شركة قطر للأنابيب والوصلات ذ.م.م.

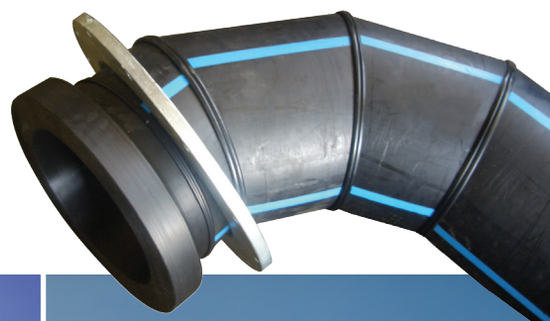
Qatar Pipeline & Fittings Co.

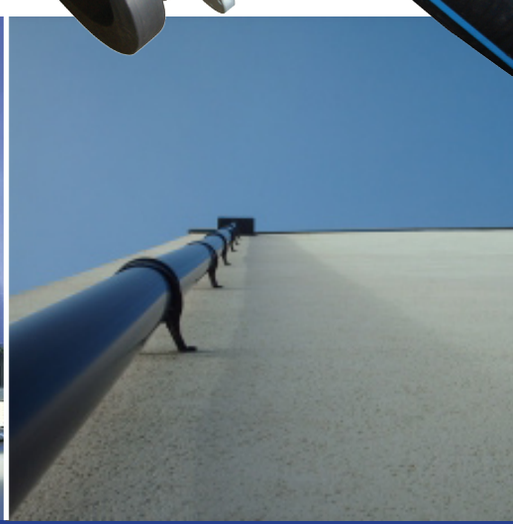
Part of Qatar Plastic Additives & Industries Group

QPF

HDPE

Products Catalogue





UNIDELTA

ISO 9001

BUREAU VERITAS Certification

www.qaddcoqatar.com

شركة قطر للأنابيب والوصلات ذ.م.م.

Qatar Pipeline & Fittings Co.

Part of Qatar Plastic Additives & Industries Group

BUREAU VERITAS
Certification

Qatar Pipeline and Fittings Company
(A Division of Qaddco Group)

Gate 72, Street 48, Industrial Area, P.O. Box 40290, Doha

STATE OF QATAR

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below

Standard

ISO 9001:2008

Scope of certification

Production, Supply and Trading of Plastic Pipes, Fittings, related accessories and Building materials

Certification cycle start date: **3 October 2012**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **2 October 2015**

Certificate No. IND 12.4422 U/Q/1 Version N, Revision date:

UKAS MANAGEMENT SYSTEMS
008

NORBERTO SALAZAR
Systems Certification Operations Manager
BUREAU VERITAS
DOHA, QATAR

Certification body address: Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom
Local office: **Bureau Veritas Certification**
Doha, State of Qatar

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: **+974 44437024**

QPF

COMPANY PROFILE

A Well-Known Company

QATAR PIPELINE & FITTINGS COMPANY has a good reputation based on many years of experience in the industry. The company came into being in 1999 as a limited liability company; we were established on the basics of being special & unique in the state of Qatar, we have since developed into a market leader in Qatar as manufacturers of PLASTIC PIPES & FITTINGS, and importers of BUILDING & CONSTRUCTION MATERIALS. Our company is a Part of QATAR PLASTIC ADDITIVES & INDUSTRIES GROUP (QADDCO).

Our Aims

To provide the best Engineered Products & Solutions to residential our customers.

On time delivery and quick reply to customers inquiries.

To offer our customers a wealth of information, technical support & customer service that meet and many times exceed customer requirements.

The Quality

If you want first class results, you need high quality, mature products. In our many years of cooperation with manufacturing & construction trades, we have had the time to collect a wide range of experiences, for these reasons, we always provide quality that you can rely on.

As well, we are ISO 9001:2008 certified company, means we are able to put our customers in a position to process the materials that we provide with no difficulties at all.

QPF have the most advanced laboratory to test the pipes & fittings according to the highest standards. QPF has been tested, supervised & certified by Marley-UK, Prandelli-Italy, Unidelta-Italy & Comer- Italy to manufacture PLASTIC PIPES with full accordance to their manufacturing standards which are originated from the relevant international standards, as all pipes will carry our commercial name. QPF also authorized, tested & certified by most of the relevant governmental authorities & the services to use our products at their projects.

International Brands

To meet the high quality standards we pledge to our customers, we require the highest quality products from our suppliers.

We are dealing with the biggest manufacturers & suppliers of PIPE's FITTINGS and BUILDING & CONSTRUCTION MATERIALS (Marley-UK, Prandelli-Italy, Comer-Italy, Unidelta-Italy, JPC- Malaysia, GBH-Malaysia, Engtex-Malaysia, RSM-Germany, Nevoga-Germany, Steico-Poland, & Gurbetciler-Turkey ...)

Employees

The experienced employees of it perform their job with care so that your business interests are achieved. QPF sales team consists of many qualified and capable sales engineers to understand technical requirements, problems faced by the site engineers and provide them solutions at site.

The team is capable to obtain additional technical support from our over-seas partners and we are confident of ourselves to extend an efficient and good quality service to our valued customers.

Delivery

Delivery is one of our strong attributes, dedicated team is able to deliver our products to your sites in a fast, prompt and professional manner. Wherever you are, whether day or night our team is ready to cover your needs.

Vision

From all the mentioned facts above, we see that we have a very promising future & prosperous outcome that lay ahead.

We believe that with best planning & implementation of proper policies that will enhance the use of all the company's resources, the company is becoming to be one of the best companies in Qatar.

We only seek to be the best & we thing that we deserve to be the best.

QATAR PIPELINE & FITTINGS COMPANY

A. Pipe Systems

1. **UPVC (Polyvinyl Chloride) Pipes & Fittings:**

- Non Pressure Pipes: are manufactured in cooperation & with license from Marley-UK, for soil & waste (above Ground), sewerage & drainage (below ground).
- High Pressure Pipes: are manufactured in cooperation with Comer-Italy, for water supply, irrigation & industrial water & gas pressure systems.

- PVC Telecom, Electrical Ducts and Conduits: are manufactured with accordance to the international standards & with accordance to KAHRAMAA & Q-TEL standards.

2. **PPRC (Polypropylene Random Co-Polymer) Pipes & Fittings:**

This type of pipes is manufactured in cooperation & with license from Prandelli-Italy for the hot and cold potable water systems also for the Gas & all types of liquids.

3. **PE (Polyethylene) Pipes: are manufactured in cooperation with Unidelta-Italy.**

- HDPE (High Density Polyethylene) Pipes.
- MDPE (Medium Density Polyethylene) Pipes.
- LDPE (Low Density Polyethylene) Pipes.

4. PVC Fabricated Fittings:

In addition to the pipes, QPF also fabricate the necessary long bends, collars & perforated pipes which are essential to the above systems.

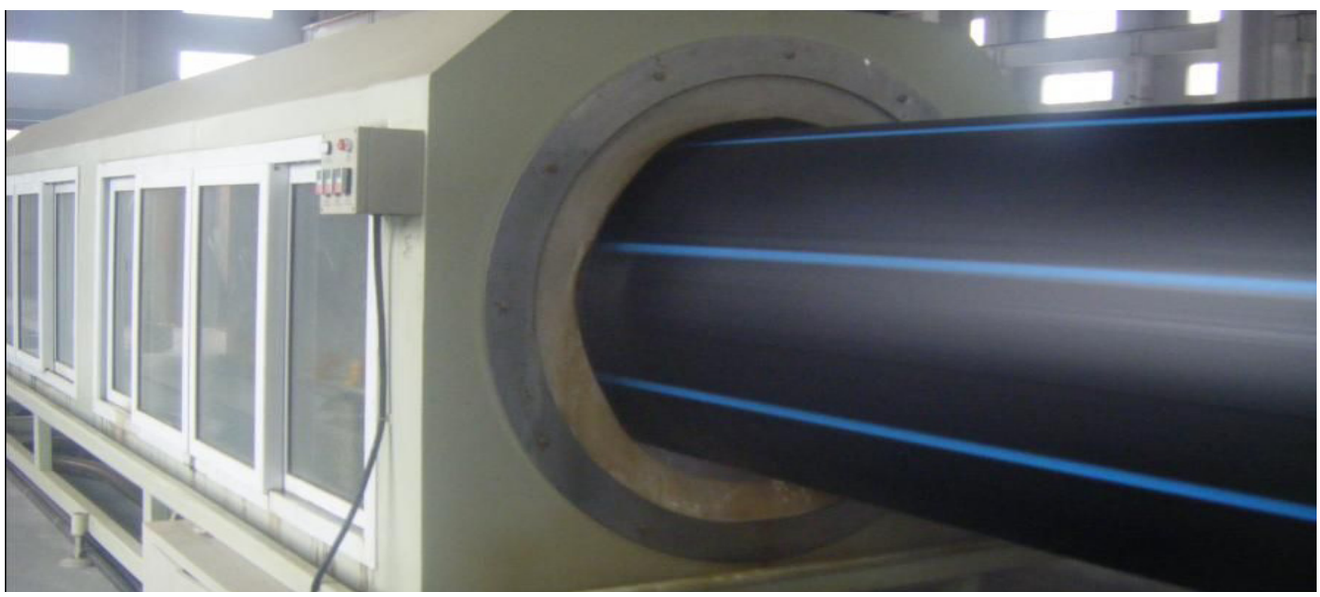
5. ESVC - Clay Pipes & Fittings: in cooperation with JPC-INTAN-Malaysia & GBH- Malaysia.

6. Ductile Iron Pipes & Fittings: in cooperation with Engtex-Malaysia.

QADDCO HDPE Pipes

Introduction

We are Qatar Pipeline and Fittings Co. (Part of Qatar Plastic Additives & Industries Group) recognized as one of the chief HDPE Pipes Manufacturers. We manufacture these HDPE Pipes using high quality raw materials. Our HDPE Pipes undergo stringent testing methods by our quality experts to ensure their quality. Due to their durability and strength, these pipes are appreciated in the domestic and international markets.



What are the advantages of HDPE Pipes & Ducts than other Conventional Pipes

There are hosts of technical & economic advantages in using HDPE pipes & Ducts as compared to other conventional pipes

- Life span more than 50 years.
- No corrosion & abrasion, no scale formation. Inert to chemicals & hence can carry acidic & alkaline fluids.
- Leak free joints, no repairs needed.
- Longer lengths, minimum joints and fittings. Sizes upto 50 mm outer dia supplied in coil length upto 1000 mtrs.
- Flexible, no additional joints needed at bends. Easy to coil & transport.
- Light weight, no heavy equipments needed for installation, easy to handle & transport.
- Food grade suitability - can be used to transport milk, edible oils etc..

- Lower Surge Pressure - As compared to other conventional pipes, the HDPE piping system components are subjected to a much lower surge pressure.
- Lowest frictional losses, lower pumping costs.
- Zero Maintenance
- Re-usable : HDPE pipes can be easily dismantled from a particular location & application & can be easily re-used at different locations

Characteristics of HDPE Pipes :-

Design Stress		PE 80 6.3 N/mm²	PE 100 8.0 N/mm²
Density	Kg/m³	945 - 960	950 - 960
Melt Index (5 kg)	g/10 min	0.4 - 0.7	0.2 - 1.4
Tensile Strength at yield	N/mm²	20	23
Elongation at break	%	>600	>600
Brittleness temperature	°C	<-70	<-70
Durometer hardness	Shore D	60 - 65	59
Charpy impact strength	kJ/m²	No Failure	No Failure

APPLICATIONS

The advantageous properties of 'QADDCO' HDPE Pipes & Ducts make them suitable for numerous applications. Some of these are:

AGRICULTURE & IRRIGATION

- Flood Irrigation (Suction & Delivery pipes in pump sets)
- Sprinkler Irrigation (Crops, Lawns, Golf course, Gardens)
- Drip irrigation (Plantations, Orchards, Nurseries)

WATER SUPPLY

- Potable water supply
- Water mains
- Distribution
- Service Pipes

SEWAGE & INDUSTRIAL EFFLUENT DISPOSAL

- Domestic Sewage System
- Sanitary System
- Petrochemical Industry
- Fertilizer Industry

DUCTING

- Air-conditioning & Refrigeration
- Extraction of Fumes
- Telecommunication, as conduits for OFC

ELECTRICAL INSTALLATIONS

- Conduits for Cables

DRAINAGE PIPES

- Surface & Rain water
- Waste Water Mains
- Sub-soil waste

The efficient use of HDPE Pipes is not limited to the above mentioned applications only. Its useful applications are diverse. For instance, when the need to carry water over a river arises, building a bridge for a surface pipeline would not be a cost effective solution. Further an underwater pipeline of other conventional materials would be susceptible to fracture on the undulating river bed and corrosion owing to salinity. HDPE pipes being flexible and chemically inert are the solution. The pipeline may be assembled, floated on the water, aligned and then sunk by merely filling it with water. That's the convenience in installation no other pipe can offer. These versatile pipes may also be used in cooking gas distribution networks, transportation of corrosive chemicals, chilled water & compressed air within a plant, transportation of products such as milk, food processing, edible oils etc.

FEATURES OF QADDCO HDPE PIPES

LONG LIFE

As against only a few years life of conventional pipes such as C.I., PVC, GI, Steel, Cement, etc,. the calculated life of HDPE pipes & ducts is 50 years at normal working temperature and pressure.

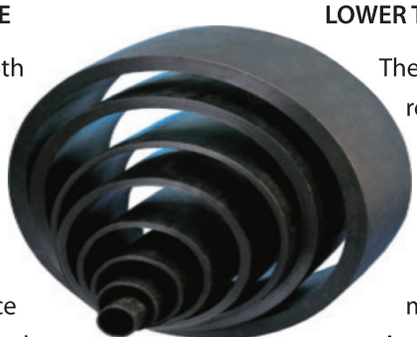
TOUGH & STRONG

The pipes bear high impact resistance and are thus strong and resilient to withstand static and dynamic loads due to internal (fluid) as well as external (soil) pressures. Rough handling, traffic loads and even freezing conditions do not cause the pipe to break or crack.

LIGHT WEIGHT

As HDPE pipes & ducts are many times lighter than conventional pipes, transportation and installation is easy and very cost effective.

SMOOTH INNER SURFACE



In addition to the smooth external surface, the pipes & ducts have an extremely smooth inner surface too, thus offering very low frictional resistance to fluid flow. Further, the non adhering characteristics of HDPE allow even solid particles to be carried along the fluids inside the pipes.

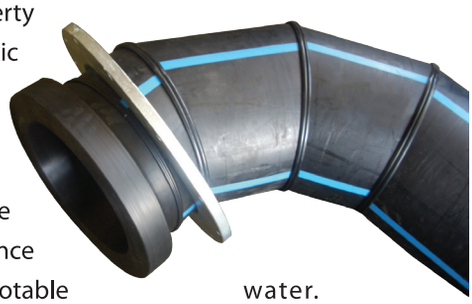
FLEXIBLE

HDPE pipes & ducts are extremely flexible and bend without cracking. This property enables long lengths of the small diameter pipe to be transported as coils thus saving on joints.

INERT TO CHEMICALS

The pipes possess excellent resistance to chemicals making them suitable for handling most of the corrosive acids and also alkalies. The pipes are completely neutral to chemicals and hence widely useful in chemical plants.

NON-HAZARDOUS



Due to its property of being non toxic and inert, HDPE is non hazardous. This enables HDPE pipes to be used for conveyance of potable water.

CORROSION RESISTANT

Resistance to electrolytic as well as galvanic corrosion make HDPE pipes & ducts best suited for underground installations.

LOWER THERMAL CONDUCTIVITY

The fluid transportation in HDPE PIPES remains at a more uniform temperature than in other types of pipes. This is due to the lower thermal conductivity of HDPE as a result of which the transfer of heat on the outer surface from the atmosphere is much slower. Further, due to the superior elongation property of HDPE PIPES., they can be used in very cold climatic conditions too, where there is any likelihood of the fluids freezing within the pipe. As the temperature goes down to subzero, the pipe simply expands to accommodate the volumetric expansion of the fluid. This excellent property is unlike in most other conventional pipes which would crack due to their rigidity.

HIGH ELECTRICAL RESISTANCE

As the dielectric strength of HDPE is very high, the pipes are extensively used as electrical conduits. No stray electrical currents can be transmitted from outside.

QADDCO POLYETHYLENE (HDPE) PIPES STANDARDS

QADDCO HDPE Pipes & Fittings comply with QCS 2007 section 8 part 3 HDPE pipes & fittings standards Which are :-

1. DIN 8074 and DIN 8075 High Density Polyethylene (HDPE) Pipes for clean water and DIN 19535 for wastewater.
2. DIN 16776-1 Plastic Moulding Materials – Polyethylene (PE) Resins (Plastic Resins), Classification and Labeling- Dec. 1984.
3. DIN 16887- Testing of Thermoplastic Pipes, Determination of the Behavior on Long term Pressure- July 1990.
4. ISO 161-1: 1996- Thermoplastics pipes for the conveyance of fluids- Nominal Outside diameters and Pressures-Part 1 Metric Series.
5. DIN 19533- Pipe Dimensions for HDPE Pipe.
6. DIN 4427:1996- Polyethylene Pipes for Water supply- Specifications.
7. ISO 11414:1996- Plastic Pipes and Fittings- Preparation for PE pipe assemblies by butt fusion.
8. ISO 3458: 1976- Assembled Joints between fittings and PE pressure pipes- Testing under pressure.
9. ASTM 2657- Thermal Butt Fusion Welding Procedures

ALSO :-

EN 12201-2:2003 Plastics Piping Systems for water supply – Polyethylene (PE)

QADDCO HDPE PRESSURE CLASS

QADDCO offers the pressure classes (PN) as indicated in below table

SDR = Standard Dimension Ratio, S=Series

C	Material	SDR17	SDR11	SDR9
		Pressure bar	Pressure bar	Pressure bar
Water	PE80	8	12.5	16
1.25	PE100	10	16	20
Gas	PE80	5	8	10
2	PE100	6	10	12.5

All pressures based on 50 year design life at 20°C Average Temperature

Table-SDR and Maximum Rated Working Pressures

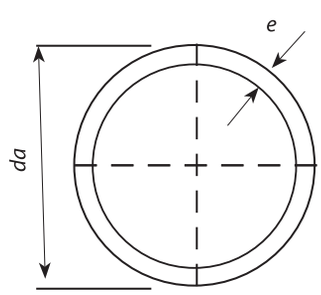
Water :-

SDR	S (Series)	Nominal Pressure for Material	
		PE 80	PE 100
17	**8**	**8**	**10**
13.6	**6.3**	**10**	**12.5**
11	**5**	**12.5**	**16**
9	**4**	**16**	**-**

Gaseous Fuel :-

SDR	S (Series)	Nominal Pressure for Material	
		PE 80	PE 100
17.6	**8.3**	**2**	**6**
11	**5**	**4**	**10**

QADDCO HDPE PIPES IDENTIFICATION PARAMETERS



SDR – Diameter - Wall Thickness Relation

(SDR - Standard Dimension Ratio)

da-–Outside diameter (mm)
e – Wall thickness

PN – Normal Pressure Rating (bar)

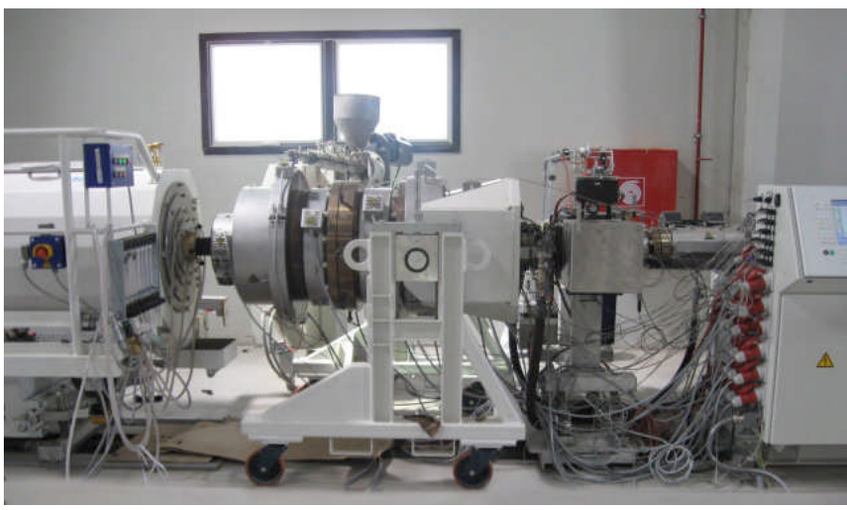
$SDR = \frac{da}{e}$ $S = Series$ $SDR = \frac{SDR-1}{e}$

QADDCO HDPE DIAMETER RANGE :-

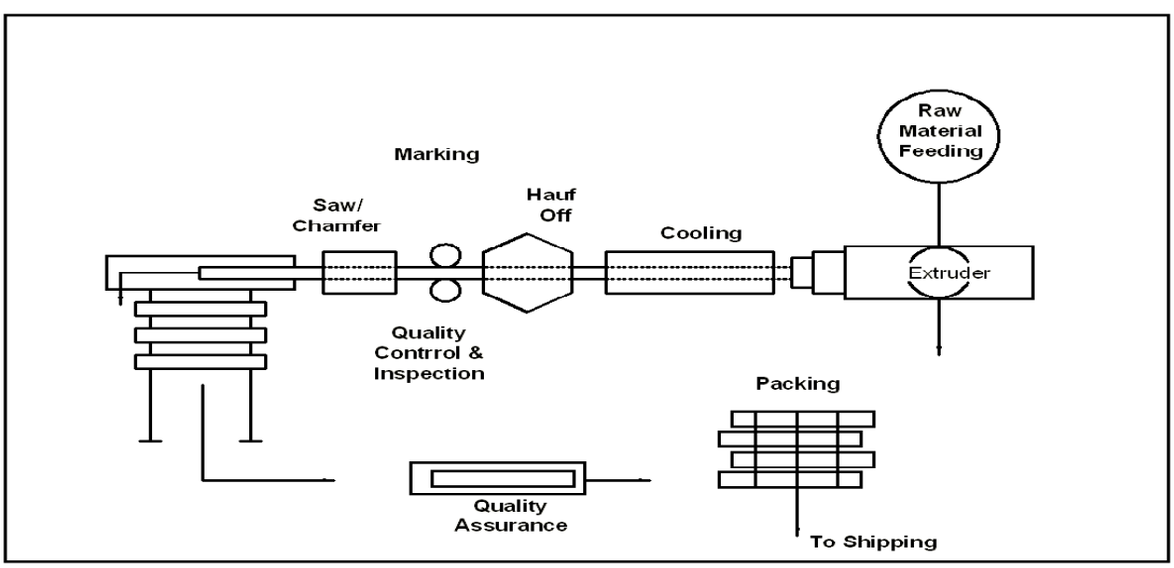
DIAMETER RANGE

QADDCO HDPE Pipes are supplied in the following Nominal Diameters* ND (mm)

Nominal Diameter ND (mm)	
20	160
25	200
32	250
40	315
50	400
63	450
75	500
90	
110	



PIPE PRODUCTION DIAGRAM :-



QADDCO HDPE PIPES FOR POTABLE WATER

HDPE PIPE DIMENSION CONFORMING TO ISO 4427, DIN 8074 & PrEN 12201 SPECIFICATIONS.

	S20		S12.5		S10		S8		S6.3		S5		S4		S3.2		S2.5		OD.
	SDR 41		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4		SDR 6		
PE80	PN 3.2		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16		PN 20		PN 25		
PE100	PN 4		PN 6.3		PN 8		PN 10		PN 12.5		PN 16		PN 20		PN 25		PN 32		
OD.	W.T.	Weight	W.T.	Weight	W.T.	Weight	W.T.	Weight	W.T.	Weight	W.T.	Weight	W.T.	Weight	W.T.	Weight	W.T.	Weight	
mm	mm	Kg/m	mm	Kg/m	Kg/m	mm	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm
20											1.9	0.113	2.3	0.13	2.8	0.156	3.4	0.182	20
25											2.3	0.173	2.8	0.19	3.5	0.242	4.2	0.281	25
32							2.0	0.197	2.4	0.234	2.9	0.275	3.6	0.32	4.4	0.390	5.4	0.458	32
40					2.0	0.25	2.4	0.29	3.0	0.36	3.7	0.434	4.5	0.52	5.5	0.606	6.7	0.708	40
50			2.0	0.32	2.4	0.37	3.0	0.45	3.7	0.55	4.6	0.672	5.6	0.79	6.9	0.946	8.3	1.09	50
63			2.5	0.48	3.0	0.58	3.8	0.72	4.7	0.87	5.8	1.06	7.1	1.27	8.6	1.48	10.5	1.74	63
75			2.9	0.69	3.6	0.82	4.5	1.01	5.6	1.24	6.8	1.48	8.4	1.78	10.3	2.10	12.5	2.46	75
90			3.5	0.97	4.3	1.18	5.4	1.47	6.7	1.78	8.2	2.14	10.1	2.56	12.3	3.02	15.0	3.54	90
110			4.2	1.44	5.3	1.78	6.6	2.18	8.1	2.63	10.0	3.17	12.3	3.81	15.1	4.52	18.3	5.28	110
125	3.1	1.23	4.8	1.85	6.0	2.27	7.4	2.77	9.2	3.39	11.4	4.12	14.0	4.92	17.1	5.82	20.8	6.80	125
140	3.5	1.55	5.4	2.33	6.7	2.84	8.3	3.48	10.3	4.25	12.7	5.13	15.7	6.17	19.2	7.30	23.3	8.54	140
160	4.0	2.00	6.2	3.05	7.7	3.74	9.5	4.55	11.8	5.54	14.6	6.72	17.9	8.02	21.9	9.51	26.6	11.13	160
180	4.4	2.49	6.9	3.81	8.6	4.69	10.7	5.75	13.3	7.03	16.4	8.50	20.1	10.55	24.6	12.03	29.9	14.07	180
200	4.9	3.05	7.7	4.72	9.6	5.81	11.9	7.10	14.7	8.59	18.2	10.50	22.4	12.55	27.4	14.89	33.2	17.38	200
225	5.5	3.87	8.6	5.92	10.8	7.34	13.4	8.99	16.6	10.96	20.5	13.30	25.2	15.89	30.8	18.80	37.4	22.00	225
250	6.2	4.85	9.6	7.34	11.9	8.99	14.8	11.02	18.4	13.50	22.7	16.40	27.9	19.53	34.2	23.21	41.6	27.14	250
280	6.9	6.00	10.7	9.16	13.4	11.35	16.6	13.86	20.6	16.90	25.4	20.50	31.3	24.55	38.3	29.10	46.5	34.05	280
315	7.7	7.54	12.1	11.67	15.0	14.26	18.7	17.54	23.2	21.43	28.6	25.88	35.2	31.06	43.1	36.85			315
355	8.7	9.60	13.6	14.92	16.9	18.11	21.1	22.33	26.1	27.16	32.2	32.83	39.7	39.44	48.5	46.71			355
400	9.8	12.16	15.3	18.70	19.1	23.09	23.7	28.23	29.4	34.45	36.3	41.69	44.7	50.04					400
450	11.0	15.33	17.2	23.64	21.5	29.19	26.7	35.76	33.1	43.68	40.9	52.80	50.3	62.7					450
500	12.3	19.09	19.1	29.16	23.9	36.07	29.7	44.18	36.8	53.84	45.4	65.13							500
*560	13.7	23.78	21.4	36.55	26.7	45.08	32.2	55.34	41.2	67.55	50.8	81.80							560
*630	15.4	30.07	24.1	46.31	30.0	56.95	37.4	70.09	46.3	87.7	57.2	103.4							630
*710	17.4	38.28	27.2	58.87	33.9	72.5													710
*800	19.6	48.54	30.6	74.56	38.1	91.9													800
*900	22.0	61.23	34.4	94.68															900
*1000	24.5	75.80	38.2	116.4															1000
*1200	29.4	109.12	45.9	167.6															1200

QADDCO HDPE PIPES FOR GASEOUS FUELS:-

Generally the gas industry uses PE 80 materials for low pressure gas distribution

For higher pressure, PE 100 with higher strength are used up to 4 bar because of their superior flexibility and ease of jointing and installation.

QADDCO HDPE Pipe PE 100 is produced according to ISO 4437 (Medium-Gaseous fuels)

Pipe Diameter	Wall Thickness	
	SDR 17.6 (S-8.3)	SDR 11 (S-5)
	Nominal Pressure	
	PN 6 (Bar)	PN 10 (Bar)
20	-	-
25	-	2.30
32	2.00	3.00
40	2.30	3.70
50	3.00	4.60
63	3.60	5.80
75	4.30	6.80
90	5.20	8.20
110	6.30	10.00
160	9.10	14.60
200	11.90	18.20
250	14.80	22.70
315	18.70	28.60
400	23.70	36.40
450	26.70	40.90
500	29.70	45.50

POLYETHYLENE PIPES FOR SERVICE CONNECTIONS (MDPE)

PE 80 PIPE DIMENSION CONFORMING TO ISO 4427/DIN8074
DESIGN STRESS = 6.3 MPa

O.D.	SDR 21		SDR 13.6		SDR 11		SDR 9	
	PN 6.3		PN 10		PN 12.5		PN 16	
	W.T.	Weight	W.T.	Weight	W.T.	Weight	W.T.	Weight
mm	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m
16							1.8	0.085
20							2.3	0.134
25					2.3	0.172	2.8	0.201
32					3.0	0.273	3.6	0.328
40					3.7	0.432	4.5	0.511
50					4.6	0.669	5.6	0.791
63			4.7	0.9	5.8	1.05	7.1	1.27
75			5.6	1.2	6.8	1.48	8.4	1.77
90	4.3	1.2	6.7	1.8	8.2	2.13	10.1	2.55
110	5.3	1.8	8.1	2.6	10.0	3.15	12.3	3.80

QADDCO MDPE Pipes are produced with multi-layers (black inside and blue outside) as per KAHRAMA specifications

QADDCO HDPE BENDS AND COLD BENDING

The bending of PE80 and PE100 is permissible and the properties of fusion jointed systems enable changes of direction without recourse to the provision of special bends. However, pipes should not normally be COLD bent to a radius less than 25 times the outside diameter of the pipe at 20°C (Ref. Table). In special circumstance and in the smaller service diameters this requirement may be relaxed to 15 x OD for SDR 11 pipe, provided no joints or tappings occur on the bend and care is taken not to kink the pipe.

At 0°C pipes should not normally be cold bent to radii less than 50 x the outside diameter of the pipe (Ref. Table).

A full range of moulded or mitered elbows are available. In addition preformed pipe bends and configurations are available upon request.

Nominal Diameter	Minimum Cold Bending Radii in Meters	
	at 20°C	at 0°C
20	0.5	1.0
25	0.625	1.25
32	0.8	1.6
50	1.25	2.5
63	1.58	3.15
90	2.25	4.5
250	6.25	12.5
315	7.88	15.75

EFFECT ON TEMPERATURE VARIATION

Expansion and Contraction

The coefficient of linear expansion for PE pipe is between 0.16mm – 0.20mm per degree Celsius.

Length in meters	Temperature variation in °C					
	5	10	15	20	30	40
1	0.8	1.6	2.4	3.2	4.8	6.4
2	1.6	3.2	4.8	6.4	9.6	12.8
4	3.2	6.4	9.6	12.8	19.2	25.6
6	4.8	9.6	14.4	19.2	28.8	38.4
8	6.4	12.8	19.2	25.6	38.4	51.2
10	8	16	24	32	48	64
12	9.6	19.2	28.8	38.4	57.6	76.8
20	16	32	48	64	96	128
50	40	80	120	160	240	320
100	80	160	240	320	480	640

Due allowance must be made for movement created by temperature variation when designing pipe systems. The position of rigid fixings or anchor points must be carefully considered, particularly in above ground installation. By utilizing the inherent flexibility of the pipe and by judicious sitting of supports, anchors, etc., expansion and contraction can be conveniently accommodated at changes in direction. For further details contact QADDCO Technical Department.

Table gives expansion/contraction in mm for a range of temperature variations and pipe lengths. The effect of expansion/contraction requires particular attention if the pipe system includes one or more push fit, non end load bearing joint. In these circumstance pipes installed at relatively high ambient temperatures may contract to such an extent when operating at service temperatures that movement in the joint may result in leakage.

Movement caused by thermal variation in the pipe systems jointed by one of the fusion welding techniques (full end load bearing joints) will generate tensile of compression stresses within the pipe material. In buried pipelines which have been allowed to stabilize to trench bottom ambient temperatures the elastic properties of the material will normally adequately accommodate these forces which are rarely of sufficient magnitude to adversely affect the performance of the system. A more critical consequence of this movement could be its effect at pipe supports, or branch connections to plant/equipment and other pipelines. Such points should be analyzed for shear and bending stresses.

HDPE FITTINGS

QADDCO supplies selection of pipe fittings for every piping system and project. Our HDPE pressurized pipe can be used in a variety of applications and can come in all sizes, dimensions and pressure ratings. Depending on the application involved we have different kinds of pressure pipe that are custom designed to meet every application requirement. To support our pipe, we carry a large stock HDPE pipe fittings to meet every possible fitting problem.

Moulded & Fabricated butt fusion& Electro fusion fittings

Compression fittings

JOINTING OF HDPE PIPES

Very simple jointing techniques are offered for both Permanent & Detachable joints.

PERMANENT JOINTS

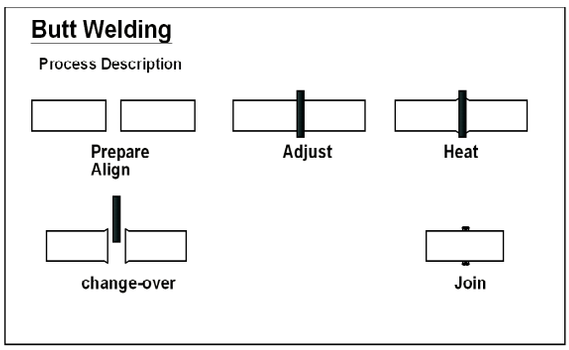
These are achieved by :-

Butt fusion welding

Butt welding employing fusion. Clean, leak- proof and permanent joints can be made by following the steps below:

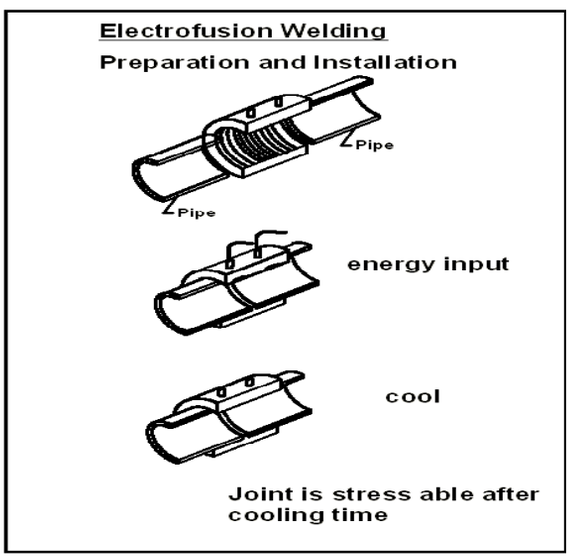
- Cleanly cut the pipes as required
- Remove fibrous material and chamfer inner edges using a rough file.
- Bring the cut surfaces together and check alignment
- Heat welding mirror to 210 degree C, bring the cut surfaces to be joined into contact with mirror. The material will melt.

- Allow weld rims to form
- Remove the mirror, bring the heated pipe ends together under a slight pressure and permit them to fuse together.



Electro fusion welding

Using electro fusion special machine and electro fusion fittings



DETACHABLE JOINTS

FLANGED JOINTS

- Slip the flanges over the edges of the pipes to be joined.
- Weld the collar (pipe end) to the pipes.
- Bring the flange faces together and tighten with nuts and bolts.

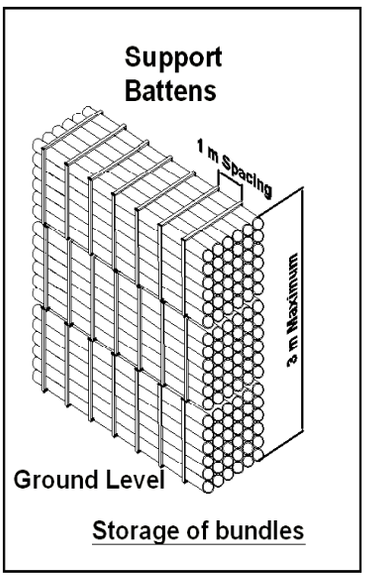
QUICK RELEASE COUPLERS

- These are ideal for projects which involve frequent dismantling and shifting, e.g. in Agriculture, where large areas are to be irrigated economically by using smaller pipe lengths. The couplers are duly butt welded and are readily available.

HANDLING, STORAGE AND TRANSPORTATION HANDLING

High Density Polyethylene Pipe being tough resilient material, light weight and easy to handle. However, because it is softer than metals it is more prone damage by abrasion and by objects with a cutting edge. HDPE pipe contains pigment to provide excellent protection against degradation due to UV radiation. If due to unsatisfactory storage or Handling, a pipe is damaged or 'kinked', the damaged portion should be cut out completely. The material is not affected low temperature as much as are some other plastics material and there is no need for more cautions handling during cold

weather QADDCO supplies the pipes in standard lengths for easy handing. We also supply bigger length however, the care should be taken by the customer while handling.



Storage of bundles

CHEMICAL RESISTANCE TABLE

Chemical & Formula	Concentration	PE
Acetic acid, Aqueous	25%	60
CH_3COOH	40%	-
	60%	23
	85%	23
Ammonium Sulfate (Alum) $AlNH_4(SO_4)_2.12H_2O$	Sat›d	60
Amonium Hydroxide	10%	60
NH_4OH	30%	R to 60
Ammonium Nitrate NH_4NO_3	Sat›d	60
Ammonium Phosphate (Monobasic) $NH_4H_2PO_4$	All	60
Ammonium Sulfate $(NH_4)_2SO_4$	Sat›d	60
Borax $Na_3B_4O_7O10H_2O$	Sat›d	60
Calcium Carbonate $CaCO_3$	Sat›d	60
Calcium Chloride	5%	-
$CaCl_2$	Sat›d	60
Calcium Hypochlorite	30%	60
$Ca(OCl)_2$	Sat›d	-
Copper Sulfate $CuSO_4$ o$5H_2O$	Sat›d	60
Chlorine Gas (Moisture Content)	0-20 ppm	C to 23
	20 - 50	C to 23
	50+ ppm	C to 23
Chlorine	Liquid	N
Chlorinated Water	10 ppm	60
Chlorinated Water	Sat›d	C to 49
Detergents	-	R to 60
Ferrous Sulfate $FeSO_4$	-	60
Hydrochloric Acid HCl	1%	-
	10%	60
	20%	-
	30%	60
	Conc.	-
Hypochlorous Acid	10%	60
HOCl	70%	-
Nitric Acid HNO_3	5%	-
	10%	23
	20%	-
	30%	23
	35%	-
	40%	23
	50%	C to 23
	70%	C to 23
	100%	N

Chemical & Formula	Concentration	PE
Lubricating Oil	-	23
Phosphoric Acid H_3PO_4	10%	60
	50%	60
	85%	23
	98%	-
Potassium Permanganate $KmnO_4$	10%	60
	25%	60
Soap	-	R to 60
Sodium Bicarbonate $NaHCO_3$	-	60
Sodium Carbonate Na_2CO_3	-	60
Sodium Chloride NaCl	-	60
Sodium HypoChlorite NaOClO $5H_2O$	-	60
Sulfur S	-	60
Sulfuric Acid H_2SO_4	30%	60
	50%	49
	60%	49
	70%	R to 49
	80%	R to 49
	90%	49
	93%	C to 23
	94% - 98%	C to 23
	100%	C to 23
Urea	-	60
Urine	-	60
Water, Acid Mild H_20	-	60
Water, Deionized H_20	-	60
Water, Distilled H_20	-	60
Water, Potable H_20	-	60
Water, Salt H_20	-	60
Water, Sea H_20	-	60
Water, Soft H_20	-	60
Zinc Sulfate	-	60
Nitric Acid HNO_3	5%	-
	10%	23
	20%	-
	30%	23
	35%	-
	40%	23
	50%	C to 23
	70%	C to 23
	100%	N

RESISTANCE CODES

Code	Meaning	Typical Results
60	Plastic type is generally resistant to temperature (ºC) indicated by code.	Swelling < 3% or weight loss < 0.5% and elongation at break not significantly changed.
R to 23	Plastic type is generally resistant to temperature (ºC) indicated by code and may have limited resistance at higher temperatures.	Swelling < 3% or weight loss < 0.5% and elongation at break not significantly have limited resistance at higher temperatures. changed.
C to 23	Plastic type is generally resistant to temperature (ºC) indicated by code and may be suitable for some conditions	Swelling 3-8% or weight loss < 0.5-5% and / or elongation at break decreased by suitable for some conditions. < 50%.
N	Plastic type is not resistant.	Swelling < 8% or weight loss < 5% and / or elongation at break decreased by > 50%.
--	Data not available	

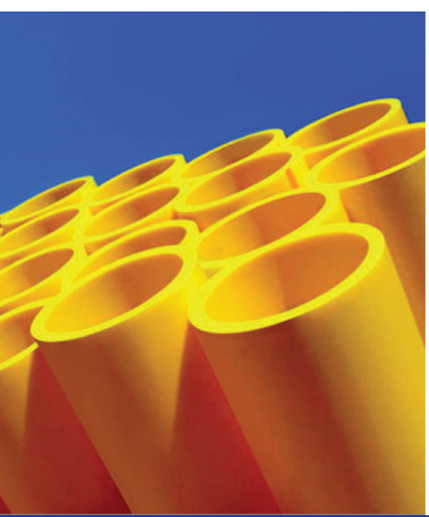
- Chemicals that to do not normally affect the properties of an unstressed thermoplastic may cause completely different behavior (such as stress cracking) when under thermal or mechanical stress (such as constant internal pressure or frequent thermal or mechanical stress cycles).
- Unstressed immersion test chemical resistance information is applicable only when the thermo-plastic pipe will not be subject to mechanical or thermal stress that is constant or cycles frequently.
- When the pipe will be subject to a continuous applied mechanical or thermal stress or to combinations of chemicals, testing that duplicates the expected field conditions as closely as possible should be performed on representative samples of the pipe product to properly evaluate plastic pipe for use in this application.

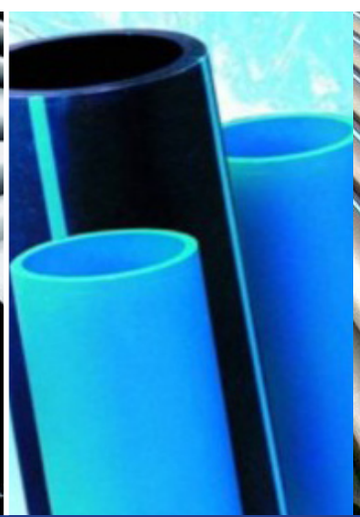
شركة قطر للأنابيب والوصلات ذ.م.م.

Qatar Pipeline & Fittings Co.

Part of Qatar Plastic Additives & Industries Group

QPF



Qatar Pipeline & Fittings Co.

Tel.: +974 - 4460 3773/3883 Fax: +974 - 4460 3993

P.O. Box: 40290 Doha - Qatar eMail: qaddcont@qatar.net.qa, salesdept@qaddcoqatar.com

ISO 9001 BUREAU VERITAS Certification

www.qaddcoqatar.com