



NEWTECH

COMMITTED TO EXCELLENCE

Newtech

Manufacturer of HDPE, MDPE, uPVC, PPRC Pipes & Fittings

Approval No: P/01019

Certificate of Approval

This is to certify that the Quality Management System

At

NEWTECH

Suite # 5, 2nd Floor, Rehman Plaza, I-10 Markaaz,
Islamabad-Pakistan.

has been examined by Assessors of QMS Certification Services
and found to be conforming to the requirements of

ISO 9001:2008

In respect of the following activities:

Manufacturing and supply of HDPE Pipe,
MDPE Pipe, uPVC Pipe, PPRC Pipe & Fittings.

This certificate is valid from 16/04/2010 to 15/04/2013
Original Certification 16/04/2010

Signature

Approval: QMS Certification Services Ltd



CERTIFICATION SERVICES
ISBN: 978 985 251 096



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Newtech Pipes

NEWTECH is one of the leading names in Plastic pipes industry in Pakistan. The company was founded in the year 1995. From a humble beginning in 1995 and with lots of constraints, the company soon grew into a multi-million revenue generating manufacturing unit with customers spread nationwide. The company uses well equipped state of art manufacturing unit, well established marketing network, team of dedicated professionals, well defined management hierarchy and a portfolio consisting of various technologically advanced range of piping products. From its inception the company adopted a continuous improvement attitude that insured dependable customer service, honest communication and tremendous employee participation.

The company manufactures the High Density Poly Ethylene (HDPE), Unplasticized Poly Vinyl Chloride (UPVC) & Polypropylene Random Copolymer (PPRC) Pipes and Fittings as well allied accessories under the popular brand name NEWTECH. It accomplishes the quality of its products through an adopted and certified integrated quality management system in accordance with ISO 9001-2008 Standards.

The raw materials for production are imported from first-class World suppliers, guarantee high quality of our products.

Our products are widely used in Water Distribution, gas conveyance, protection of optical cables, Construction, Government Enterprises, Irrigation, Agriculture, Industry and other purposes.

NEWTECH is a fast growing, dynamic company led by true visionaries. The company is driven in its vision "Committed to Excellence", by its core values of integrity, responsibility and commitment to the customers and society. The company is a family of like-minded & hardworking people. We firmly believe in an open work culture that encourages teamwork and healthy communication, at the same time nurturing individual growth and talent.

Vision Statement "Committed to Excellence"

We believe in focusing on our valued customers and their needs. Our objective is to provide prime quality products at competitive price on committed time to the customer's entire satisfaction. We would like to be our customers' First Choice to fulfill their all Pipe related needs.

Quality Standards

NEWTECH accomplishes the quality of its products through an adopted and certified integrated quality management system in accordance with ISO 9001-2008 Standards. Our production control system fully augments with the ISO standards ensuring high quality production in conformance with the required standards. Moreover our in-house testing facilities are an additional check to the quality of our products.

Technical Support & Services

NEWTECH has well staffed Customer Service mechanism. It offers Pre-sales, during sales & after sales service to all customers. On-site training for pipe installation & jointing can also be provided. Our team of experts is always available to provide on-site services. Besides our experienced staff can also visit the site and suggest the more economical solutions as & when requested by our customers.

Project Support

NEWTECH can provide a Project Support Service to the technical staff of project like Engineers, Consultants, executing staff regarding HDPE related projects to benefit from our logistics systems and technical experience. This includes a full planning service covering pipe supply and delivery to site. Moreover we have the capabilities to execute the complete project on Turn-Key basis as well.



HDPE Pipes

High Density Poly Ethylene (HDPE):

Why Select HDPE Pipe?

Pipes made from High Density Polyethylene (HDPE) is a cost effective answer for a number of piping problems in Metropolitan, Municipal, Industrial, Underwater, Mining, Landfill Gas extraction, Cable duct and agricultural applications. It has been tested and proven effective for underground, above ground, surface, under water as well as floating pipe applications.

HDPE pipes are strong, tough, non-toxic, light in weight and resistance to corrosion and have been widely adopted in a variety of piping system and are replacing most pipes of conventional materials.

Polyethylene pipes can carry potable water, wastewater, slurries, chemicals, hazardous wastes, cables and compressed gases as well as oils. Polyethylene pipes have a long and successful service experience to the gas oil, mining and water utility industries. PE pipes have the lowest repair frequency per Kilometer of pipe per year compared with all other pipe materials used for urban water and gas distribution.

NEWTECH HDPE pipes will meet all your requirements of long service, trouble-free installation, flexibility, resistance to corrosion and chemicals.

Characteristics of HDPE (PE100) Material:

CHARACTERISTIC	UNIT	Value
Density	gm/cm ³	0.95
Design Stress	Ma	8
Tensile Strength at Yield	N/mm ²	23-25
Flexural Modules (Bend Creep)	N/mm ²	1000-1200
Elongation at Break	%	>600
Crystallite MELT Range	C	128-132
Surface Resistance	O	>10 ¹⁴
Coefficient of Linear Expansion	mm/m*k	0.13
Heat Conductivity at 20 Deg C	W/m*k	0.38
Impact Strength at 23 Deg C	Kj/m ²	83
Brittleness Temperature	C	<-70
Shore Hardness	D	62
Melt Flow Rate (Melt Flow Index)	g/10min	0.15
Water Absorption	%	0.01-0.04

Applications:

- Water supply
- Telecommunication Industry for Cable Protection
- Sewerage & Drainage
- Irrigation/farming/Tubewells
- Sprinkler Irrigation Systems & Drip Irrigation Systems
- Construction Industry
- Gas and oil Transmission
- Industrial Effluents
- Chemical Industries



HDPE Pipes

Benefits of HDPE Pipe:

- Light in Weight
- More Flexible than other pipe, such as - GI, Stainless Steel, Black Iron, Copper, uPVC and Concrete etc.
- Coating of the HDPE pipe is quite smooth.
- Capable to resist from environmental threat or Crack
- It can defy pipeline Corrosion
- Can protect form Frost & Rodent.
- Hygienically Safe (Food Grade)
- Easy to install and handle.
- There is a least chance to conduct heat.
- Abrasion free
- Has Long Life (approx 50 Years)



Typical Physical Properties of HDPE Pipe:

1	Abrasion Resistance	In tests, it has been proved that HDPE is superior even to X-52 grade steel when it comes to conveyance of iron ore water slurry. The performance ratio is 3:1 in favour of HDPE
2	Flexibility	The flexibility of HDPE pipe allows it to curved under, over & around obstacles as well as directional changes. In some cases, the flexibility of HDPE pipe reduces the need for fittings & saves installation costs. It can be bent to a minimum radius of 20 to 40 times the pipe diameter
3	Life Expectancy	The hydrostatic design basis of HDPE pipe is based on extensive testing data evaluated & standardized by industry methods. HDPE has a projected life expectancy of 50 years transporting water at 30° C.
4	Lightweight	It is lighter than Mild steel, Stainless steel, Concrete & Cast iron. It is easier to handle & install as compared to above materials. Density = 0.95kg/cm ²
5	Pressure Ratings	Depending on size & application, HDPE pipes as available in PN-6, PN-8, PN-10, PN-12.5 & PN-16
6	Toughness	HDPE has low notch sensitivity, high tear strength & excellent scratch & abrasion resistance. Its resistance to environmental stress cracking is outstanding
7	UV Protection	Black HDPE pipe containing 2.0 to 2.5% carbon black can be safely stored outside in the sun without damage from UV exposure.
8	Welding	HDPE pipe can be joined by mechanical & butt fusion methods. In butt fusion, the strength of the joint is stronger than the pipe itself & the welding is homogenous. It can be flanged, tapped, reduced like other piping materials.
9	Coiled Pipe	HDPE pipe is available in coil form upto 100 meters in single length in sizes 20mm Ø to 90mm Ø . It leads to significant saving in installation / Jointing costs.
10	Corrosion Resistance	Corrosion resistant. Does not rust, rot, or corrode.
11	Leak Proof	Leak tight. Heat-fused joints create a homogenous, monolithic system. The fusion joint is as strong or stronger than the HDPE pipe itself.
12	Jointing	Polyethylene pipe is normally joined by heat fusion. Butt, socket, create a joint that is as strong or stronger than the pipe itself, and is virtually leak free. Similarly the Compression Fittings used for smaller dia pipes are leak proof, easy to install resulting significant cost reductions compare to other materials.

HDPE Pipes

HDPE Pipe:

HDPE Pipe is manufactured in diameters from 20mm to 63mm (in rolls of 100 Mtr), from 75mm to 90mm (in rolls of 50 Mtr) and the pipe having diameter from 110mm to 315mm is produced in straight lengths upto 12 Mtr) for pressure series PN-6, PN-8, PN-10, PN-12.5 & PN-16.

PE 100 Pipe Dimension Conforming to ISO 4427, DIN 8074 Specifications:

Outer Diameter. mm	SDR 26	SDR 21	SDR 17	SDR 13.6	SDR 11
	PN 6.3	PN 8	PN 10	PN 12.5	PN 16
	W.T.	W.T.	W.T.	W.T.	W.T.
mm	mm	mm	mm	mm	mm
20	-	-	-	-	1.9
25	-	-	-	-	2.3
32	-	-	2.0	2.4	2.9
40	-	2.0	2.4	3.0	3.7
50	2.0	2.4	3.0	3.7	4.6
63	2.5	3.0	3.8	4.7	5.8
75	2.9	3.6	4.5	5.6	6.8
90	3.5	4.3	5.4	6.7	8.2
110	4.2	5.3	6.6	8.1	10.0
125	4.8	6.0	7.4	9.2	11.4
140	5.4	6.7	8.3	10.3	12.7
160	6.2	7.7	9.5	11.8	14.6
180	6.9	8.6	10.7	13.3	16.4
200	7.7	9.6	11.9	14.7	18.2
225	8.6	10.8	13.4	16.6	20.5
250	9.6	11.9	14.8	18.4	22.7
280	10.7	13.4	16.6	20.6	25.4
315	12.1	15.0	18.7	23.2	28.6

SDR Standard Dimension Ratio | PN Nominal Pressure | W.T. Wall Thickness

Please note the pipes of bigger diameter can be supplied on special request.

HDPE Fittings

NEWTECH is Authorized Agent for Internationally well established fitting manufacturers. We import, stock & provide the fittings (Compression and Butt Fusion) to our customers as & when required by them. We are committed to facilitate our customers at every step, so we maintain the stock for complete range of fitting generally used by our customers.

Compression Fittings:

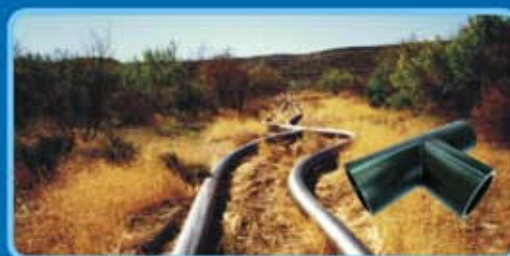
Compression fittings are available in which, pipes ends are inserted and tightened by threaded cap. These fittings provide a quick/easy leak proof assembly system for 20mm to 110mm pipe networks. In this case, except pipe cutter no other tools are required to install the fittings.

Compression fittings are specially recommended for areas without electricity where butt fusion is difficult and for temporary piping systems. It is not recommended for gas or hot water piping system.

Butt Fusion Fittings:

In this method, pipes are welded with the help of a butt fusion machine in which first pipes end are faced, heated and compressed to yield a strong joint. Butt fusion fittings are available for a wide range of angles. Fittings are available with various combinations of end preparations i.e. flanges or butt fusion.

In Butt Fusion, HDPE pipe can be heat fused together to form a joint that is as strong or stronger than the pipe itself and is leak free. This eliminates the potential leak points every 10-20 feet as found with PVC and Ductile Iron bell and spigot connections. The Life Cycle Cost of HDPE pipe differs from other pipe materials because the "allowable water leakage" is zero rather than typical leakage rates of 10 to 20% for PVC and Ductile Iron. HDPE pipe fused joints are self restraining and costly thrust restraints or thrust blocks are not required. HDPE pipe's fused joints simply do not leak, eliminating infiltration and exfiltration problems experienced with alternate pipe joints.



MDPE Pipes

MDPE Pipe for Transportation of Gas:

NEWTECH Medium Density Polyethylene (MDPE) Pipes are suitable for distribution of natural gas due to their characteristics such as strength, flexibility, inertness, light weight and ease of maintenance and installation. NEWTECH pipes are maintenance free with a design life of over 50 years under normal operating conditions.

We manufacture these pipes for GAS service as per ISO4437 standards which undergo rigorous quality checks throughout the entire production process to ensure their reliability and effectiveness for gas transportation.

Pipes are available in coils in order to reduce the number of joints to make a cost effective choice for contractors and clients. Pipes are also available in straight lengths of 6 or 12 meters. The jointing can be done by Butt Fusion jointing methods, providing a completely homogeneous leak free system.



uPVC Pipes

Unplasticized Poly Vinyl Chloride (UPVC):

uPVC's intrinsic properties make it suitable for a wide variety of applications. uPVC Pipes have excellent chemical resistance across its operating temperature range, with a broad band of operating pressures. Due to its long term strength characteristics, high stiffness and cost effectiveness, uPVC systems account for a large proportion of plastic piping installations. These are biologically and chemically resistant, making it the plastic of choice for most household sewerage pipes and other pipe applications where corrosion would limit the use of metal.

uPVC is resistant to most solutions of acids, alkalis, salts and organic compounds but it is not resistant to, aromatics and chlorinated hydrocarbons.

Characteristics of uPVC Material:

Property	Unit	Value
Density	gr/cc	1.4-1.46
Tensile Strength	MPa	45-50
Elongation	%	80-150
Compressive Strength	MPa	59
Modulus of Elasticity	MPa	3000
Specific Heat	Cal/g/°C	0.24
Thermal Conductivity	Kcal/m/h/°C	0.12
Linear Expansion	mm/m/°C	0.08
Volume Resistivity	ohm/cm	10^{15}
Flammability	Self Extinguishing	



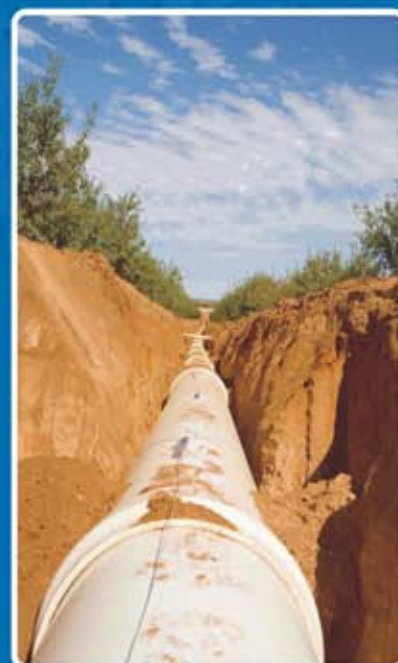
Applications:

- Water Mains & Potable Water Services
- Cold Water Plumbing Services
- Electrical Conduits
- Ducting for power and communication cables
- Drainage Installations (Domestic & Industrial)
- Effluent lines
- Chemical Plant Installations
- Brine lines- Tanning Plant, Ice Rinks
- Non-Explosive Dry Materials Handlings- Sand, Cement, Rock Salt Plastics Compounds.
- Emergency Repairs to damaged pipe lines in all materials
- Surface Water Drainage
- Tubewell Casing and strainer
- Irrigation Farm and range irrigation-system and sprinkler system.
- Horticulture and greenhouse Irrigation System
- Irrigation for golf courses and sports grounds



Benefits of uPVC Pipe:

- Low cost and long service life
- More Strength & Less weight
- Corrosion Resistance
- Shock Resistance
- Moisture Resistant
- Temperature Resistant
- Pressure Resistance
- Non-Toxic
- Non-Flammable
- Smooth Surface
- Saves Power
- Easy installation
- Insect and mouse proof
- Can be used underground & in concrete
- Require Low Maintenance



uPVC Pipes

uPVC Pipe Dimensions Conforming to BSS 3505 Specifications:

Normal Size	Wall Thickness (in mm)											
	Class B, 6.0 bar			Class C, 9.0 bar			Class D, 12.0 bar			Class E, 15.0 bar		
	Average Value	Individual Value		Average Value	Individual Value		Average Value	Individual Value		Average Value	Individual Value	
		min	max		min	max		min	max		min	max
½"	—	—	—	—	—	—	—	—	—	2.1	1.7	2.1
¾"	—	—	—	—	—	—	—	—	—	2.5	1.9	2.5
1"	—	—	—	—	—	—	—	—	—	2.7	2.2	2.7
1¼"	—	—	—	—	—	—	2.7	2.2	2.7	3.2	2.7	3.2
1½"	—	—	—	—	—	—	3.0	2.5	3.0	3.7	3.1	3.7
2"	—	—	—	3.0	2.5	3.0	3.7	3.7	3.7	4.5	3.9	4.5
63mm	—	—	—	—	—	—	—	—	—	5.5	4.7	5.5
2½"	—	—	—	3.5	3.0	3.5	4.5	3.9	4.5	5.5	4.8	5.5
3"	3.4	2.9	3.4	4.1	3.5	4.1	5.3	4.6	5.3	6.5	5.7	6.6
4"	4.4	3.4	4.0	5.2	4.5	5.2	6.8	6.0	6.9	8.3	7.3	8.4
5"	5.2	3.8	4.4	6.3	5.5	6.4	8.3	7.3	8.4	10.1	9.0	10.4
6"	6.0	4.5	5.2	7.5	6.6	7.6	9.9	8.8	10.2	12.1	10.8	12.5
7"	6.7	5.2	6.0	8.7	7.7	8.9	11.4	10.1	11.7	13.9	12.4	14.3
8"	6.1	5.3	6.1	8.8	8.7	9.0	10.6	10.3	11.9	14.1	12.6	14.5
9"	6.7	5.9	6.8	9.8	9.7	10.0	12.9	11.5	13.3	15.8	14.1	16.3
10"	7.5	6.6	7.6	10.0	11.5	11.2	14.3	12.8	14.8	17.5	15.7	18.1
12"	8.8	7.8	9.0	12.9	12.6	13.3	17.0	12.2	17.5	20.8	18.7	21.6
14"	9.7	8.5	9.8	14.1	14.5	14.5	18.6	16.7	19.2	22.8	20.5	23.6
16"	10.9	9.7	11.2	16.2	16.7	16.7	21.1	21.1	21.9	26.0	23.4	27.0
18"	12.3	11.0	12.7	18.2	18.8	18.8	23.3	23.8	24.9	—	—	—
20"	13.7	12.2	14.1	20.2	20.9	20.9	—	—	—	—	—	—



PPRC Pipes

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Polypropylene Random Copolymer (PPRC):

World Class hot & cold water supply system suitable for all sanitary & portable water applications. Our pipes & fittings are made of polypropylene random co-polymer (PPRC) and known for its strength & resistance to high temperatures, their properties are ideally suited to the requirements for any carrier of drinking water & hot water transfer. The raw materials used in the manufacturing of our pipes & fitting conform to global quality standards & display exemplary degrees of homogeneity & quality.

These outstanding quality & durable PPRC pipes & fittings are being used from piping networks in residential complexes & commercial establishments to air conditioning systems, chemical carriers, irrigation systems, piping networks in rainwater harvesting, swimming pools and so on. Our PPRC Pipes are manufactured as per the norms of DIN 8077/8078 and fittings are as per the DIN 16893.

Made of the highest quality PPRC material, which is tested under extreme conditions & conforms to global quality standards for quality, our PPRC pipes are reliable & designed to give levels of performance in the face of the harshest of elements. Conforming to world-class standards of quality, they are extremely reliable & offer convenient & reliable installation in any plumbing system. Built to perform in tough conditions, they have extremely long service life.

Applications:

- Hot / Cold and chilled water piping
- Industrial piping for aggressive fluids
- Compressed Air
- Air Conditioning / Refrigeration
- Food and Beverage Processing

Benefits of PPRC Pipe:

- A service life-time over 50 years.
- Environmentally friendly.
- Chemical stability.
- Creeping strength (Hydrostatic test),
- High temperature resistance.
- Corrosion Resistant.
- Higher flow capacities.
- Reduces energy losses
- Suitable for potable water and food processing Industries
- Low cost of transportation and handling
- Reduces jointing and labor cost
- Low cost of Fittings used
- Quick & Easy Installation
- Lesser number of fittings are used
- Easy connectivity over a complex network.
- Safe environment with recyclable ability.
- Nontoxic and Physiologically harmless material.



PPRC Pipes

Characteristics of PPRC Material:

Category		Unit	Random PP
Melt Index		g/10min	0.2
Melting Temp		°C	140
Tensile Strength	(at Yield)	Kg/cm ²	270
Elongation	(at Break)		230
Flexural Modulus		%	500
Izod Impact		Kg/cm ²	8,5
Strength	23	Kg.cm/cm	No Breaker
	0		8
	-20		3

Material : Polypropylene Random Copolymer
 Durability : 50 yrs
 Construction : Satisfactory
 Connection : Heat fusion

Recycling : Possible
 Major function : Cold and hot water supplying pipes/ Under floor heating pipes/Chemical pipes

PPRC Pipe Dimensions/Specifications:

Outer Diameter (mm)	PN-10 (for Cold Water)		PN-20 (for Hot & Cold Water)	
	Wall Thickness (mm)	Internal Dia (mm)	Wall Thickness (mm)	Internal Dia (mm)
20	1.9	16.2	3.4	13.2
25	2.3	20.4	4.2	16.6
32	3.0	26.0	5.4	21.2
40	3.7	32.6	6.7	26.6
50	4.6	40.8	8.4	33.2
63	5.8	51.4	10.5	42.0

Comparison of PPRC Pipes with Conventional Pipe Systems:

Pipe Property	G.I. Pipe	Copper Pipe	UPVC Pipe	PPRC Pipe
Service Life	5-10 Years	50 Years	25 Years	50 Years
Resistance to high Temperature	Good	Good	Bad	Good
Hygienic Property	Bad	Normal	Bad	Good
Recyclable and No Pollution	No	No	No	Yes
Pie Furring	Yes	Yes	No	No
Corrosion-Resistant	Bad	Bad	Good	Good
Installation	Hard	Hard	Easy	Easy
Price	Normal	High	Low	Normal
Reliability	Normal	Normal	Normal	Good



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An ISO 9001 Certified Manufacturer of HDPE, MDPE, uPVC & PPRC Pipes

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