



# Abrah Dashte Markazi

High performance PE Pipe for Water



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Ghodratollah Daryae

Approvals /standards

	Dimensions, general quality requirements and tests	Standards and guidelines also applicable
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**PIPE**

PE 80 / PE 100 pressure pipes	DIN 8074/8075	ISIRI 14427
PE 80/PE 100 waste-water pressure pipes	DIN 8074/8075	DIN EN 13244 , ISIRI 14427
PE 80/PE 100 drinking water pipes	DIN 8074/8075	DIN EN 12201 , ISIRI 14427

Marking	Product will be marked on one side with characters at least 5mm high in a contrasting color
Identification marking	<p>The following identification and traceability marks will be printed once every meter;</p> <ul style="list-style-type: none"> <li>• Manufacturers identification: Abrah Dashte markazi</li> <li>• Standard number: DIN 8074 (see note 1)</li> <li>• Material designation: PE100 or PE80</li> <li>• SDR</li> <li>• Outside diameter: 250mm (example)</li> <li>• Manufacturing Code (contains Date) (see note 2)</li> </ul> <p>Note 1: The use of this mark is Abrah Dashte Markazi's claim that the product has been manufactured in accordance with DIN 8074</p> <p>Note 2: The shift code denotes the extruder, shift week and year of manufacture plus the plant identification code. Each item being allocated a maximum of 2 digits. Where the codes numerical value is less than 10 a 0 is inserted. Or a simple date code may be used DD/MM/YY</p>

Description	HDPE pipe Base on (DIN 8074 - DIN 8075) (63-250mm)
SDR	All manufactured products will be in SDR Series base on DIN 8074-8075
Color	Black
Specification	DIN 8074:1999 Polyethylene (PE) - Pipes PE 80, PE 100 – Dimensions DIN 8075:1999 Polyethylene (PE) - Pipes PE 80, PE 100 – General Quality Requirements, Testing
Weights	All weights (Equivalent pipe) are published in Abrah Dashte Markazi Product Guide.
Dimensions	All dimensions are in accordance with DIN 8074.
Lengths	Pipes ≤ 125 mm diameter will be supplied in lengths of 6 or 12m or coil lengths of 50m, 75m, 100, 150m , 200m Pipes ≥ 125mm diameter will be supplied in standard lengths of 6m, 12m (Other lengths maybe produced at customer's request).

The following materials will be used in accordance  
With the manufacturer's technical specification:  
PE80 and PE100 Pressure pipe materials

## Material

PE	Polyethylene
PE RC	Polyethylene, resistant to crack

Material Specification	Standards/guidelines	PE 80	PE 100 RC	PE 100 RC Black
Density, g/cm <sup>3</sup>	ISO 1183	0.945	0.948	0.949
Yield stress, MPa	DIN EN ISO 527		23	25
Elongation at yield, %	DIN EN ISO 527		10	
Elongation at break, %	DIN EN ISO 527		>1000	600
Tensile modulus of elasticity, MPa	DIN EN ISO 527		850	1100
Impact strength, kJ/m <sup>2</sup>	DIN EN ISO 179	22	25	16
Notched impact strength, kJ/m <sup>2</sup>	DIN EN ISO 179	no break	no break	no break
Ball indentation hardness, MPa	DIN EN ISO 2039-1	40	40	40
Shore hardness, D	ISO 868		62	60
Thermal conductivity, W/m · K	DIN 52612	0.38	0.38	0.38
Surface resistance, Ohm	DIN IEC 167	1 · 10		
Combustibility	DIN 4102	B2	B2	B2
Physiological acceptability	as per BfR	yes	yes	yes
Chemical resistance	according to DIN 8075 Supplement	fulfilled	fulfilled	fulfilled
Temperature range, °C		- 40 to + 80	- 40 to + 80	- 40 to + 80
MRS, MPa	ISO/TR 9082	8	10	10
OIT, min	EN 728	30	30	30
S4 Test (RCP) , bar	ISO DIS 13477		> 20	>10
Resistance to Slow Crack Growth , h	ISO 13479		>1000	>1000



## About Us

Abrah Dashte Markazi is an exclusive producer of Polyethylene pipes in the Middle East, we are producer solid-wall HDPE PIPE with a Premier Quality.

Abrah Dashte Markazi Company for plastic pipes was formed in 2011 with the aim of developing a professional HDPE Pipes industry. Since its foundation, Abrah Dashte Markazi has a steady growth with high quality standards to fulfill the requirements of its customers specially for HDPE Pipes.

Abrah Dashte Markazi pipes are produced according to DIN, ISO, ASTM, BSI, ISIRI (Iranian standard) demand. There is also the facility of manufacturing products with special specifications according to customer requirements.

Abrah Dashte Markazi HDPE Pipes are well accepted and widely used in domestic water system, warming, cooling, and all types of industrial process pipe works, water distribution and water treatment as well as irrigation systems.

Abrah Dashte Markazi Company using new technology to produce the best performance HDPE PIPES, HDPE PIPES for the toughest applications and offers.

Abrah Dashte Markazi Company to provide global quality standards provides such benefits to their clients who enjoy the distinctive quality and cost-optimized.

Our goal is to offer all customers the best quality and this is one of the pillars of development of Abrah Dashte Markazi Company.

Abrah Dashte Markazi Company in 2011 in Iran Arak Khair Abad Industrial Park established and started its manufacturing activities.

Applications for PE pipe include pressure and non-pressure pipelines for drinking water, irrigation, wastewater, electrical, industrial, mining and telecommunications industries.

## Customer rights

Our Company by placing all of its ability to provide service and quality products to fulfill the basic rights of customer picks step in the way of development of the company and the development of the industry.

Abrah Dashte Markazi Company is proud to promote health and quality of life and can be instrumental in optimizing the quality of life for people.

**Using engineered production methods**

In recent years Abrah Dashte Markazi company has gained remarkable achievements by using its experienced employees in product hdpe pipes that have engineered step by step process in each field of production to deliver high performance pipes for toughest applications

**Customers feedback as a part of the production and Development Process**

As part of process of development Abrah Dashte Markazi always has been open to the customer's Feedback for rapidly moving forward in increasing quality of products and satisfaction of it's own customer

**Using Advanced machinery and material**

Abrah Dashte Markazi Company using new technology of production lines and best material in the row from inside Middle east and iran and Basell ,Solvay to produce the best performance HDPE PIPES

**The holder of the national standard**

Abrah Dashte Markazi Has this honor and merit to be holder of national standard and always will be an effort to preserve this trust

**member of Iranian Association of Polyethylene Pipe & Fittings Producers**

Abrah Dashte Markazi has this proud and deserve to join Iranian Association of Polyethylene Pipe & Fittings Producers always will be an effort to preserve this trust

**PE80 and PE100 materials use**

Abrah Dashte Markazi company using a wide range of PE80 and PE100 material performance and application for the customer according to the offers on demand

**Quality Management**

Abrah Dashte Markazi's Quality management is certified in accordance Din EN ISO 9001- 2008



**Treacebaility Code**

All the HDPE PIPES has been manufacterd in Abrah Dashte Markazi Company have Treacebaility Code For Assurance of material used , data of producation and specification of MFR , Site , application , manufacturer of raw material

## Applications

High Density Polyethylene (HDPE) Solid Wall Pipe has been used in Potable Water applications since the 60's, HDPE pipes have provided decades of exceptional performance in the US, Canada and Europe in potable and other applications due to its durability and resistance to earthquakes, tsunami, hurricane, corrosion, fatigue, zero leakage and lowest life cycle cost and has been gaining approval and growth in municipalities ever since. HDPE Pipe is approved in ASTM D3035 (All pipes produced under this specification may be used for the transport of water, industrial process liquids, effluents, slurries, municipal sewage) , AWWA C901 and C906 (This standard describes minimum requirements for PE pressure pipe and tubing made from material having standard PE code designations PE 2606, PE 2706, PE 2708, PE 3608, PE 3708, PE 3710, PE 4608, PE 4708, and PE 4710 and intended for use in potable water, reclaimed water, and wastewater service.), NSF 14 and 61 (NSF International is an independent global organization that writes public health standards and protocols, and tests and certifies products for the water, food and consumer goods industries)

## Features and benefits of HDPE PIPE

- HDPE pressure pipe can accept repetitive pressure surges that significantly exceed the static pressure rating of the pipe
- HDPE pipe is flexible and ductile, not rigid. It has outstanding resistance to fatigue HDPE pipe can be bent to a radius 25 times. This can eliminate many fittings required for directional changes in a piping system where fittings and thrust blocks or restraints are required with alternate materials. Unlike other plastic pipes, it is designed and pressure rated to handle the kind of occasional and recurring surge events that are common in water distribution systems.
- The combination of flexibility and leak free joints allow for unique and cost effective types of installation methods that the rigid PVC and Ductile Iron pipes can't use with bell and spigot connections..
- Polyethylene pipe installations are cost effective and have long term cost advantages Firstly, because its failure rate is low, the cost per mile for repair/replacement is also low due to its physical properties, HDPE is fusion-welded joints which ensure very low leakage rates and thus low water loss costs leak free joints and reduced maintenance costs.
- The polyethylene pipe industry estimates a service life for HDPE pipe to conservatively be 50-100 years. This relates to savings in replacement costs for next generations to come.
- HDPE pipe will not rust, corrode, tuberculate or support biological scale or growth, and has superb chemical resistance compared to traditional pipe materials
- Hazen Williams C Factor is 150 and doesn't change over time

Outside diameter d (mm)	Nominal bore DN (inch)	Pipe Series (S)																															
		Standard Dimension Ratio (SDR)																															
		PE80 Material																															
		PE100 Material																															
		25		20		16		12.5		10.5		10		8.3		8		6.3		5		4		3.2		2.5		2					
51		41		33		26		22		21		17.6		17		13.6		11		9		7.4		6		5							
		PN 3.2		PN 4		PN 5				PN 6				PN 8		PN 10		PN 12.5		PN 16		PN 20		PN 25									
		PN 4		PN 5		PN 6				PN 8				PN 10		PN 12.5		PN 16		PN 20		PN 25											
		e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m	e <sub>min</sub> mm	mass in kg/m						
10	1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,8	0,048	2,0	0,052				
12	1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,8	0,060	2,0	0,065	2,4	0,075		
16	3/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,0	0,092	2,3	0,103	3,0	0,125	3,3	0,135
20	1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,0	0,118	2,3	0,134	3,0	0,164	3,4	0,182	4,1	0,209			
25	3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,0	0,151	2,3	0,173	3,0	0,202	3,5	0,243	4,2	0,281	5,1	0,323				
32	1	-	-	-	-	-	-	-	-	-	-	-	-	2,0	0,198	2,0	0,198	2,4	0,235	3,0	0,282	3,6	0,331	4,4	0,390	5,4	0,458	6,5	0,525				
40	1 1/4	-	-	-	-	-	-	1,8	0,229	1,9	0,240	2,0	0,251	2,3	0,288	2,4	0,299	3,0	0,360	3,7	0,434	4,5	0,514	5,5	0,607	6,7	0,708	8,1	0,818				
50	1 1/2	-	-	-	-	1,8	0,290	2,0	0,317	2,3	0,365	2,4	0,378	2,9	0,445	3,0	0,458	3,7	0,555	4,6	0,673	5,6	0,796	6,9	0,945	8,3	1,10	10,1	1,27				
63	2	-	-	1,8	0,368	2,0	0,403	2,5	0,500	2,9	0,569	3,0	0,586	3,6	0,695	3,8	0,728	4,7	0,883	5,8	1,06	7,1	1,27	8,6	1,49	10,5	1,74	12,8	2,02				
75	2 1/2	1,8	0,440	1,9	0,462	2,3	0,557	2,9	0,683	3,5	0,816	3,6	0,836	4,3	0,987	4,5	1,03	5,6	1,25	6,8	1,48	8,4	1,78	10,3	2,12	12,5	2,47	15,1	2,85				
90	3	1,8	0,531	2,2	0,647	2,8	0,800	3,5	0,988	4,1	1,15	4,3	1,20	5,1	1,40	5,4	1,47	6,7	1,79	8,2	2,14	10,1	2,57	12,3	3,03	15,0	3,54	18,1	4,09				
110	4	2,2	0,795	2,7	0,952	3,4	1,19	4,2	1,45	5,0	1,69	5,3	1,79	6,3	2,10	6,6	2,19	8,1	2,64	10,0	3,18	12,3	3,82	15,1	4,54	18,3	5,29	22,1	6,10				
125	4 1/2	2,5	1,01	3,1	1,25	3,9	1,53	4,8	1,86	5,7	2,19	6,0	2,29	7,1	2,69	7,4	2,79	9,2	3,40	11,4	4,12	14,0	4,92	17,1	5,84	20,8	6,82	25,1	7,87				
140	5	2,8	1,26	3,5	1,56	4,3	1,90	5,4	2,35	6,4	2,75	6,7	2,86	8,0	3,37	8,3	3,50	10,3	4,26	12,7	5,13	15,7	6,18	19,2	7,33	23,3	8,56	28,1	9,87				
160	6	3,2	1,65	4,0	2,02	4,9	2,45	6,2	3,08	7,3	3,58	7,7	3,75	9,1	4,40	9,5	4,57	11,8	5,56	14,6	6,74	17,9	8,04	21,9	9,54	26,6	11,2	32,1	12,9				
180	7	3,6	2,07	4,4	2,51	5,5	3,10	6,9	3,83	8,2	4,52	8,6	4,71	10,2	5,54	10,7	5,77	13,3	7,05	16,4	8,51	20,1	10,2	24,6	12,1	29,9	14,1	36,1	16,3				
200	8	3,9	2,48	4,9	3,08	6,2	3,88	7,7	4,74	9,1	5,57	9,6	5,84	11,4	6,86	11,9	7,12	14,7	8,65	18,2	10,5	22,4	12,6	27,4	14,9	33,2	17,4	40,1	20,1				
225	9	4,4	3,16	5,5	3,90	6,9	4,82	8,6	5,96	10,3	7,07	10,8	7,37	12,8	8,64	13,4	9,03	16,6	11,0	20,5	13,3	25,2	15,9	30,8	18,8	37,4	22,1	45,1	25,4				
250	10	4,9	3,88	6,2	4,88	7,7	5,98	9,6	7,38	11,4	8,68	11,9	9,02	14,2	10,7	14,8	11,1	18,4	13,5	22,7	16,3	27,9	19,6	34,2	23,3	41,5	27,2	50,1	31,4				
280	11	5,5	4,88	6,9	6,04	8,6	7,47	10,7	9,20	12,8	10,9	13,4	11,4	15,9	13,3	16,6	13,9	20,6	16,9	25,4	20,5	31,3	24,6	38,3	29,2	46,5	34,1	56,2	39,4				
315	12	6,2	6,18	7,7	7,59	9,7	9,47	12,1	11,7	14,4	13,8	15,0	14,3	17,9	16,9	18,7	17,6	23,2	21,5	28,6	25,9	35,2	31,1	43,1	36,9	52,3	43,2	63,2	49,8				
355	14	7,0	7,81	8,7	9,65	10,9	12,0	13,6	14,8	16,2	17,5	16,9	18,2	20,1	21,4	21,1	22,4	26,1	27,2	32,2	32,9	39,7	39,5	48,5	46,8	59,0	54,8	-	-				
400	16	7,9	9,92	9,8	12,2	12,3	15,2	15,3	18,8	18,2	22,1	19,1	23,1	22,7	27,2	23,7	28,3	29,4	34,5	36,3	41,7	44,7	50,1	54,7	59,4	66,5	69,6	-	-				
450	18	8,8	12,4	11,0	15,4	13,8	19,2	17,2	23,7	20,5	28,0	21,5	29,3	25,5	34,3	26,7	35,8	33,1	43,7	40,9	52,8	50,3	63,4	61,5	75,2	-	-	-	-				
500	20	9,8	15,4	12,3	19,2	15,3	23,6	19,1	29,2	22,8	34,5	23,9	36,1	28,3	42,3	29,7	44,2	36,8	53,9	45,4	65,2	55,8	78,1	68,3	92,8	-	-	-	-				

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