ANHAR INDUSTRIAL GROUP

ANHAR HAYAT KERMAN Co.
ANHAR ETESAL Mfg.Co.

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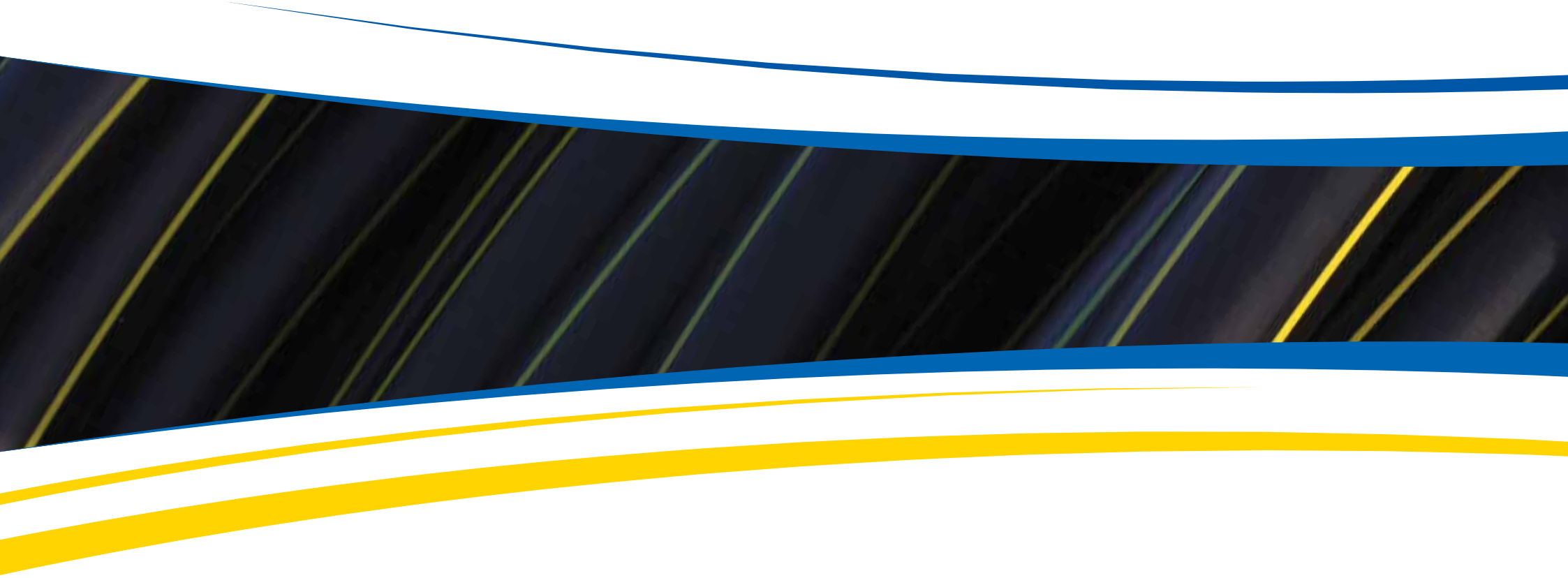
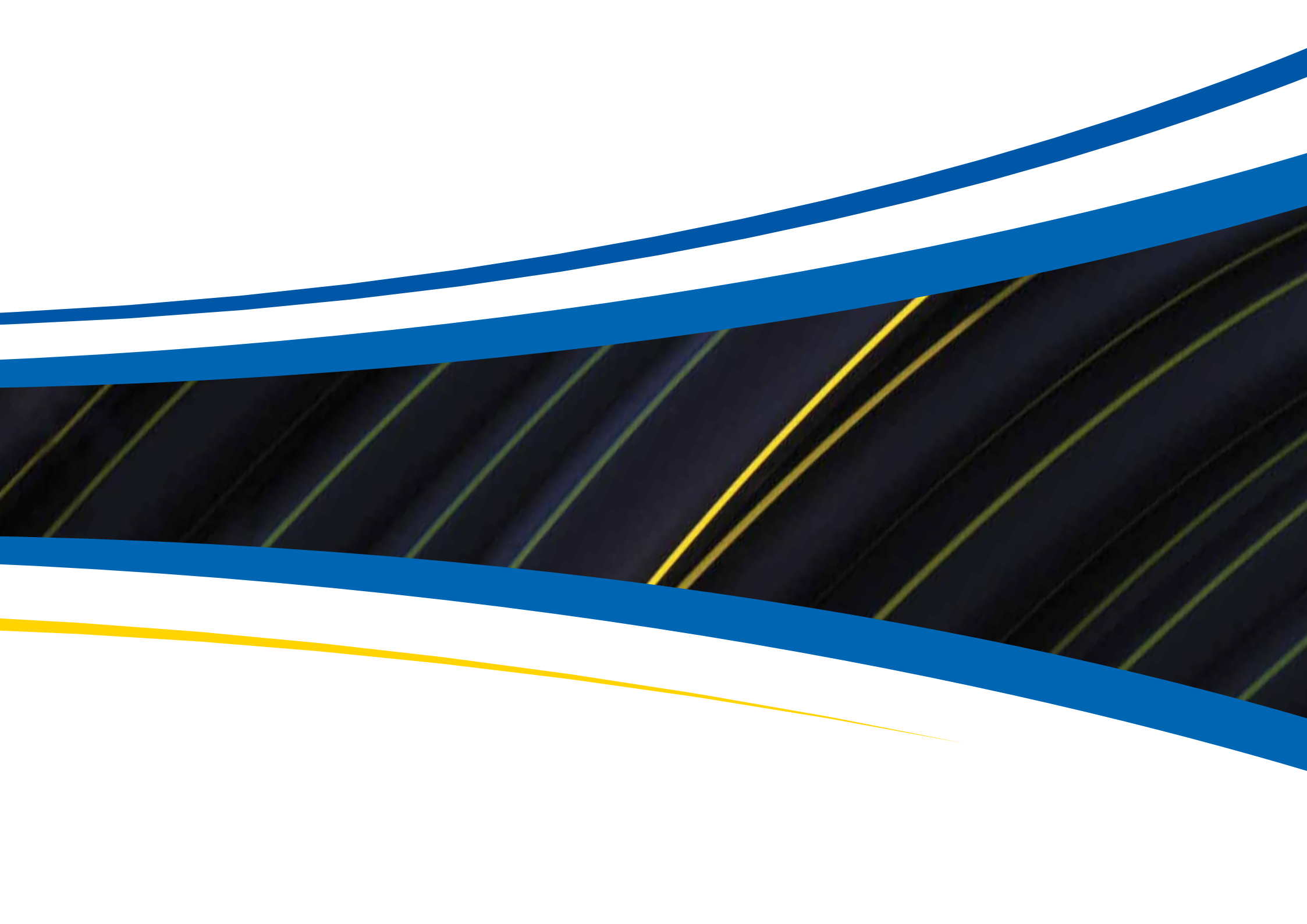




Anhar Hayat was established in 2004 in Kerman with focus on the manufacturing of Polyethylene pipes for water supplies, gas distribution networks and the agriculture sectors.

In order to improve the quality and use the welding Technology, We acquired the technical knowledge of Electrofusion Polyethylene fittings and valves which was achieved by establishment of Anhar Etesal Mfg company in 2007, by modern machines, well equipped laboratories with the latest equipment's, with variety of Credentials and Certifications from competent governmental and international authorities, as well as standard national badges for products.

Determining quality, technology and customer satisfaction as our first goals to achieve, directs us to supply high quality products to the market by technical ability, product package, and also quantitative and qualitative development of manufactured products.

ANHAR HAYAT KERMAN Co.

ANHAR ETESAL Mfg. Co.

Certificates and Approvals

1-National Standard badge holder for all products

2-Approved by the Ministry of Agriculture.

3-Confirmed Supplier Polyethylene gas pipes, fittings and valves of NIGC (National Iranian Gas Company).

4-Confirmed Supplier of Polyethylene Pipes and fittings for water supply from Ministry of Energy Iran.

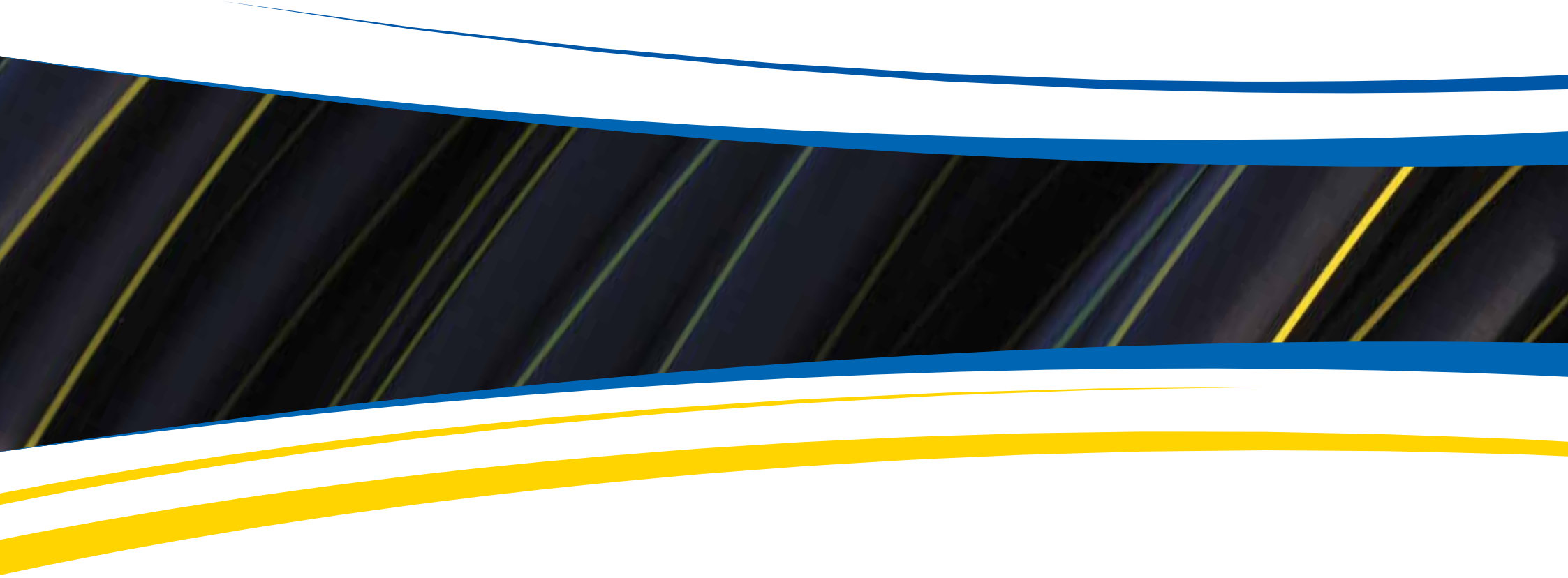
5-Competence certificate of laboratory (ISO/IEC 17025) OF National accreditation Center of Iran (NACI).

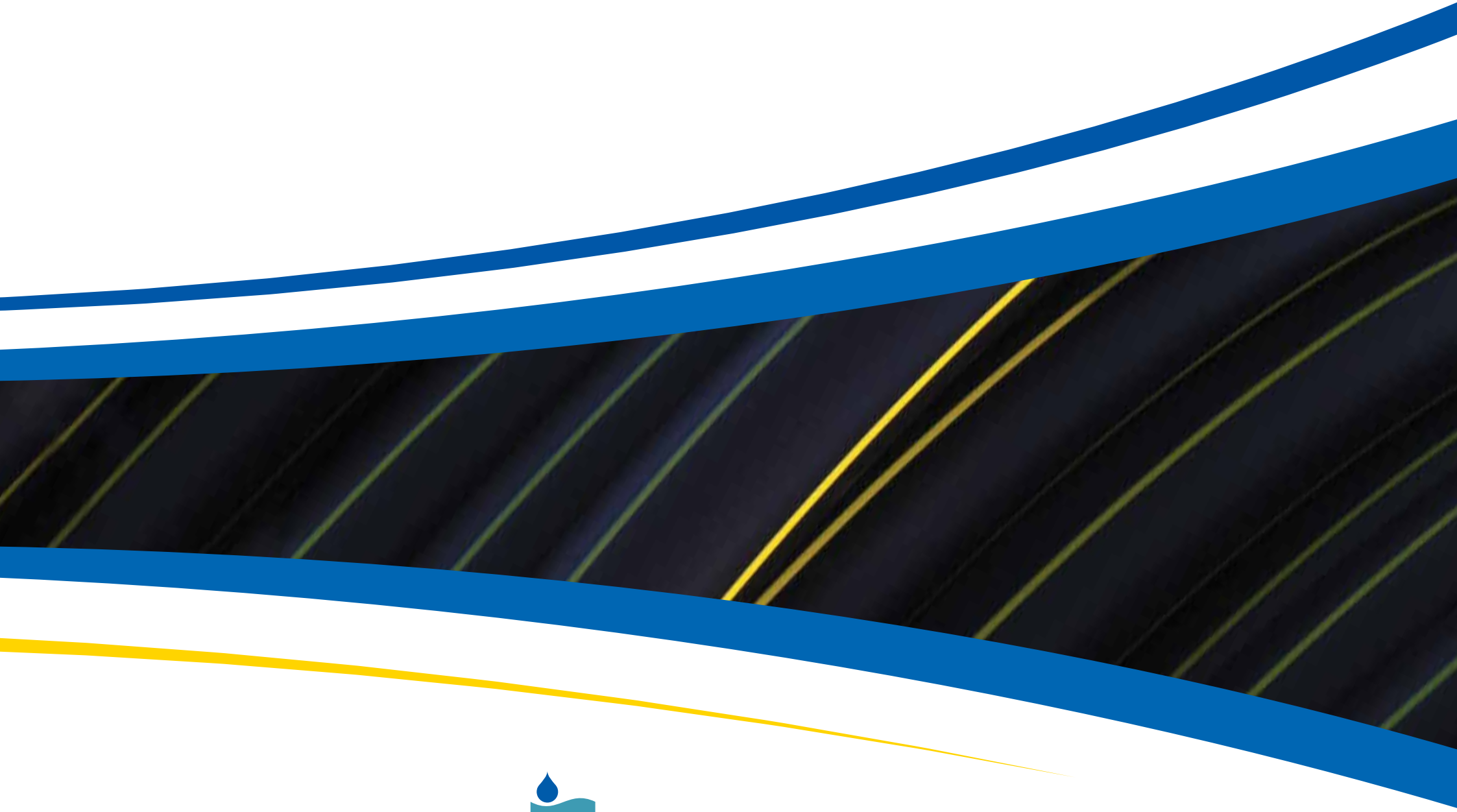
6-International certificate of Quality assurance Management (ISO 9001) from ACM.

7-International Environmental Management certificate (ISO 14001) from ACM

8-International Health and Safety certificate (ISO 18001) from ACM.

9-International Quality Management Certificate in Oil, Gas and Petrochemical Industries (ISO/ TS 29001) from ACM.





ANHAR HAYAT KERMAN Co.

Polyethylene Pipe Dimensions(Natural Gas) CEN1555					
Nominal Size DN/OD	Wall Thickness for SDR11		Mean Outside Diameter (mm)		Maximum Out of Roundness for Straight Pipes (3*)
	Min Wall Thickness Emin	Plus Tolerance	Dem.min	dem.max Grade B(*2)	
20	3.0(1*)	0.4	20.0	20.3	1.2
25	3.0(1*)	0.4	25.3	25.3	1.2
32	3.0(1*)	0.4	32.3	32.3	1.3
40	3.7	0.5	40.4	40.4	1.4
50	4.6	0.6	50.0	50.4	1.4
63	5.8	0.7	63.0	63.4	1.5
75	6.8	0.8	75.0	75.5	1.6
90	8.2	1.0	90.0	90.6	1.8
110	10.0	1.1	110.0	110.7	2.2
125	11.4	1.3	125.0	125.8	2.5
160	14.6	1.6	160.0	161.0	3.2
200	18.2	2.0	200.0	201.2	4.0
250	22.7	2.5	250.0	251.5	5.0

(1*)For SDR11 pipe e min wall thickness value rounding to 3 mm.
(2*)According ISO 1992-1-1997 standard maximum value for dem.
(3*)The value double bended pipe (location and time production) is calculated.

Polyethylene Pipe Dimensions(Water Pipe) INSO14427

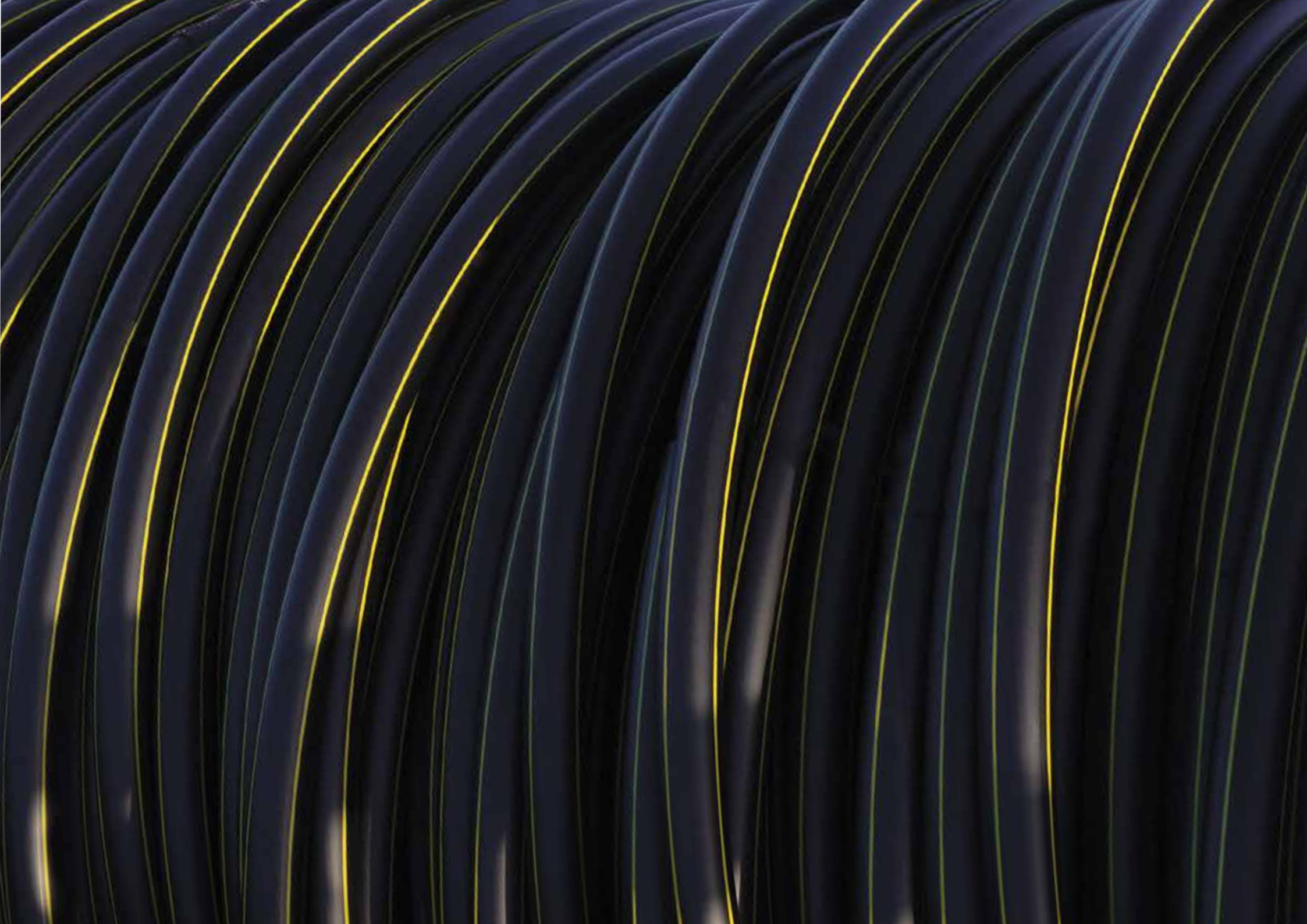
SDR	41		33		26		21		17	
PE 80	PN3.2		PN4		PN5		PN6		PN8	
PE 100	PN4		PN5		PN6		PN8		PN10	
mm	S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m
16	–	–	–	–	–	–	–	–	–	–
20	–	–	–	–	–	–	–	–	–	–
25	–	–	–	–	–	–	–	–	–	–
32	–	–	–	–	–	–	–	–	2.0	0.193
40	–	–	–	–	1.8	0.220	2.0	0.245	2.4	0.293
50	–	–	1.8	0.280	2.0	0.309	2.4	0.370	3.0	0.450
63	1.8	0.360	2.0	0.390	2.5	0.489	3.0	0.575	3.8	0.717
75	1.9	0.450	2.3	0.540	2.9	0.669	3.6	0.823	4.5	1.01
90	2.2	0.630	2.8	0.780	3.5	0.971	4.3	1.18	5.4	1.46
110	2.7	0.930	3.4	1.17	4.2	1.43	5.3	1.77	6.6	2.17
125	3.1	1.22	3.9	1.51	4.8	1.84	6.0	2.26	7.4	2.76
140	3.5	1.53	4.3	1.87	5.4	2.32	6.7	2.83	8.3	3.47
160	4.0	1.99	4.9	2.42	6.2	3.04	7.7	3.72	9.5	4.53
180	4.4	2.47	5.5	3.06	6.9	3.79	8.6	4.67	10.7	5.72
200	4.9	3.04	6.2	3.83	7.7	4.69	9.6	5.79	11.9	7.06
225	5.5	3.85	6.9	4.77	8.6	5.90	10.8	7.31	13.4	8.96
250	6.2	4.82	7.7	5.92	9.6	7.31	11.9	8.95	14.8	10.98
280	6.9	5.98	8.6	7.40	10.7	9.12	13.4	11.29	16.6	13.79
315	7.7	7.51	9.7	9.38	12.1	11.61	15.0	14.19	18.7	17.46
355	8.7	9.55	10.9	11.86	13.6	14.68	16.9	18.02	21.1	22.23
400	9.8	12.11	12.3	15.10	15.3	18.61	19.1	22.98	23.7	28.09
450	11.0	15.27	13.8	19.02	17.2	23.53	21.5	29.06	26.7	35.59
500	12.3	19.01	15.3	23.46	19.1	29.03	23.9	35.85	29.7	43.97
560	13.7	23.67	17.2	29.52	21.4	36.38	26.7	44.87	33.2	55.09
630	15.4	29.64	19.3	37.24	24.1	46.10	30.0	56.68	37.4	69.77
710	17.4	38.16	21.8	47.41	27.2	58.70	33.9	72.29	42.1	88.68
800	19.6	48.39	24.5	60.06	30.6	74.34	38.1	91.63	47.4	112.45
900	22.0	61.03	27.6	76.08	34.4	94.40	42.9	115.93	53.3	142.24
1000	24.5	75.57	30.6	93.28	38.2	116.02	47.7	143.23	59.3	175.80
1200	29.4	108.79	36.7	134.79	45.9	167.10	57.2	206.16	71.1	252.93
1400	34.3	148.04	42.9	183.73	53.5	227.28	66.7	280.32	83.0	344.42
1600	39.2	193.33	49.0	239.78	61.2	297.13	76.2	366.07	94.8	449.37

Coming Soon

13.6		11		9		7.4		6	
PN10		PN12.5		PN16		PN20		PN25	
PN12.5		PN16		PN20		PN25		---	
S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m	S in mm	mass AV; in kg/m
_	_	_	_	2.0	0.090	2.3	0.102	3.0	0.124
_	_	2.0	0.116	2.3	0.132	3.0	0.162	3.4	0.180
2.0	0.148	2.3	0.169	3.0	0.210	3.5	0.240	4.2	0.278
2.4	0.230	3.0	0.277	3.6	0.326	4.4	0.386	5.4	0.454
3.0	0.359	3.7	0.428	4.5	0.508	5.5	0.601	6.7	0.703
3.7	0.547	4.6	0.664	5.6	0.788	6.9	0.937	8.3	1.09
4.7	0.871	5.8	1.05	7.1	1.26	8.6	1.47	10.5	1.73
5.6	1.23	6.8	1.47	8.4	1.77	10.3	2.10	12.5	2.45
6.7	1.77	8.2	2.12	10.1	2.55	12.3	3.01	15.0	3.53
8.1	2.62	10.0	3.15	12.3	3.79	15.1	4.50	18.3	5.26
9.2	3.37	11.4	4.09	14.0	4.90	17.1	5.80	20.8	6.78
10.3	4.23	12.7	5.09	15.7	6.14	19.2	7.28	23.3	8.51
11.8	5.52	14.6	6.69	17.9	7.99	21.9	9.48	26.6	11.10
13.3	7.00	16.4	8.45	20.1	10.11	24.6	11.98	29.9	14.27
14.7	8.59	18.2	10.42	22.4	12.50	27.4	14.82	33.2	17.32
16.6	10.90	20.5	13.19	25.2	15.82	30.8	18.84	37.4	21.94
18.4	13.43	22.7	16.22	27.9	19.44	34.2	23.13	41.5	27.04
20.6	16.83	25.4	20.34	31.3	24.44	38.3	29.00	46.5	33.93
23.2	21.33	28.6	25.75	35.2	30.92	43.1	36.71	52.3	42.93
26.1	27.04	32.2	32.68	39.7	39.27	48.5	46.55	59.0	54.55
29.4	34.29	36.3	41.49	44.7	49.81	54.7	59.13	66.5	69.28
33.1	43.43	40.9	52.54	50.3	63.07	61.5	74.79	_	_
36.8	53.59	45.4	64.83	55.8	77.71	68.3	92.30	_	_
41.2	67.24	50.8	81.22	62.5	97.50	_	_	_	_
46.3	84.99	57.2	102.90	70.3	123.38	_	_	_	_
52.2	108.15	64.5	130.94	79.3	157.09	_	_	_	_
58.8	137.19	72.6	166.06	89.3	199.31	_	_	_	_
66.1	173.57	81.7	210.19	_	_	_	_	_	_
73.4	214.10	90.8	258.06	_	_	_	_	_	_
88.2	308.67	_	_	_		_	_	_	_
102.9	419.96	_	_	_	_	_	_	_	_
117.5	548.14	_	_	_	_	_	_	_	_

The mass has been calculated taking the average density as 0.953gr/cm3


talos
monos 75 -37G
CINCINNATI EXTRUSION




ANHAR

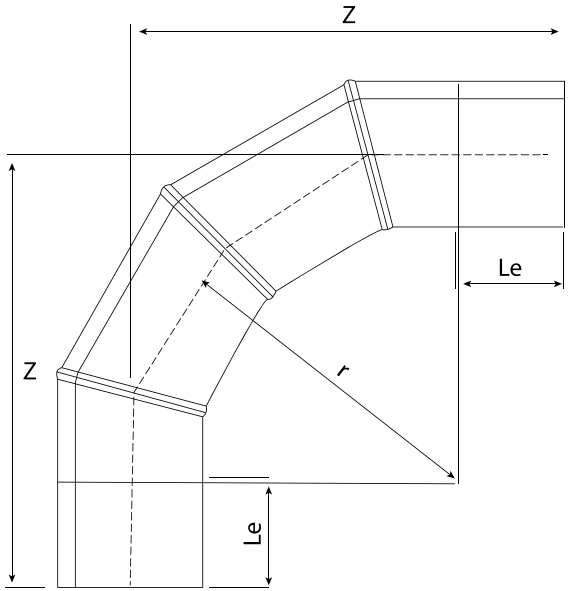
Polyethylene (PE) welded fittings

The company is using the world's best technology to product the (PE) fittings by Butt fusion method, including all kinds of elbows, equal and unequal tees, from size 400 to 1000 mm for specific orders. The above capability have been used to facilitate required fittings delivery with standard quality according to project requirements to customers.

Welded Elbow 90°

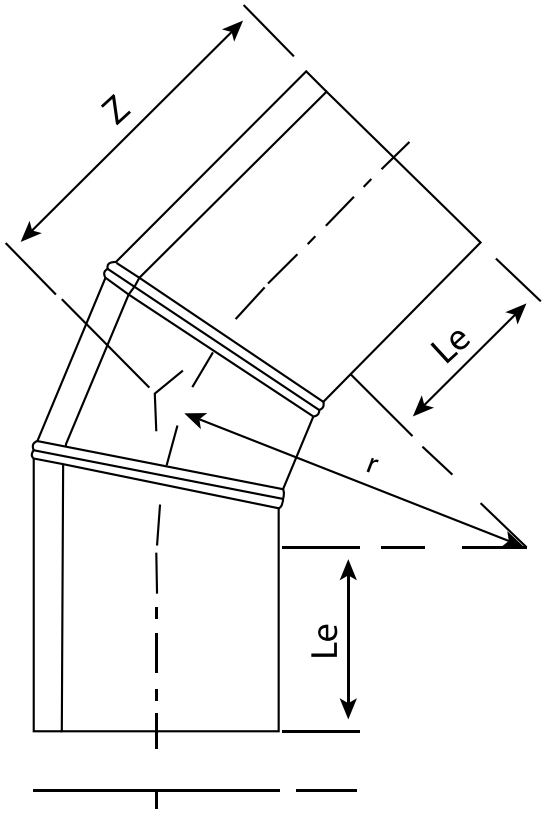
Nominal size (mm)	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000
Z min (mm)	261	315	338	360	390	420	450	488	625	670	773	883	900	975	1100	1190	1295	1415	1550	1750	1900
r° (mm)	135	165	188	210	240	270	300	338	375	420	473	533	600	675	750	840	945	1065	1200	1350	1500
Le (mm)	150	150	150	150	150	150	150	150	250	250	300	300	300	300	350	350	350	350	350	400	400

- Segment-welded fittings have a pressure reduction factor of 0.8
- r= 1.5 d
- a= ± 2 °



Welded Elbow 45° / 60°

Nominal size (mm)	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000
Z min (mm) 45°	189	218	228	237	249	262	274	290	412	424	498	520	548	580	665	698	741	792	847	960	1022
Z min (mm) 60°	207	245	258	271	288	305	323	345	466	492	576	608	646	689	783	835	896	965	1043	1179	1266
r° (mm)	135	165	188	210	240	270	300	338	375	420	473	533	600	675	750	840	945	1065	1200	1350	1500
Le (mm)	150	150	150	150	150	150	150	150	250	250	300	300	300	300	350	350	350	350	350	400	400

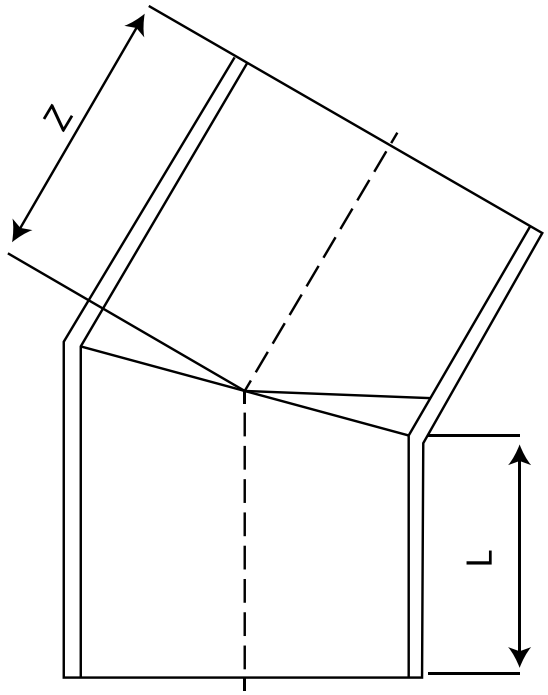


- Segment-welded fittings have a pressure reduction factor of 0.8
- r= 1.5 d
- a= ± 2 °

Welded Elbow 11.25° / 22.5° / 30°

Nominal size (mm)	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000
Z min (mm)	194	200	206	214	222	230	241	350	362	428	443	461	481	551	575	603	636	672	762	802
L (mm)	150	150	150	150	150	150	150	250	250	300	300	300	300	350	350	350	350	350	400	400

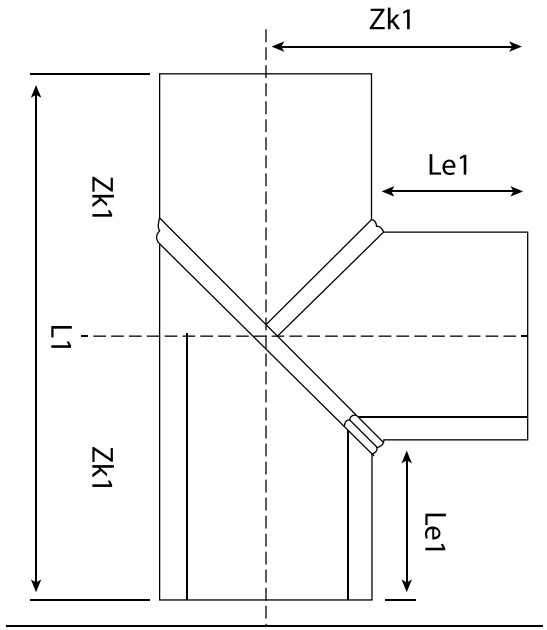
- Segment-welded fittings have a pressure reduction factor of 0.8



Welded Equal Tee 90 °

Nominal size (mm)	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000
ZK1 min (mm)	170	205	215	220	230	240	250	265	375	390	460	480	500	525	600	630	665	705	750	850	900
L1 (mm)	360	410	430	440	460	480	500	530	750	780	920	960	1000	1050	1200	1260	1330	1410	1500	1700	1800
Le1 min (mm)	150	150	150	150	150	150	150	150	250	250	300	300	300	300	350	350	350	350	350	400	400

- Segment-welded fittings have a pressure reduction factor of 0.8



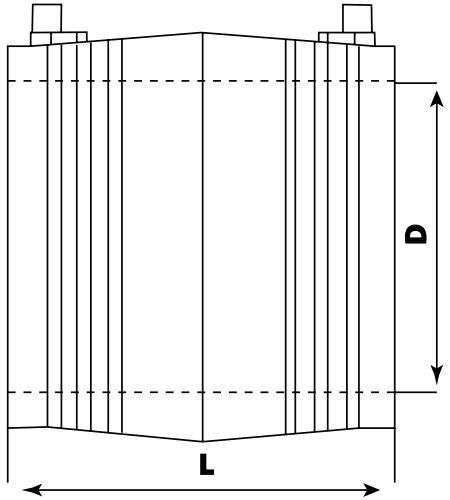
ANHAR ETESAL Mfg. Co.

ELECTROFUSION COUPLER

W	G	size (mm)
✓		20
✓	✓	25
✓	✓	32
✓		40
✓		50
✓	✓	63
✓		75
✓	✓	90
✓	✓	110
✓	✓	125
✓	✓	160
✓	✓	200
✓	✓	225
✓		250

W : Water
G : Gas

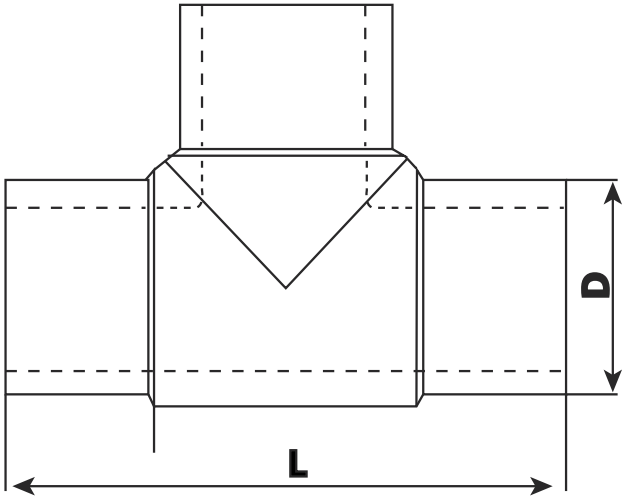
size (mm)	D	L
20	20.2	61
25	25.3	80
32	32.4	84
40	40.5	92
50	50.6	105
63	63.6	118
75	75.6	123
90	90.8	140
110	110.9	164
125	125.9	174
160	160.9	196
200	201	200
225	226.3	210
250	252.3	224



EQUAL TEE (SPIGOT)

SDR 11-17	W	G	size (mm)
	✓	✓	63
	✓		75
	✓	✓	90
	✓	✓	110
	✓	✓	125
	✓	✓	160
	✓	✓	200
	✓	✓	225

size (mm)	D	L
63	63.3	230
75	90.3	293
90	110.3	325
110	125.4	358
125	160.5	408
160	200.5	485
200	200.5	117
225	225.5	143

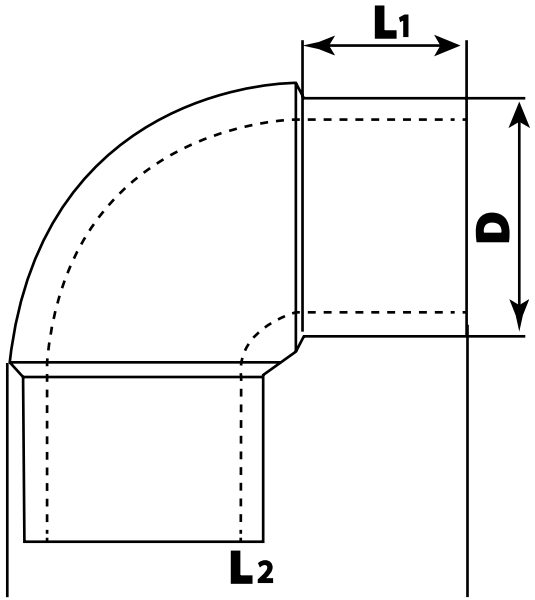


ELBOW 90 (SPIGOT)

SDR 11-17	W	G	size (mm)
	✓	✓	25
	✓	✓	63
	✓	✓	90
	✓	✓	110
	✓	✓	125
	✓	✓	160
	✓	✓	200
	✓	✓	225

W : Water
G : Gas

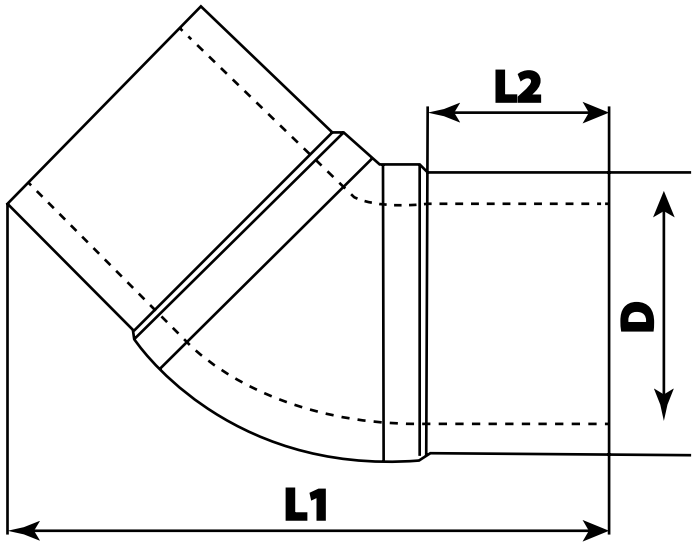
size (mm)	D	L1	L2
25 x 90	25.2	35	70
63 x 90	6 3.2	77	150
90 x 90	90.3	79	189
110 x 90	110.3	92	225
125 x 90	125.4	93	247
160 x 90	160.4	108.3	296
200 x 90	200.4	112	365
225 x 90	225.4	120	385



ELBOW 45° (SPIGOT)

SDR 11-17	W	G	size (mm)
	✓	✓	125
	✓	✓	160
	✓	✓	200
	✓	✓	225

size (mm)	D	L1	L2
125	125.4	295	90
160	160.4	355	108
200	200.5	405	114
225	225.5	410	120

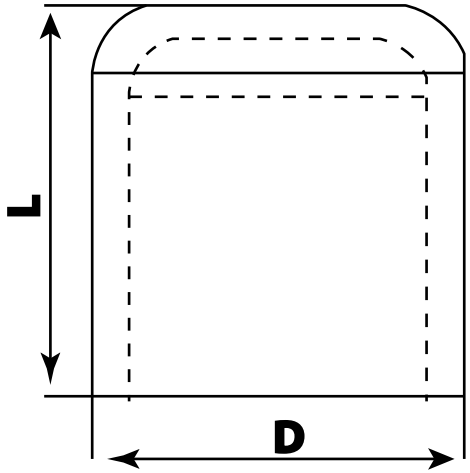


W : Water
G : Gas

CAP (SPIGOT)

SDR 11-17	W	G	size (mm)
	✓	✓	25
	✓	✓	63
	✓		75
	✓	✓	90
	✓	✓	110
	✓	✓	125
	✓	✓	160
	✓	✓	200
	✓	✓	225

size (mm)	D	L
25	50.3	181
63	63.3	230
75	90.3	293
90	110.3	325
110	125.4	358
125	160.5	408
160	200.5	485
200	200.5	117
225	225.5	143



W : Water
G : Gas

REDUCER (SPIGOT)

SDR 11-17	W	G	size (mm)	W	G	size (mm)
	✓	✓	90 x 63	✓	✓	200 x 63
	✓		90 x 75	✓		200 x 75
	✓	✓	110 x 63	✓	✓	200 x 90
	✓		110 x 75	✓	✓	200 x 110
	✓	✓	110 x 90	✓	✓	200 x 125
	✓	✓	125 x 63	✓	✓	200 x 160
	✓		125 x 75	✓	✓	225 x 63
	✓	✓	125 x 90	✓		225 x 75
	✓	✓	125 x 110	✓	✓	225 x 90
	✓	✓	160 x 63	✓	✓	225 x 110
	✓		160 x 75	✓	✓	225 x 125
	✓	✓	160 x 90	✓	✓	225 x 160
	✓	✓	160 x 110	✓	✓	225 x 200
	✓	✓	160 x 125			

W : Water
G : Gas

ELECTROFUSION TAPPING TEE

W	G	size (mm)
✓		63 x 20
✓		90 x 20
✓		110 x 20
✓		125 x 20
✓	✓	63 x 25
✓	✓	90 x 25
✓	✓	110 x 25
✓	✓	125 x 25
✓	✓	63 x 32
✓	✓	90 x 32
✓	✓	110 x 32
✓	✓	125 x 32

W : Water
G : Gas

FLANGE

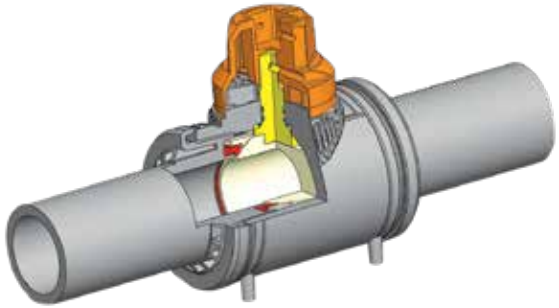
SDR 11-17	W	size (mm)
	✓	63
	✓	75
	✓	90
	✓	110
	✓	125
	✓	160
	✓	200

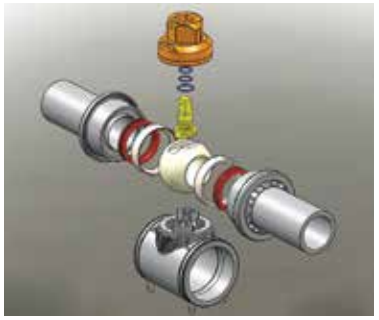
Polyethylene Valve Dimensions

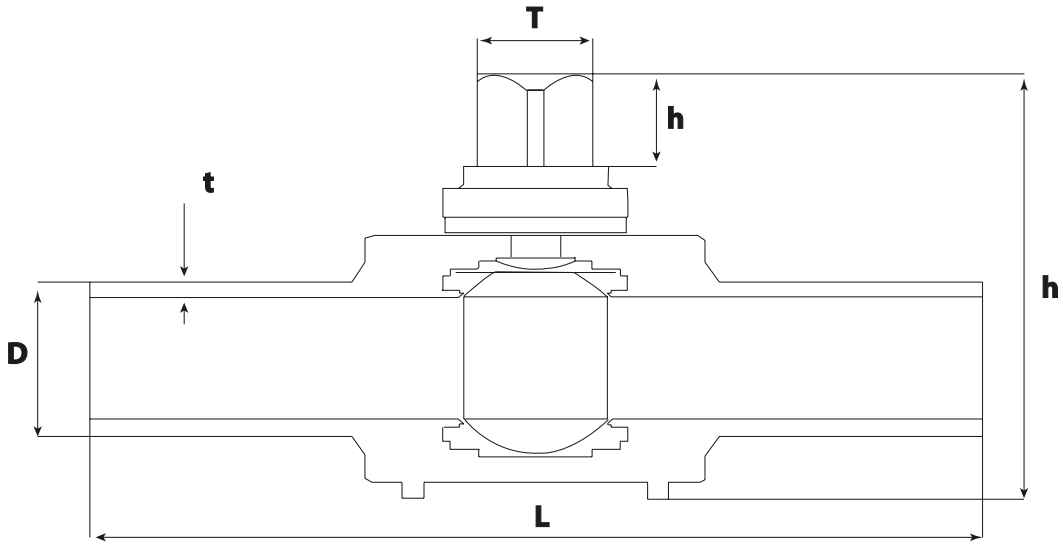
size	Outside diameter	thickness	port area	Cap size		length	length
	D (mm)	t (mm)	d (mm)	T (mm)	h (mm)	L (mm)	H (mm)
63	63 - 63.4	5.8 - 6.5	47	50	40	382	175
90	90 - 90/6	8.2 - 9.5	67	50	40	432	247
110	110 - 110.7	10 - 11.1	82/5	50	40	505	278
125	125 - 125.8	11.4 - 12.7	101.7	50	40	628	326
160	160 - 161	11.4 - 12.7	101.7	50	40	640	326
200	200.4	19.3	139.5	50	40	673	412
225	225.4	21.5	139.5	50	40	673	412

Polyethylene Valve Raw Material

Body	ball	cap	Retainer	packing	o-ring	stem
PE 100	POM	POM	PP	NBR	NBR	Brass

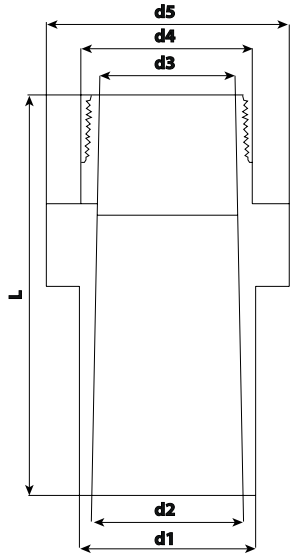






TF

W	G	size (mm)
✓	-	63 x 2"
✓	-	50 x 1$\frac{1}{2}$



W : Water
G : Gas

polymer valve(Long handle)

W	size (mm)
✓	63
✓	90
✓	110
✓	125
✓	160

W : Water
G : Gas


PE PIPE & FITTING
ANHAR ETESAL

Specialized laboratories
Anhar Industrial group

ANHAR HAYAT KERMAN Co.

ANHAR ETESAL Mfg CO.

Laboratories

Anhar Industrial group factories has accurate laboratories, using the latest laboratory equipment. Among the valuable services of these laboratories can be mentioned Performing tests of raw materials, Polyethylene (PE) pipes, fittings and valves in accordance with the latest developed standards by competent International and national authorities and also provide accurate results.

Anhar Industrial group laboratories is proud to provide services as reference and Collaborative Laboratory of standards institute.

Polyethylene Pipe, Fittings and Valve Tests

Single-wall Polyethylene Pipe Tests			
Description of Test	**Standard**	**Test Equipment**	**Test**
Carbon Black and Pigment Dispersion assessment	ISO 18553 - INSO 20059	oven-microscope	Carbon Black Dispersion
Carbon Black Content according standard	ISO6964 - ASTMD1603	electric furnace	Carbon Black Content
Non-sponge plastics density Immersion method	ISO 1183-1 / INSO 7090-1	scale accuracy 0.0001 GR	density
Melt Mass Flow Rate	ISO 1133-1 / INSO 6980-1	MFR - scale	Melt Mass Flow Rate
Determination of Oxidation Induction Time	ISO 11357-6 / ISIRI 7186-6	differential calorimetry	Oxidation Induction Time
Percent Differential in sample length	INSO 17614 - ISO 2505	oven	longitudinal Reversion
Sensitivity to cracking due to environmental stress cracking induce by insert type fittings	INSO 8796 - ISIRI 8988	oven	ESCR
Resistance to crack growth caused by combination of stress and environmental factors	ISIRI7175 - 8 -ASTMD1693	water bath	ESCR
Determination of resistance to internal pressure for crushing	EN-ISO 12106	squeez off/pressure	squeez off
Determination of tensile properties	ISO 6259-1,3 INSO 17140-1,3	tension equipment	tension
Determination of resistance to short-term hydraulic pressure	ASTMD 1599	pressure generator-cold water tank	rapid burst test
Determine resistance to internal pressure	ISIRI 12181-1,2 ISO 1167-1,2	pressure generator-cold,hot water tank	hydro static test
Slow Scratch test	ISO 13479	NOTCH	SCG
Determine of resistance to rapid crack propagation	ISO 13477	RCP	RCP
Dimensions control pipe	INSO 2412 - ISO 3126	colise	dimensions control
Appearance and Colour condition control	INSO 14427(clsuse 1-5 /2-5 ,11) EN 1555-2 (clsuse10)	-	appearance and marking condition control
Effects on water quality(smell & taste) in water suply systems	INSO 14427(clsuse3-5)	-	effects on water quality


SAMSUNG

Electrofusion Polyethylene fittings Test			
Description of test	**standard**	**Test equipment**	**Test**
Carbon Black Dispersion	ISO 18553	oven-microscope	Carbon Black Dispersion
Carbon Black Content	ISO 6964	electric furnace	Carbon Black Content
Density	ISO 1183	scale accuracy 0.0001 GR	Density
Melt Mass Flow Rate	ISO 1133	MFR	Melt Mass Flow Rate
Oxidation Induction Time	ISO 11357	DSC	Oxidation Induction Time
Dimension Control	EN 1555-IGS	digital colise	Dimension Control
Decohesive resistance	ISO 13955	crusher	Decohesive resistance
Electrical Resistance	EN 1555-3	ohm meter	Electrical Resistance
Fusion	EN 1555-3	welding machine	Fusion
Hydrostatic strength	EN ISO 1167	pressure generator	Hydrostatic strength
Burst	ASTMD 1599	pressure generator	Burst

PE Ball Valve Test			
Description of Test	**Standard**	**Test equipment**	**Test**
Carbon Black Dispersion	ISO 18553	oven-microscope	Carbon Black Dispersion
Carbon Black Content	ISO 6964	electric furnace	Carbon Black Content
Density	ISO1183	scale accuracy 0.0001 GR	Density
Melt Mass Flow Rate	ISO 1133	MFR	Melt Mass Flow Rate
Oxidation Induction Time	ISO 11357	DSC	Oxidation Induction Time
Dimension Contol	EN 1555-3	digital colise	Dimension Contol
Hydrostatic Strength	EN 917	pressure generator	Hydrostatic Strength
Thermal Cycling Resistance	EN 12119	thermal cycle machine	Thermal Cycling Resistance
Actuation Mechanism Resistance	EN 12100	pressure generator	Actuation Mechanism Resistance
control torque maximum for two temperature	EN 28233	torque meter	Stop Resistance
Operating Torque	EN 28233	torque meter	Operating Torque
Leak Tightness of Seat and Packing	ISO 5208	pressure generator	Leak Tightness of Seat and Packing
Resistance to Bending Between Supports	EN 12100	bending test-pressure generator	Resistance to Bending Between Supports
Impact Loading Resistance	EN 1705	impact test-pressure generator	Impact Loading Resistance

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GRANULE KAVIR

Gahar Granule Kavir co.

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Email: info@granulekavir.com **Website:** www.granulekavir.com

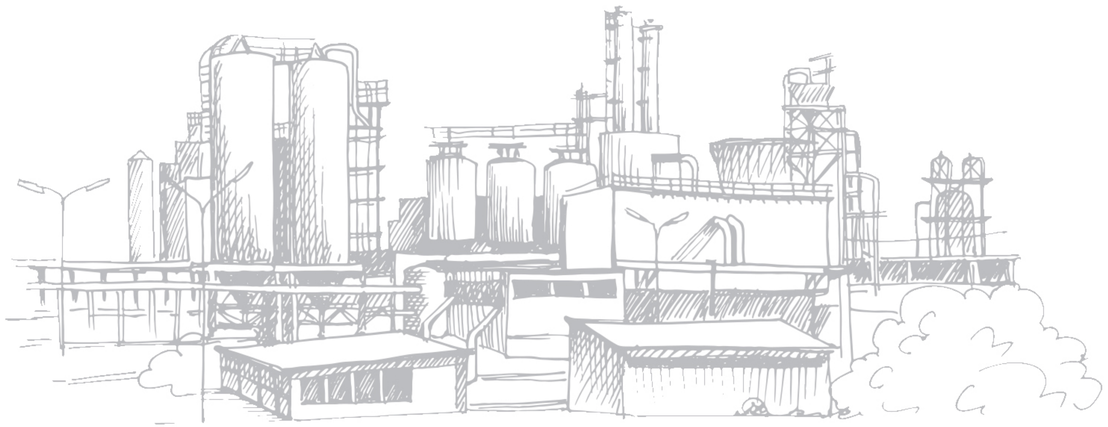
GRANULE KAVIR

Gahar Granule Kavir co.

Gahar Granule Kavir является производителем полимерных компаундов. Наше производственное предприятие оснащено высококачественными компаундерами, полностью оборудованной лабораторией контроля качества и опытной инженерной командой.

Основная цель Gahar Granule Kavir — производить продукцию, которая не только соответствует международным стандартам, но и учитывает специфические потребности каждого клиента. Благодаря постоянным исследованиям и разработкам нам удалось создать уникальные полимерные компаунды, применяемые в различных отраслях, включая автомобилестроение, упаковку, строительство, электронику и многие другие.

Мы имеем успешный опыт экспорта нашей продукции в страны СНГ и Ближнего Востока.



ISO 9001 | ISO 14001 | ISO 45001 | ISO 29001

Our Products:

HDPE
PE100
PE100
PE80
PE80
EX3
HDPE-Film grade
5110
F7000
HDPE-Rotaqry Molding
3840
HDPE-Blow Molding
0035
BL3
HDPE-Injection grade
52518
62N07
LLDPE
209AA
22B02
LDPE
0075
020
2119
2100
2420 H
G-SPC-11 (STEEL PIPE COATING)
G-LLDPE1 (LOW-DENSITY PIPE)

Пигменты и инженерные компаунды для специальных целей.

GRANULE KAVIR

CRP 100 BLACK

HDPE100 — это черный полиэтилен высокой плотности, классифицированный как PE100. Хорошо диспергированный сажевый черный пигмент обеспечивает выдающуюся устойчивость к ультрафиолетовому излучению. Долгосрочная стабильность обеспечивается благодаря оптимизированной системе стабилизации. Кроме

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Application

under pressure polyethylene pipes and fittings (PE gaz pipes sewerage and irrigation pipe)

Properties	ReferenceTest method	value
Melt flow index(190◦C/5kg)	ISO1133-A,isiri6980-1	0.24 ± 0.03gr/10min
Melt flow index(190◦C/2.16kg)	ISO1133-A,isiri6980-1	——
Density(method A-metanol 23◦C)	ISO1183-1,isiri7090-1,2	0.950 ± 0.005gr/cm³
Carbon Blak Content	ISO 6964	2.25 ± 0.25
Ash content		0.02± 0.02
Disp/Carbon Black	ISO 6964	≥3
Elongation at Break		≥ %750
Yield Strength		≥ 20 Mpa
Tensil Strength at Break	ISO6964	≥ 25 Mpa
Oxidation Induction Time 210◦C	ISO11357	≥ 30 min
Melting Point	ISO11357-6	140◦C
Escr (50◦C . A :10% Igepal Co-630)	ASTM D1693	≥ 1000 hr
Total Volatiles	EN 12099	179mg/kg

GRANULE KAVIR

GRANULE KAVIR

G-F7000-31

Гранулы полиэтилена G-F7000-31 представляют собой высокоплотный бимодальный сополимер полиэтилена, широко используемый для производства выдувных пленок. Материал имеет прозрачную гранулярную форму с плотностью около 0,952 г/см^3 и низким индексом текучести расплава, обеспечивая отличную механическую прочность, жесткость и ударную стойкость. Высокая технологичность позволяет эффективно производить выдувные пленки ультратонкой толщины при сохранении прочности. Пленки F7000 обладают высокой устойчивостью к ползучим трещинам, ультрафиолетовому излучению и воздействию

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Property	Value	Unit	Test Method
Density (23°C)	0.952	g/cm3	ISO 1183
Melt Flow Rate (190°C/2.16kg)	0.04	g/10min	ASTM D 1238
Melt Flow Rate (190°C/21.6kg)	--	g/10min	ASTM D 1238
Stress at Yield Point	250	Kg/cm2	ASTM D 638
Stress at Break	390	Kg/cm2	ASTM D 638
Elongation at Break	Above 500	%	ASTM D 638
Izod Impact	30	Kg.cm/cm	ASTM D 256
Stress Cracking Resistance	Above 600	hr	ASTM D 1693
Melting Point	131	°C	ASTM D 2117

GRANULE KAVIR

G-LLDPE1

Линейный полиэтилен низкой плотности (LLDPE) — это специально разработанное пластиковое сырье, широко используемое для производства трубок капельного полива. Их уникальное сочетание гибкости, прочности и устойчивости к воздействию солнечного света и растрескиванию обеспечивает, что получающиеся трубы долговечны, легки в установке и очень эффективны для подачи воды. Будучи основным материалом в сельскохозяйственных и садовых системах капельного орошения, гранулы LLDPE помогают создавать трубы, обеспечивающие точный полив, сохраняют воду и

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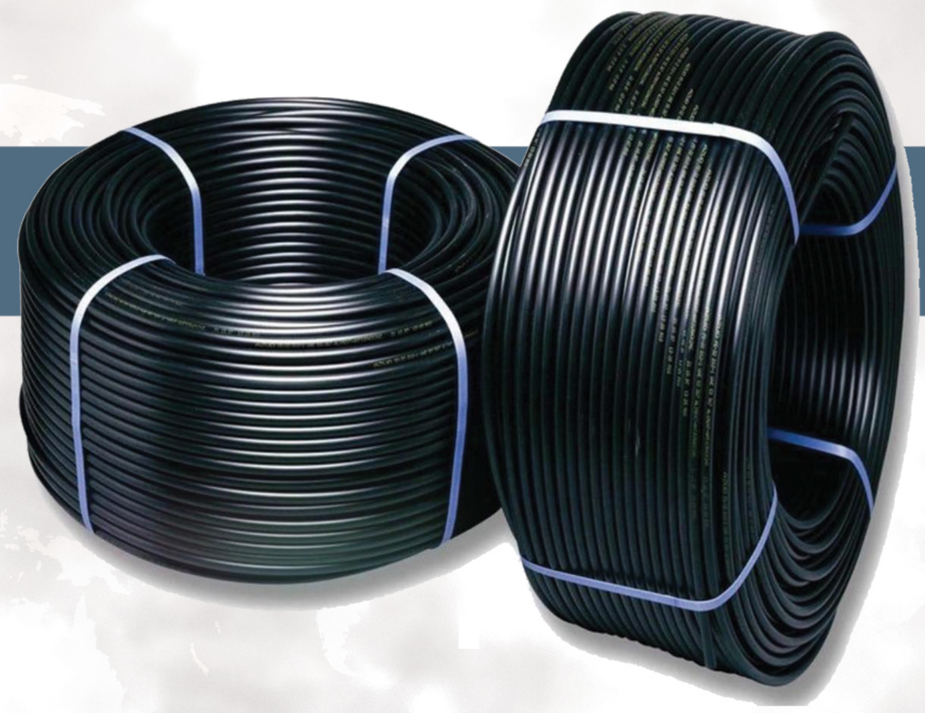

Property	Test Method	Value
Melt Flow index (190° C/5 kg)	ISO1133-A,isiri6980-1	-
Melt Flow index (190° C/2.16 kg)	ISO1133-A, isiri6980-1	0.566gr/10min
Density (method A-methanol 23°C)	ISO1183-A, isiri7090-1,2	0.931gr/cm3
Carbon Black Content	ISO 6964	2.10%
Ash Content		-
Disp/Carbon Black	ISO 18553	2-A2
Elongation at Break	ISO 6259	-
Yield Strength		-
Tensile strength		-
Oxidation induction Time 210°C	ISO 11357-6	-
Oxidation induction Time 200°C	ISO 11357-7	≥30min
Escr (50°C .A:10% Igepal Co-630	ASTM D1693	≥1000h
Total Volatiles	EN 12099	-

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GRANULE KAVIR

G-2119

G-2119 LDPE — это полиэтилен низкой плотности, предназначенный для производства выдувных пленок. Он обладает высокой прозрачностью и высокой прочностью расплава, что позволяет создавать прочные и гибкие пленки. Плотность около 921 кг/м³, индекс текучести расплава — 1,9 г/10 мин, что обеспечивает лёгкую переработку. В состав входят антиоксиданты для стабильности, но отсутствуют антиблокировочные и скользящие добавки. Рекомендуемая толщина пленки — 20–50 мкм при температуре экструзии 165–185 °C и коэффициенте расширения 2–3.

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Property	Value	Unit	Test Method
MFI (190 0C /2 .16 Kg)	**1.9**	**dg/min**	**ISO 1133**
Density	921	Kg/m3	ISO 1183 (A)
Impact strength	26	KJ/m	ASTM D 4272
Tear strength (TD)	25	KN/m	ISO 6383-2
Tear Strength (MD)	60	KN/m	ISO 6383-2
Yield stress (TD)	11	MPa	ISO 527
Yield stress (MD)	13	MPa	ISO 527
Tensile stress at break (TD)	20	MPa	ISO 527
Tensile stress at break (MD)	35	MPa	ISO 527
Strain at Break (TD)	>500	%	ISO 527
Strain at Break (MD)	>150	%	ISO 527
Modulus of Elasticity (TD)	200	Mpa	ISO 527
Modulus of Elasticity (MD)	190	Mpa	ISO 527
Coefficient of friction	>1		ASTM D 1894
Blocking	20	g	SABTEC method
Re-blocking	100	g	SABTEC method
Haze	9	%	ASTM D 1003A
Gloss (45o)	55	%	ASTM D 2457
Clarity	26	mV	
Additive: Antioxidant			

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GRANULE KAVIR

LL209AA

GRANULE KAVIR

Линейный низкоплотный полиэтилен 209 AA LL209AA и LL0209KJ — это сополимеры линейного низкоплотного полиэтилена, содержащие бутен-1 в качестве комономера. LL209AA и LL0209KJ подходят для производства универсальных пленок, как в чистом виде, так и в смесях с низкоплотным полиэтиленом (LDPE) и другими полиэтиленами.

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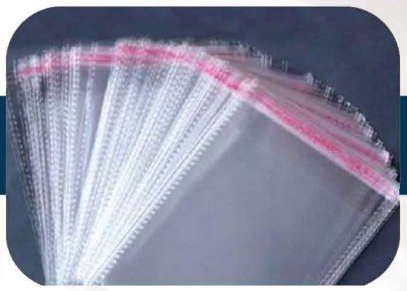

No.	Property	Value	Units	Test Method
1	MFI@190°C, 2.16KG)	0.9	g/10min	D1238
2	Density	0.920	g/ml	D2839
3	Vicat softening Point	100	°C	D1525
FILM	-	-	-	-
4	TENSILE STRENGTH @ YEILD, MD,TD	10.5/11	Mpa	D638
5	ELONGATION @ BREAK, MD,TD	620/840	%	D638
6	TENSILE STRENGTH @ BREAK, MD,TD	41/32	Mpa	D688
7	TEAR STRENGTH, MD,TD	145/370	gr/25mic	D1922
8	IMPACT STRENGTH, DART	150	g	D1709
9	HAZE	10	%	D1003
10	Gloss(45°)	56	Rating	D2457

Application

under pressure polyethylene pipes and fittings
(PE gaz pipes sewerage and irrigation pipe)

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GRANULE KAVIR

G-AS-5110-1

G-AS-511-1 специально разработан для производства высококачественных пленок и пакетов, а также других изделий, требующих изменения свойств для достижения определённых эксплуатационных характеристик. Наша смола производится с использованием передовой лицензированной технологии Lupotech G от Basell, что обеспечивает стабильность и надёжность каждой партии. Типичные свойства пленок основаны на выдувных пленках толщиной примерно 20 мкм, изготовленных при температуре плавления 220°C с применением технологии с длинной горловиной и коэффициентом увеличения 4:1. Для оптимальных результатов рекомендуется

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Property	Value	Unit	Test Method
Physical Properties			
Density (23 °C)	951	kg/cm3	ISO 1183
MFI (190 °C /21.6Kg)	10	dg/min	ISO 1133
Mechanical properties			
Tensile Modulus of elasticity	1050	MPa	ISO527-1;2
Tensile Strength (MD)	55	MPa	ISO 527-1;3
Tensile Strength (TD)	55	MPa	ISO 527-1;3
Tensile Strain at Break (MD)	580	%	ISO 527-1
Tensile Strain at Break (TD)	620	%	ISO 527-1
Tensile stress at Yield	26	MPa	ISO 527-1
Tensile strain at Yield	10	%	ISO 527-1
Elmendorf tear strength(MD)	250	mN	ISO 6383-2
Elmendorf tear strength(TD)	800	mN	ISO 6383-2
Thermal Properties			
Melting Point	132	°C	ISO 3146
Vicat Temperature , (A50,50 °C/h , 10 N)	127	°C	ISO 306

Additive :Antioxidant –Heat stabilizer
Zinc Stearate

GRANULE KAVIR

G-SPC11 (Покрытие стальных труб)

G-SPC11 — это чёрный компаунд полиэтилена высокой плотности (H D PE), предназначенный для покрытия стальных труб. Он обеспечивает высокую прочность расплава для экструзионных процессов, а также превосходные механические свойства и отличную устойчивость к растрескиванию под воздействием напряжений и окружающей среды (ESCR). Состав включает специализированный пакет антиоксидантов и хорошо диспергированный сажевый пигмент, что гарантирует надёжную защиту от атмосферных воздействий в суровых условиях. Данный компаунд классифицируется как неопасный материал, что делает его пригодным для широкого спектра промышленных применений.

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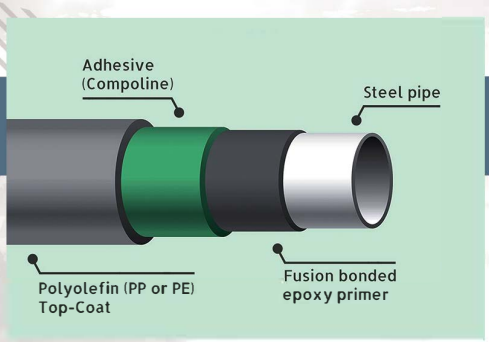

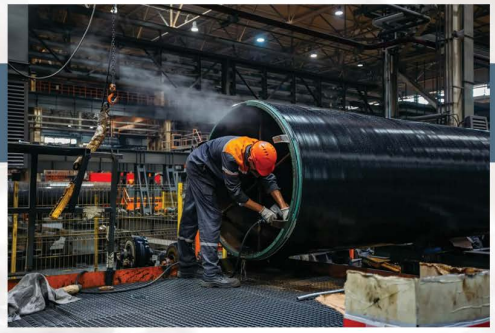

Property	Units	Range	Value	Test Method
Melt Flow index (190° C/2.16 kg)	gr/10 min	0.30 - 0.45	0.32	ISO 1133
Density (Compound) at 23±2 °C	gr/cm3	0.941 - 0.955	0.945	ISO 1183
Yield Strength at 23±2 °C (50 mm/min)	MPa	≥15	>16	ISO 527
Tensile strength at Break at 23±2 °C (50 mm/min)	MPa	≥18	27	ISO 527
Elongation at Break at 23±2 °C (50 mm/min)	%	≥600	>820	ISO 527
O.I.T. at 210 °C	Minutes	≥30	>60	ISO 11357
Melting Point (DSC Method)	°C	≥125	135	ISO 11357
Hardness	Shore D	≥55	>60	ISO 868
Vicat Softening Point (A/50, 9.8 N)	°C	≥120	121	ISO 306
Carbon Black Content	%	2.0 - 2.5	2.2	ASTM D 1603
Carbon Black Dispersion	Grade	≤3	1.1	ISO 18553
Brittleness temperature	°C	≤-70 (No Fracture)	No Fracture	ASTM D 746
E.S.C.R. (50° C,F0)	Hours	≥1000	≥1200 hr	ASTM D 1693
Water Content	Weight%	Max. 0.05	0.01%	ISO 15512
Thermal Aging	% ΔMFI	Max. 35	5%	ISO 21809-1. Ann.G
UV Resistance	% ΔMFI	Max. 35	11%	ISO 21809-1. Ann.G

GRANULE KAVIR

G-AD11

G-AD11 (ADHESIVE COMPOLINE) — это современный специализированный адгезионный агент, разработанный для улучшения сцепления между полиэтиленом и эпоксидными покрытиями с термосваркой (FBE). С высоким содержанием ангидрида малеиновой кислоты он обеспечивает превосходную адгезию на межфазном уровне при низком расходе, что оптимизирует как эффективность, так и затраты. Предназначен для сложных промышленных задач, таких как системы покрытия трубопроводов, ADHESIVE COMPOLINE гарантирует прочность, стабильность и надежность покрытия, способствуя увеличению срока службы и устойчивости к расслаиванию в жестких условиях эксплуатации.

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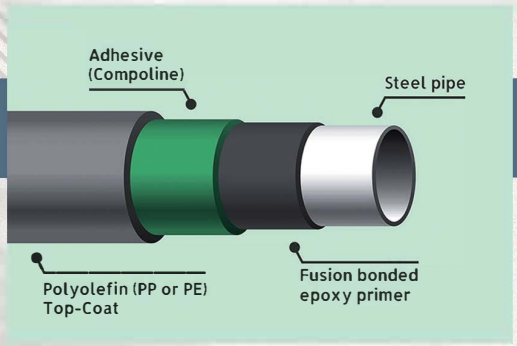

Property	Units	Range	Value	Test Method
Melt Flow index (190° C/2.16 kg)	gr/10 min	1.00 - 1.80	1.33	ISO 1133
Density (Compound) at 23±2 °C	gr/cm3	0.920 - 0.940	0.932	ISO 1183
Tensile Yield Strength at 23±2 °C (50 mm/min)	MPa	≥8	11	ISO 527
Elongation at Break at 23±2 °C (50 mm/min)	%	≥600	710	ISO 527
O.I.T. at 210 °C	Minutes	≥20	>30	ISO 11357
Vicat Softening Point (A/50, 9.8 N)	°C	≥95	101	ISO 306
Water Content	Weight%	≤0.05%	0.02%	ISO 15512

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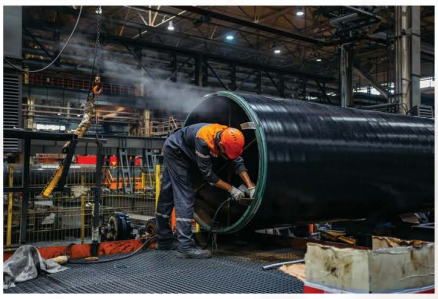
Результаты испытаний трехслойного покрытия стальной трубы DN250



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Property		Units	Range		Test Method	Value
FBE layer thickness		µm	200 to 300		ISO 2808 or ASTM D4138	236
Adhesive layer thickness		µm	150 to 250		ISO 2808 or ASTM D4138	180
Minimum total thickness of coating, Pipe diameter, mm (in): DN 250 (10)		mm	2.5		ISO 21809-1 (Annex A)	2.72
Appearance of coating		--	Uniform colour, free of defects and discontinuities, delaminations, seperations		Visual	ok
Continuity / Holiday detection (maximum speed: 0.3 m/s)		--	No holidays		ISO 21809-1 (Annex B)	No holidays
Impact resistance, min	at 23±2°C	J/mm	7		ISO 21809-1 (Annex E)	No cracks and defects
	at -30±3°C		3			No cracks and defects
Indentation, max	at 23±2°C	mm	0.2		CSA Z245.20 Series- 14 (Clause 12.12)	0.09
	at 80±3°C		0.4			0.27
Elongation at break at 23±2°C, min		%	400		ISO 527-1 and -3	576
Peel strength (Adhesion)	at 23±2°C	N/mm	Peeled surface shall be cohesive. Nobare steel after peeling	>15	ISO 21809-1 (Annex C)	38.1
	at 80±3°C			>3		7.2
Product Stability during application of the PE top layer process (In process degradation of PE)		%	ΔMFR ≤ 20 for PE (virgin compounded granulate before application/ coating after application of the same batch)		ISO 1133-1 or ASTM D1238	3.1
Average radius of cathodicdisbondment , max	at 65±3°C/ 24 h/ -3.5 V	mm	5		ISO 21809-1 (Annex H)	1.7
	at 23±2°C/ 28 d/ -1.5 V		5			2.0
	at 80±3°C/ 28 d/ -1.5 V		12			7.1
Flexibility		--	No cracking at an angle 2.5° Per pipe diameter length		No crack	
Hot water immersion test		mm	Average ≤2 and maximum ≤3		0.70	