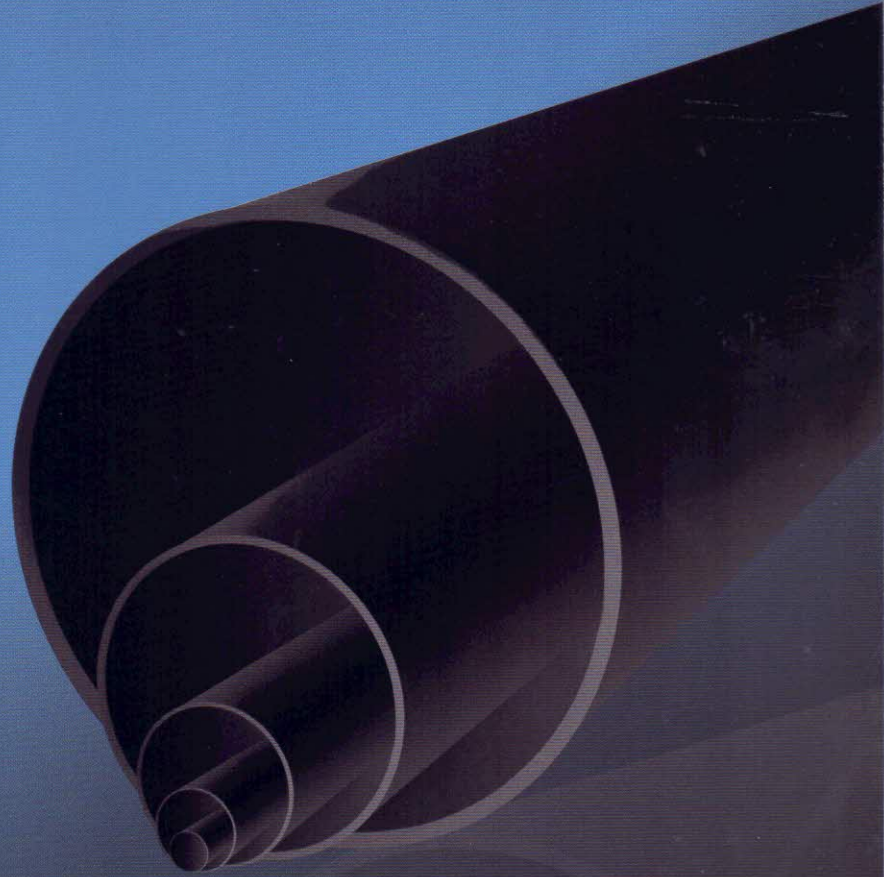


Working for a better tomorrow



# BBJ Polyethylene Pipes

Flexible Pipe System For Water & Industrial Applications

ISO 4427 DIN 8074/8075



BBJ PIPE INDUSTRIES LTD.



## BBJ PIPE - HDPE / MDPE

Water is far too precious to waste, so it is essential to have distribution system that ensure minimum losses in transit throughout the lifecycle while serving the diversified users in household (house / service connections), industries, agriculture and other sectors that are integral part of society. It is widely recognized that Polyethylene (PE) Pipes have valuable role to play in meeting this objective (water management), both for new systems in developing countries and for renovation of existing systems in the developed world, many of which are old and leaking water at an unsustainably high rate. An ideal piping system should not just transport water but it should also protect water from variables that threaten to contaminate it, such as bacteria, corrosion and abrasion.

BBJ Polyethylene Pipe is fast replacing conventional piping system for House/Service connections, water supply and distribution. BBJ Polyethylene Pipe Systems offered by BBJ Pipe are manufactured from high quality Polyethylene (PE) compound imported from internationally reputed organizations.

BBJ Pipe is safe to use because it does not allow algae growth, rot or rust over time. BBJ Pipe -PE Piping System is extremely resistant to scale build up, which can lead to decreased flow rates and decontaminated water. BBJ Polyethylene Pipes are impervious to most aggressive chemicals and corrosive elements.

BBJ Pipe-PE Piping System delivers significant value to industrial users as well. BBJ Pipe-PE Piping System is perfect solution for industrial applications that feature high flow rates and extremely harsh conditions. BBJ polyethylene pipe is ideal for transportation of aggressive fluids and chemicals as well as potable water from one point to another without the need off regular maintenance or replacement. It is specifically designed for processes where corrosion resistance, abrasion resistance and operating pressure are major factors. In addition, polyethylene fittings are more chemically resistant than steel.

## PRODUCT RANGE

BBJ Pipe offers high and medium density Polyethylene (PE) pipe for water and industrial applications. BBJ Polyethylene Pipe is produced from selecting international reputed supplier high quality resin, extruded with precision and strict quality control measures taken to ensure high quality of the product in compliance to international standards.

### BBJ PIPE SIZES

Diameter Range: 16 mm to 500 mm  
Coils: 50 M and 100 M standards length upto 90 mm  
Length: 6 M and 12 M upto 500 mm

### APPLICATION

◦	Water supply & distribution networks
◦	Water treatment & desalination plants
◦	Waste water & pressure sewerage disposable
◦	Irrigation system
◦	Industrial purposes & many more
◦	Potable water piping network system
◦	Chilled water piping
◦	Cooling water
◦	Sea water effluents
◦	Storage tank piping, water intakes and water outfalls
◦	Fire hydrant lines
◦	House and service connection
◦	Sludge piping, fly ash disposal, dredging and hazardous waste

Pipe PE 100 SDR 11 PN 16

BBJ Pipe PE 100 SDR 11 PN 16



## FABRICATED FITTINGS

BBJ Polyethylene fabricated fittings are manufactured from pipes in a wide variety of sizes and pressure classes. The standard range of Polyethylene fabricated fittings are manufactured within our manufacturing facility where our experts ensure a quality product is being manufactured, fitting ranging in size from 90-450 mm.

## INDUSTRIAL USE:

BBJ Polyethylene Pipe caters to a variety of industries for different use. Some of them include:

- Agriculture and Irrigation
- Breweries and food Processing
- Oil, Gas & Chemicals
- Marine and Mining
- Power Generation
- Textile (Dying/Bleaching/Effluents)
- Tanneries and Mineral Processing
- Fire Main Line
- Sugar
- Telecommunication and many more

## RAW MATERIAL

The Polyethylene compound used for production process is in the form of small uniform sized granules. It is imported by BBJ Pipe from reputed international suppliers. Pipes are manufactured from Polyethylene (PE) compound, which is a synthetic compound normally produced from the distillation and cracking of crude oil. Polyethylene (PE 80 & PE 100) is highly resistant to environmental stress cracking and meets the ISO classification for (PE 80 & PE 100) pipe materials.

## PHYSICAL PROPERTIES (Raw Material)

(Tests are performed by raw material manufacturer. Copy of test certificate is provided upon request.)

PROPERTY		TYPICAL VALUE	UNITS	TEST METHOD
Melt Flow Rate	190°C/5kg	0.26	g/10 min.	ISO 1133
Density of Compound	Compound	950-960	Kg/m <sup>3</sup>	ISO 1183
Tensile Stress at Yield	50 mm/min	> 21	MPA	ISO 1133
Elongation at Yield		9	%	ISO 527-2
Elongation at Break		>350	%	ISO 527-2
Charpy Impact Strength, Notched	0°C	14	Kg/m	ISO 197/1eA
Thermal Stability	210°C	>20	Min.	EN 728
Carbon Black Content		>2	%	ASTM D 1603
Environmental Stress Crack Resistance	10% Igepal, F60	>10000	Hrs.	ASTM D 1693 A
Brittleness Temperature		<-70	°C	ASTM D 746





# FEATURES OF BBJ PIPE-PE PIPING SYSTEM

- Flexible pipe so coiling is easy
- Resistant to UV, Biological Attack, Corrosion, Abrasion, Chemicals and Weatherability
- Have various jointing techniques
- Have low coefficient of friction i.e excellent flow properties
- Light weight & Low installation cost
- Low maintenance and operational cost
- Durable & impact resistant
- Non biodegradable
- Long life (More than 50 years) & suitable for narrow trenching
- Can withstand substantial deflection during installation
- Impervious to contaminated sub-soils
- Resistant to saline water (To transport salty/sea/saline water)
- Material classification is simple to understand for fusion/welding compatibility like PE 80 and PE 100.
- Ductile & tough
- Comparatively high coefficient of linear heat expansion (thermal expansion)

## BBJ PIPE - PE STANDARD SPECIFICATIONS

BBJ PIPE - HDPE  
ISO 4427-2007  
PE 100 Material

DN	SDR 11 (PN 16)	SDR 13.6 (PN 12.5)	SDR 17 (PN 10)	SDR 21 (PN 8)
O.D (mm)	e (mm)	e (mm)	e (mm)	e (mm)
20	2.0	-	-	-
25	2.3	2.0	-	-
32	3.0	2.4	2.0	-
40	3.7	3.0	2.4	2.0
50	4.6	3.7	3.0	2.4
63	5.8	4.7	3.8	3.0
75	6.8	5.6	4.5	3.6
90	8.2	6.7	5.4	4.3
110	10.0	8.1	6.6	5.3
125	11.4	9.2	7.4	6.0
140	12.7	10.3	8.3	6.7
160	14.6	11.8	9.5	7.7
180	16.4	13.3	10.7	8.6
200	18.2	14.7	11.9	9.6
225	20.5	16.6	13.4	10.8
250	22.7	18.4	14.8	11.9
280	25.4	20.6	16.6	13.4
315	28.6	23.2	18.7	15.0
355	32.2	26.1	21.1	16.9
400	36.3	29.4	23.7	19.1
450	40.9	33.1	26.7	21.5
500	45.4	36.8	29.7	23.9





## PRESSURE RATING

Operating pressure of BBJ Polyethylene Pipes range between 6, 8, 10, 12.5, 16 and 20 bar. The nominal Pressure (PN) correspond to the maximum allowable working pressure in bar for pipe at 20°C.

### Operating Pressure of BBJ Pipe Fittings:

10	bar	(Compression type)
8-16	bar	(Butt fusion type)

### COLD BENDING RADII (CBR):

CBR in meters at 20 C° = 2x Outside diameter of pipe

## QUALITY ASSURANCE

BBJ Pipe philosophy is customer focused and believes in customer delightness. All products are supplied to the customers after adhering stringent quality measures. In order to supply best quality products to the client, a separate quality control department has been established to ensure implementation of client specifications and compliance to applicable international standards from raw material to delivery of the products. Quality control staff consists of energetic and self motivated professional engineers. BBJ Pipe has in house laboratory facility, fully equipped with latest and state of the art testing equipments capable to test PE products & PE materials in accordance with all applicable International Standards.

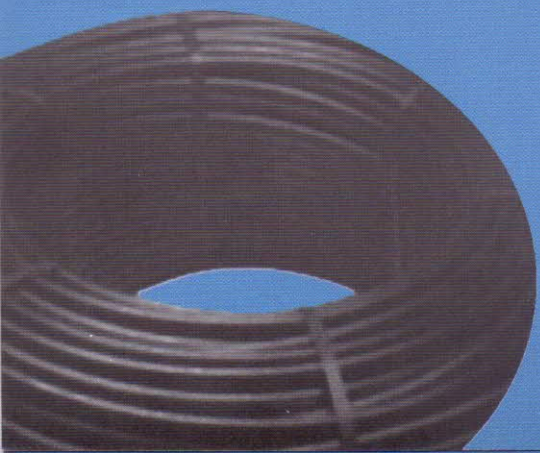




# CHEMICAL RESISTANCE CHART

Common chemicals resisted by polyethylene pipes are listed below :

S. #	Chemicals	PE	S. #	Chemicals	PE
1	Acetaldehyde	C	33	Chloroform	C
2	Acetamide	A	34	Chromic Acid 50%	A
3	Acetic Acid 80%	D	35	Citric Acid	A
4	Acetone	B	36	Copper Sulphate	B
5	Acetylene	A	37	Diesel Fuel	C
6	Alcohols: Amyl	B	38	Ethylene Glycol	B
7	Benzyl	D	39	Fatty Acids	A
8	Butyl	A	40	Ferric Chloride	A
9	Ethyl	B	41	Ferric Sulphate	A
10	Isopropyl	A	42	Fluorine	C
11	Methyl	A	43	Formaldehyde 10%	B
12	Aluminum Sulphate	A	44	Formic Acid	B
13	Ammonia	C	45	Gasoline	C
14	Aniline	B	46	Heptane	B
15	Aromatic Hydrocarbons	C	47	Hydrochloric Acid 20%	A
16	Arsenic Acid	B	48	Hydrogen Peroxide	C
17	Barium Carbonate	B	49	Iodine	A
18	Barium Sulphate	B	50	Magnesium Hydroxide	A
19	Benzaldehyde	A	51	Mercury	A
20	Benzene	C	52	Oleum 100%	D
21	Benzoic Acid	B	53	Petrolatum	B
22	Benzol	C	54	Phenol	B
23	Borax	A	55	Phosphoric Acid	B
24	Boric Acid	A	56	Potassium Carbonate	A
25	Butadiene	D	57	Silver Nitrate	B
26	Butane	C	58	Sodium Bicarbonate	A
27	Butylenes	B	59	Stearic Acid	B
28	Calcium Sulphate	B	60	Sulphuric Acid	B
29	Carbon Dioxide	B	61	Tannic Acid	B
30	Carbon Disulfide	C	62	Toluene	C
31	Carbonic Acid	C	63	Zinc Sulphate	A
32	Chlorine, Anhydrous	B			

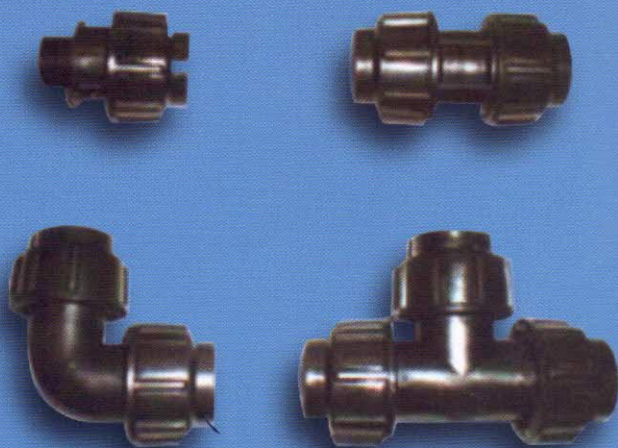




# INDUSTRY SPECIFIC CHEMICAL RESISTANCE CHART

S. #	Chemicals Used In Textiles	PE
1	Alum	B
2	Copper Sulphate	B
3	Iron (Ferrous Sulphate)	B
4	Tannic Acid	B
5	Oxalic Acid	B
6	Sodium Acid	B
7	Sulphuric Acid	B
8	Hydrogen Peroxide	B
	<b>Textile Waste Water</b>	
9	Caustic Soda	B
10	Urea	B
11	Ammonia (Aqueous)	B
	<b>Chemicals Used in Tanneries</b>	
12	Sodium Sulphate	B
13	Sodium Sulphide	B
14	Chromium Sulphate	B
15	Ammonium Sulphate	B
16	Ammonium Chloride	B
17	Tannic Acid	B
	<b>Tanneries Effluent</b>	
18	Sulphuric Acid	B
19	Phosphoric Acid	B
20	Formaldehyde	B
21	Glycolic Acid	B
22	Ethylene Glycol	B

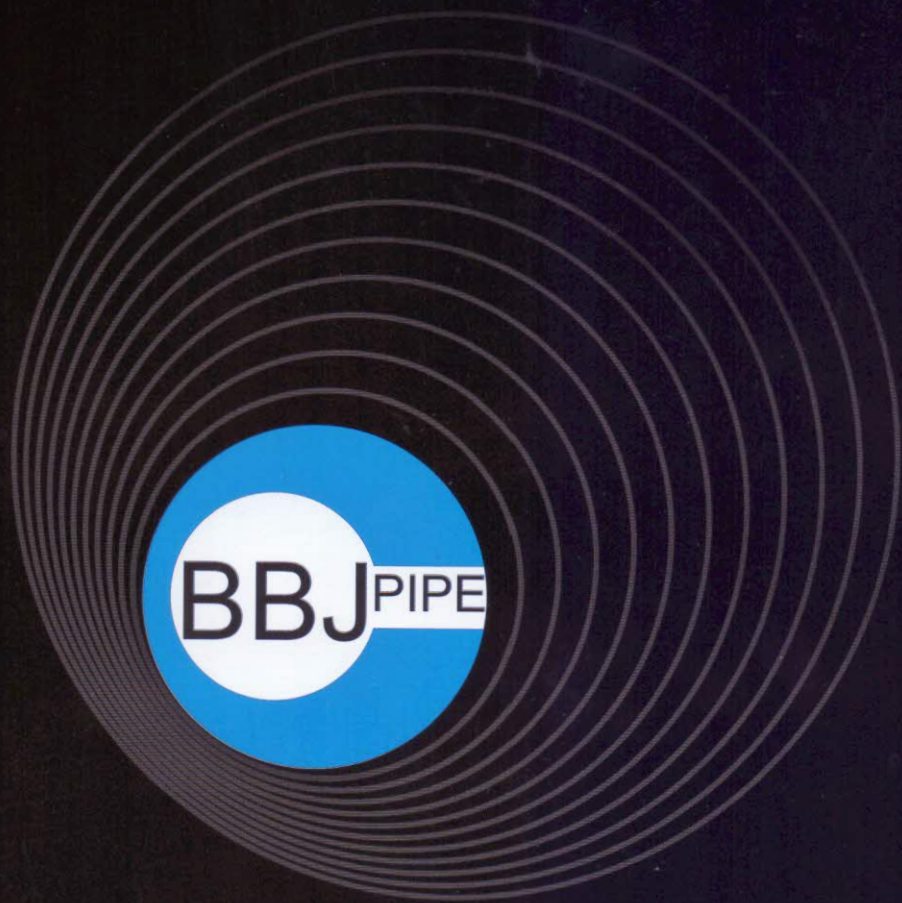
A: Very Good      B: Good  
C: Moderate      D: Not Recommended



*Note: Data should not be used for specification work. BBJ Pipe technical department should be consulted for specific operational conditions with respect to pressure, temperature and fluid concentration prior to specifying the product.*

*All information contained in this literature is given in good faith. The user should, however, check that the product is suitable in the application for which it shall be used. Please ensure compliance with all health and safety requirements. Whilst continuing its programme of continuous development, BBJ Pipe reserves the right to modify or extend any published information without prior notification. No responsibility can be accepted for any error, omissions or incorrect assumptions.*





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