42	2	3100
TABRIZ	1460	1.7	104	57	3	4710
	1240	2.5	96	53	3	4300
	1340	4	97	44	2.5	3100
	1810	20	90	42	2	3100
TJPC	1161	4	104	51		2650
Petro Pak	1115	9-11	95	42	2.5	2900
Petro Pak	1028	2.4	102	55		3200



# **High Impact Polystyrene | HIPS**

It is a cappying compression force Wersiandiene rubber to improve the impact strength.

# Analysis of HIPS grades

Our Suppliers	PROPERTY	MFI (200°MFI (200°C/5kg) g/10min	Tensile Stress @ break (MPa)	Tensile Modulus (MPa)	Izod Impact kJ/m²	Applications
	8350	4.5	20	1600	11	Fridge Doors and Cabinet Liners
	7240	4.5	21	1950	11	Industrial Parts, Packaging food Containers, Egg Boxes
	7240WB	4.5	21	1950	10	
TABRIZ	7350 ESCR	4	20	1600	12	Sheet extrusion, Refrigerator inner & door liner, Packaging for oily food and dairy products
ΙZ	3630	15	25	2300	3	Bathroom Accessories, Coat Hangers, Injection molding
	4240	3.5	27	3110	6	Vending Cups, Extruded Profiles
	6630	13	24	3110	5	Computer Keyboards, Toys
	WT1235	5	35	2980	3	Toys, TV Cabinets, Clocks
	3163	16	32	2500	5	Disposable dishware,
	7026	2.4	30	2100	12.5	electronic packaging, TV and tape recorder equipment
	4125	12	30	2600	6.3	household, toys, food containers
	4035	3.3	24	1700	6	injection parts sheet extrusion, refrigerator inserts
PETR	5073	7	25	2100	8	especially for dairy, food containers, house hold
	6045	4	24	1900	9.5	food packaging as beverage cups, kitchen and bathroom, disposable dishware
	7055	4.4	30	2100	11.5	refrigerator inserts and door paneling, oily food, and dairy products, sheet extrusion







# **Expanded polystyrene | EPS**

Polystyrene Founds, made by selding blowing spents. Polystyrene foams are 95-98% air and 5-2% PS. Polystyrene foams exhibit good thermal insulation properties as the voids are filled with air. Due to very low thermal conductivity, PS foams have a wide range of applications in construction and architectural models. By adding suitable additives, their properties can be altered depending on their uses. With the incorporation of graphite Grey, polystyrene foam is made, which exhibits superior insulation properties. With good damping properties, they are applied widely in the packaging industry as well.

#### Analysis of EPS grades

Our Suppliers	Grade	Bead Size (mm)	Pre-expansion Density (Kg/m3)	Foam Multiple (times)	Foam Density (kg/m3)	Applications
	F50	1.6 - 1.9	11	60 - 75	10-20	
	F100	1.2 - 1.6	13	47 - 65	14 - 22	
Petromole	F150	1.0 - 1.2	14	42 - 60	16 - 30	Insulation, big packing
	F250	0.73 - 1.0	15	35 - 55	20 - 35	products
	F350	0.47 - 0.73	16	28 - 50	22 - 40	
	F450	0.3 - 0.47	17	24 - 45	23 - 42	
	HS121	1.8-2.5			13-15	construction applications without special requirements
	HS221	1.0-1.8			14-30	construction applications without special requirements concerning flame resistance or as packaging blanks
Tabriz	HS321	0.7-1.0			18-30	packaging material for contour moldings
	FC422	0.5-0.7			20-30	High-Density Block, Shape Molding
	FC522	0.3-0.5			22-30	High-Density Block, Shape Molding, very thin wall
	WP526	0.3-0.5			20	Shape Molding, very thin-wall waterproof shape molding products, drinking cup
	F1000	1.4-2.0	11-12	50-95	7	N ROBERTON CHARLES WE SE THE PARTY
	F2000	0.9-1.4	12-14	50-95	7	Rigid insulation boards, Panel
Baniar	F-3000	0.9-1.4	14-16	50-95	7	application, low-density housing and
baniar	F-4000	0.5-0.8	16-18	50-95	7	construction blocks, roofing, walls, perimeter insulation











ABS
Acrylonitrile Butadiene Styrene

# PDF Compressor Free Version Acrylonitrile Butadiene Styrene | ABS

Acrylonitrile Butadiene Styrene Copolymer is produced in 70 grades including general purpose, special grades, heat resistant, flame retardant, and antistatic grades in both natural and pre-colored forms. They are easily injection molded, extruded, and thermoformed. They can also have an excellent secondary process such as electroplating, painting, and so on. It is suitable for producing home appliances, automobile parts, electric industry parts, medical equipment, etc.

#### **Key Properties of ABS**

ABS is an ideal material of choice for various structural applications, thanks to its several physical properties such as:

- High rigidity
- · Good impact resistance, even at low temperatures
- Good insulating properties
- Good weldability
- · Good abrasion and strain resistance
- · High dimensional stability (Mechanically strong and stable over time)
- High surface brightness and excellent surface aspect

ABS shows excellent mechanical properties i.e. it is hard and tough in nature and thus delivers good impact strength. Acrylonitrile Butadiene Styrene offers a high degree of surface quality.

Apart from these characteristics, Acrylonitrile Butadiene Styrene exhibits good electrical insulating properties.

# Analysis of ABS Grades

Category	Our Suppliers	Grade	MFI 200°C, 5kg g/10min	Applications
		ABS 50 N	3	Injection Molding
	GBPC	ABS 70 N	1.5	Injection Molding / Extrusion
	OBPC	ABS 80 N	5	High Flow
		ABS 40 N	2	High Impact
General		SD0152	2.4	furniture, automotive parts, general
		SD0150	1.8	injection molding, appliances casing,
	Tabriz	SD0140	3.2	office supplies
		HR2340	1	Injection Molding
		HR2320	1.2	Injection Molding
		ABS 75 N/ ABS 70 SR	0.5	Sheet Extrusion
	GBPC	ABS 72 ER	0.5	Sheet Extrusion / ESCR
Extrusion		ABS 90 N		Pipes
		SH0150	1.1	general sheets
	Tabriz	SV0157	0.5	extruded sheet, hot tubs,recreational vehicle parts, and refrigerator liner







# Analysis of ABS Special Grades

Category	Our Suppliers	Grade	MFI 200°C, 5kg	Applications	
		ABS HFA 56 N	0.9	Flame Retardant/ Extrusion	
Flame	GBPC	GAC 265 FR	1.1	Flame Retardant	
Retardant		ABS HFA 70 N	2.9	Flame Retardant / Injection	
Tabriz	Tabriz	Tabriz VH0800D		electrical & electronics applications such as TV Monitor, Wiring devices	
	GBPC	ABS GH 500 N	0.5		
Heat	Tabriz	HR0370	1.2	High Heat Resistance	
Resistance	GBPC	ABS 30 N	0.9	Semi Heat Resistance	
	OBFC	ABS 38 H	0.6	Heat Resistance	
Antistatic	GBPC	ABS 50 V	2.9	Antistatic / Injection Molding	
		ABS 10 N	2.9	Electroplating / Injection Molding	
Plating /	GBPC	ABS 70 E	1.7	Electroplating / Injection Molding / Extrusion	
	Tabriz	HM0560	2.5	Injection Molding/ watches, toys, cassette recorders, etc	











# Polycarbonate | PC

# Polycarbonate | PC

#### **PDF Compressor Free Version**

Polycarbonate (PC) is a transparent thermoplastic with carbonate functional groups. Its high strength makes it resistant to impact and fracture. It is lightweight so an excellent alternative to glass. PC is melted and forced into a mold with high pressure to give it the desired shape. It is widely used owing to its eco-friendly processing and recyclability. As PC shows excellent compatibility with certain polymers, it is widely used in blends, such as PC/ABS, PC/PET, and PC/PMMA.

# Analysis of Khuzestan Petrochemical Polycarbonate grades. All grades are UV Stabilized

Property	MFI at 1.2Kg, 300°C (g/10min)	Modulus of Elasticity (Kgf/cm2)	Elongation (%)	Izod Impact Strength (Kj/m2)	Features
PGPC-1012 LED3	10.1 - 12	24000	≥ 100	≥ 80	Medium viscosity, The clarity of this grade is 7%, Application LED Lamps
PGPC-CREAM	10	24000	≥ 50	85	Medium viscosity, Impact modifier
PGPC-1215UR	12.1-15	24000	≥ 100	≥ 75	
PGPC-GF25	8	7250	3	13	Medium viscosity, Impact modifier
PGPC-W1	10	24000	≥ 50	85	Medium viscosity, Impact modifier
PGPC-0407UR	4.1-7	24000	≥ 100	≥ 80	Low viscosity
PGPC-1518UR	15.1-18	24000	≥ 100	≥ 80	Low viscosity
PGPC-1012S1	10.1 - 12	24000	≥ 100	≥ 75	Medium viscosity, Mold Shrinkage is 0.5-0.7
PGPC-1012UR	10.1 - 12	24000	≥ 100	≥ 80	Medium viscosity
PGPC-0710UR	7.1-10	24000	≥ 100	≥ 80	Medium viscosity
PGPC-1822UR	18.1-22	24000	≥ 100	≥ 80	Low viscosity
PGPC-ABS 65	20	22000	≥ 50	41	Low viscosity, Vicat softening point is 118°C







# PETR BON

RAW MATERIAL SUPPLIER





# OTHER POLYMERS

- SBR
- Epoxy Resins

# Styrenec Butsidiene erubber | SBR

From tires and conveyor belts to seals or gaskets... Styrene-Butadiene rubber is a widely used general-purpose rubber with an extensive range of applications. The reason for the success of this synthetic rubber is, of course, its unique properties and diverse applications. Also, it is the only material that exhibits long-range elasticity, and which therefore fills a special need in modern technology.

- Styrene content in the range of 10-25% contributing to good wearing and bonding characteristics
- •While the butadiene unit is composed approximately 60 to 70% trans-1,4; 15 to 20% cis-1,4; and 15 to 20% 1,2 configurations for the polymer at 50°C.

#### Analysis of SBR Grades

Products	SBR 1502	SBR 1712
Volatile Matter (wt%)	≤0.75	≤0.75
Ash (wt%)	≤1.5	≤1.0
Organic Acid (wt%)	5.00-7.00	3.90-5.70
Soap (wt%)	≤0.5	≤0.5
Bound Styrene (wt%)	22.5-24.5	22.5-24.5
Raw Viscosity	46.0-58.0	42.0-52.0
Compound Viscosity	≤84	≤62
Tensile (kg/cm2)	≥250	≥200
Elongation @ break (%)	≥350	≥530
300% Modulus (kg/cm2)	167-207	79-109
Application	Light-colored Products, Toys, Footwear, Building industry, Bicycle tire	Black color products conveyor belts, Hose
Our Suppliers	Bandar Imam	TJPC







# Epoxy Resins Free Version

After their first commercial production in 1940, epoxy resins comprise a wide family of materials today. Thanks to their high strength, versatility, and excellent adhesion to a variety of surfaces, epoxy resins have gained wide acceptance in diverse applications.

#### SOLID EPOXY RESIN - Khuzestan Petrochemical

Property	Epiran-11P	Epiran-11T  Clear Light Yellow Flakes	
Appearance	Clear Light Yellow Flakes		
Epoxide Equivalent (g/eq)	720 - 800	801 - 870	
Epoxy Value (mmol/Kg)	1250 - 1389	1149 - 1248	
Softening Point (°C)	88 - 96	92 - 98	
Applications	Hot Cured Varnishes, Powder Coatings, Adhesives manufacture	Hot Cured Varnishes, Powder Coatings, Adhesives manufacture	

#### Liquid EPOXY RESIN - Khuzestan Petrochemical

Property	Epiran-o6SPL	Epiran-01X75
Appearance	Clear Light Yellow Liquid	Clear Light Yellow Liquid
Epoxide Equivalent (g/eq)	185 - 192	434 - 555
Epoxy Value (mmol/Kg)	5200 - 5400	0.180 - 0.230
Color(40% in Dioxan) (Pt-Co (APHA))	50≥	40≥
Viscosity (mPa)	10,000 - 14,000	6000 - 12000
Non-Volatile (%wt)	≥99.3	74 - 76
Applications	Adhesives, Casting, Tooling, Civil Eng. Composites, Automotive, Can and Coil Coatings, Marine and Protective Coatings, Electrical & Electronics use, Potting, and Encapsulation.	Cold Cured Varnishes, Solvent-based 2 – pack Coatings for Metals, as Modifier in Stoving Enamels based on Acrylics, Alkyd-Melamine resin systems, and Hot Cured Adhesives manufacture.





