

AN ISO 9001 : 2008 COMPANY



A PROMISE FOR STRONG



IS:4984-95



CM/L-7600054412

Reliable Irrigation is a well known manufacturer in the industrial, municipal, agricultural / irrigation, domestic pipe markets. Engineered for gravity flow systems and also pumping mains a wide range of HDPE Pipe are available to meet specific requirements of customers.

MATERIAL CLASSIFICATION

Proper raw materials with specified grades (PE63, PE80 & PE100) are selected for production and these polyethylene's are polymerized in controlled environment thus producing PE pipes of high quality products, superiority on nature. Polyethylene (PE100) pipes can carry potable water, waste water, slurries, chemicals, hazardous wastes and compressed gases. In fact, PE100 is strong, extremely tough and very durable when compared to it preceding material like PE 80 grade and PE63 grade. PE100 pipe has superior qualities in terms of mechanical and all also other properties when compared to PE80, PE63. The Polyethylene material used for the manufacture of pipeline systems are classified and dimensioned by long term performance under hydrostatic pressure in accordance with IS 4984. The design basis used in IS4984 for Pressure rating (PN rating) of PE pipes in order to determine the minimum wall thickness for each diameter and PN rating provides for the steady and continuous application of the maximum allowable working pressure over an arbitrary period of 50 years. The selection of the long term hydrostatic design stress value (HDS) is dependent on the specific grade of PE and the pipe material service temperature.

CHARACTERISTICS AND PROPERTIES OF HDPE PIPES

STRENGTH

The inherent flexibility of the HDPE Pipe provides this product with its inherent minimum pipes stiffness of 320 kPa or 210kPa. The smooth inner wall provides longitudinal stiffness which enables alignment and grade to be maintained in the trench during installation.

UV RESISTANCE

HDPE Pipe contains a minimum of 2% carbon black additive to protect the product from ultraviolet light. This gives HDPE Pipe maximum weather resistance in applications where continuous exposure to the elements is expected.

CHEMICAL RESISTANCE

HDPE has the highest level of chemical resistance of all traditional sewer products. HDPE Pipe brings the gravity flow sewer market the same exceptional performance remaining tough and resistant under conditions that could seriously damage pipe made of other conventional materials.

RECOMMENDED PH RANGE

HDPE material provides excellent resistance to both acidic and alkaline environments with strong acids through all bases, ranging PH1.25 to 14.

ABRASION RESISTANCE

Tests indicate that HDPE Pipe is highly resistant to abrasion, giving it a significant advantage over other pipe materials in both acidic and abrasive environment. Piping made from polyethylene is a cost effective solution for a broad range of piping problems in municipal, industrial, marine, mining, landfill, duct and agricultural applications. It has been tested and proven effective for above ground, surface, buried, slip lined, floating and sub-surface marine applications.

DUCTILITY AND TOUGHNESS

Polyethylene pipe and fittings are inherently tough, resilient and resistant to damage caused by external loads, vibrations and from pressure surges such as water hammer. Even in cold weather polyethylene pipe is tolerant to handling and bending.

ADVANTAGES BY USING HDPE PIPE

The design and construction of HDPE product offer a distinct weight advantage over conventional pipe. They provide ease of handling, positioning, installing and connecting those conventional pipes cannot match. HDPE pipe affords these important benefits to the user:

1. SAVING ON INSTALLATION

Due to its light weight, less manpower and lighter machinery is needed to transport, handle and connect HDPE pipe compared to most of the other pipes. That's real savings and real value added by using HDPE Pipe.

2. FASTER INSTALLATION

The Continuous coils up to 1000 meters can be achieved for the pipes with diameters from minimal to 110 mm dia pipes. For more than 110 diameter pipe standard length up to 12 meter is produced and these 12 meter standard lengths are easily handled and installed using minimal equipment.

3. IMPACT TOUGHNESS

PE pipe is highly resistant to the rigors of installation handling in tough environment prevailing at the site location. HDPE pipe can be installed with confidence in the hottest of summer or the coldest of winter conditions.

4. SAFER HANDLING

At less than 10% the weight per meter of concrete pipe, HDPE pipe gives the handler and installer a big safety advantage. For example a 2.4 m length of 900 mm diameter concrete pipe weighs more than 2,400 kg, while an equal length of 500 mm diameter HDPE pipe weighs less than 100 kg.

Dimensions of HDPE Pipes as per IS : 4984



All Dimensions in Millimeters for use in Water Supply

PE-63

Outside DIA	Tolerance on Outside DIA	PN - 2.5		PN - 4		PN - 6		PN - 8		PN - 10		PN - 12.5		PN - 16	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
32	+0.3	-	-	-	-	2.3	2.8	3.0	3.5	3.6	4.3	4.4	5.2	5.4	6.2
40	+0.4	-	-	2.0	2.4	2.9	3.4	3.7	4.3	4.5	5.2	5.5	6.3	6.7	7.6
50	+0.5	-	-	2.4	2.9	3.6	4.2	4.6	5.3	5.6	6.4	6.8	7.7	8.4	9.5
63	+0.6	2.0	2.4	3.0	3.5	4.5	5.2	5.8	6.6	7.1	8.1	8.6	9.7	10.5	11.8
75	+0.7	2.3	2.8	3.6	4.3	5.3	6.1	6.9	7.8	8.4	9.5	10.2	11.5	12.5	14.0
90	+0.8	2.8	3.3	4.4	5.1	6.4	7.3	8.2	9.3	10.1	11.4	12.2	13.7	15.0	16.7
110	+1.03	3.4	4.0	5.0	6.0	7.8	8.8	10.0	11.2	12.4	13.8	14.9	16.6	18.4	20.5

PE-80

Outside DIA	Tolerance on Outside DIA	PN - 2.5		PN - 4		PN - 6		PN - 8		PN - 10		PN - 12.5		PN - 16	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
32	+0.3	-	-	-	-	-	-	2.4	2.9	3.0	3.5	3.6	4.2	4.5	5.2
40	+0.4	-	-	-	-	2.3	2.8	3.0	3.5	3.7	4.3	4.5	5.2	5.6	6.4
50	+0.5	-	-	2.3	2.8	2.9	3.4	3.8	4.4	4.6	5.3	5.6	6.4	6.9	7.8
63	+0.6	-	-	2.5	3.0	3.6	4.2	4.7	5.4	5.8	6.6	7.0	7.9	8.7	9.8
75	+0.7	-	-	2.9	3.4	4.3	5.0	5.6	6.4	6.9	7.8	8.4	9.5	10.4	11.7
90	+0.8	2.3	2.8	3.5	4.1	5.1	5.9	6.7	7.6	8.2	9.3	10.0	11.2	12.5	14.0
110	+1.03	2.7	3.2	4.3	5.0	6.3	7.2	8.2	9.3	10.0	11.2	12.3	13.8	15.2	17.0

PE-100

Outside DIA	Tolerance on Outside DIA	PN - 6		PN - 8		PN - 10		PN - 12.5		PN - 16	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
32	+0.3	-	-	-	-	2.4	2.9	2.9	3.4	3.7	4.3
40	+0.4	-	-	2.4	2.9	3.0	3.5	3.7	4.3	4.6	5.3
50	+0.5	2.3	2.8	3.0	3.5	3.7	4.3	4.6	5.3	5.7	6.5
63	+0.6	2.9	3.4	3.8	4.4	4.7	5.4	5.7	6.5	7.1	8.1
75	+0.7	3.5	4.1	4.5	5.2	5.6	6.4	6.8	7.7	8.5	9.6
90	+0.9	4.1	4.8	5.4	6.2	6.7	7.6	8.2	9.3	10.2	11.5
110	+1.0	5.0	5.7	6.6	7.5	8.1	9.2	10.0	11.2	12.4	13.9



TM



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RELIABLE IRRIGATION

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