

SAFA AL ARABIA Factory was founded in year 2006. In Jeddah K.S.A.

SAFA PIPES VISION

IS to be one of the leading manufacturers in UPVC and CPVC pipes. PVC is a predominant and preferred material used for drinking water and irrigation Networks, Sewage etc .due to its outstanding physical and mechanical properties. CPVC is with its higher heat resistance .mechanical strength, Chemical resistance, Fire resistance and workability; bending, cutting, jointing operations as easy as PVC.

SAFA PIPE'S MISSION

IS to provide high quality pipes to domestic and international Markets, Matching The Customer's requests and gain broad acceptance all around the world since Their introduction.

GENERAL ADVANTAGES OF SAFA UPVC PIPES

The principal reason for the great economy of SAFA pipes is not so much their cost per meter as delivered to site but rather the dramatic reduction in installation costs which can be achieved by intelligent exploitation of their light weight, availability in longer lengths, ease of joining and their immunity from corrosion. These characteristics are of even greater importance to engineers now that the need to carry out water supply and sewerage schemes, industrial plant installations, etc. at minimum cost and maximum reliability.

Non-corrosion: SAFA UPVC pipes resist corrosion caused by acid, alkalis, oils, salts, moisture and the media inside and outside the pipe. It is particularly reliable for resistance to the severe climatic and soil conditions in Saudi Arabia.

Sanitary: SAFA UPVC pipes are entirely non-toxic. It will not affect the taste, smell or color of water of liquid nor react with any liquid to cause precipitant. Low Flow Loss: SAFA UPVC pipes have a mirror –smooth surface which minimize resistance and impede the build – up of deposits and corrosive scales.

Mechanical strength: SAFA UPVC pipes have great tensile strength yet they are flexible enough to withstand displacement in the pipe line. They will not dent or flatten under pressure.

Light Weight: SAFA UPVC pipes are incredible light. Their specific weight is one fifth of steel pipe. This cuts down transportation costs and facilitates the installation of pipes and reduces its cost.

Ease of installation: SAFA UPVC pipes are quick and easy to install, with a complete range of fittings, using solvent cement or rubber joints are leak proof. UPVC pipes can be cut easily for installation.

Ease of Maintenance: SAFA UPVC pipes can be quickly repaired with a minimum of complication or cost.

Fire Resistance: SAFA UPVC pipes will not support combustion. In the event of fire, flames are unable to travel along the pipe. It is self extinguishing.

Insulator: SAFA UPVC pipes are ideal for electric conduits. Because UPVC in itself is an integral insulator, it eliminates the possibility of electrolytic corrosion which so often destroys underground piping.

APPLICATION OF SAFA UPVC PIPES

Water supplies: Non- toxic SAFA UPVC pipes will not affect the taste, color, or smell of drinking water. They will never corrode and are therefore extremely sanitary. Deposits and scales will not build up inside as in the case for conventional steel pipes. Their strength is greater than that of asbestos pipes.

Irrigation systems: SAFA UPVC pipes are ideal for agricultural irrigation and sprinkler systems. Non-corrosive SAFA UPVC pipes is perfect for carrying water which contains chemical fertilizers and insects inhibitors. In thick wall and large diameter SAFA UPVC pipes liquids can be transported under high pressure, which is convenient for the management of large farms.

Safa UPVC pipes for Casing & screen: Engineering difficulties, and the probability of adverse chemical reaction reactions, make it impractical to overcome corrosion and encrustation through the use of protective coating, chemical treatment or cathodic protection. Thus SAFA non-corrosion PVC for water well casing and screens rapidly received approval by the appropriate ministry consultants and engineers.

Industry: resistant to most chemicals, SAFA UPVC pipes have an important role to play in industrial plants. Light, non corrosive, and easy to assemble, they allow more complex piping work than with steel or cast –iron pipes.

Soil, Waste & Drainage Sewer System: waste lines for corrosive gases, ventilation for office buildings and factories; drainage systems for private homes and elevated highways – these are a few of the many possibilities for SAFA UPVC pipes .

Mining: SAFA UPVC pipes particularly are well – suited for draining corrosive liquids found in mines. They make an ideal vent line for pits because they are easily installed in hard to reach places.

Electrical & Telecommunications Cables: SAFA UPVC pipes form an integral insulator, hence there is an ever- increasing demand for them as electrical conduit.

RANGE OF PRODUCTION

SAFA UPVC pipes are manufactured according to SSA and or DIN standards from 5mm. up to 800mm. outside diameter in various pressure classes. SAFA UPVC pipes are available with solvent weld socket joints for Diameters less than 63mm. Sizes of outside diameter 63mm. and larger are available with both mechanical rubber ring joints, and solvent weld socket joints. SAFA UPVC manufactured in accordance with ASTM are ranging from ½ inch up to 8 Inches in various pressures (Sch40, Sch80) with white & gray color. ASTM PVC pipes are available with plain spigot and socket joints only. SAFA UPVC pipes are produced in 6 meters standard length (other lengths are available on request), standard colors are Gray, white and Gray (other colors are available on request).

Manufacturing Standards

يتم تصنيع مواسير صفا لأنابيب الضغط العالي من ال UPVC وفقاً للمواصفات القياسية التالية:

SAFA High Pressure UPVC pipes are manufactured in accordance with the following standards
 UN-plasticized polyvinyl chloride pipes –general quality requirements and testing:

- | | |
|--|----------------------------|
| 1- Saudi Arabian Standard (SSA). | 2- German Standard (DIN). |
| 3- American Society for Testing & Material (ASTM) | 4- British Standard (BS). |
| 5- National Electrical Manufacturers Association (NEMA). | 6- European Standard (En). |

مواصفات أنابيب الضغط العالي من ال UPVC كلاس ١ ، كلاس ٢ ، كلاس ٣ ، كلاس ٤ ، كلاس ٥ Standard Specification for high pressure UPVC Pipes CLASS1 , CLASS2 , CLASS3 , CLASS4 , CLASS5	المواصفات الألمانية (DIN8062&8061)	
مواصفات أنابيب الضغط العالي من ال UPVC حسب المواصفات SCH120 ، SCH80 ، SCH40 Standard Specification for high pressure UPVC Pipes stander SCH40, SCH80, and SCH120	المواصفة الأمريكية (ASTM D1785)	
مواصفات أنابيب الضغط العالي من ال UPVC حسب (مواصفات SDR) Standard Specification for high pressure UPVC stander Pipes, (SDR Series)	المواصفة الأمريكية (ASTM D2241)	
مواصفات أنابيب ال UPVC للصرف الصحي والتهوية Standard Specification for UPVC pipes for Drain, waste and Vent Pipe	المواصفة الأمريكية (ASTM D2665)	
مواصفات أنابيب الضغط العالي من ال UPVC الخاصة بماء الشرب البارد Standard Specification for UPVC pressure Pipes for cold potable water	المواصفة البريطانية (BSEN1452)	
مواصفات الضغط العالي من ال UPVC المخصصة للاستخدامات الصناعية Standard Specification for high pressure UPVC Pipes for industrial uses	المواصفة البريطانية (BS3506)	
مواصفات أنابيب الضغط العالي من ال UPVC الخاصة بماء الشرب البارد Standard Specification for UPVC pressure Pipes for cold potable water	المواصفة البريطانية (BS3505)	



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SAFA UPVC PIPES PROPERTIES

Property	Characteristics	Test method	Value	Units
physical	specific gravity	ASTM D 792	1.44	g/cc
	Hardness	ASTM D 785	120	Rockwell R
	Water Absorption	ASTM D 570	0.05	mg/ cm2
	Tensile Strength@20°C	ASTM D 638	500	kg/ cm2
	Ultimate Elongation .min.	ASTM D 638	80	%
	Compressive Strength	ASTM D 695	675	kg/ cm2
	Modulus of Elasticity	ASTM D 5934	1400	Mpa
	Modulus of Rigidity	ASTM D 1043	11250	kg/ cm2
	Charpy Impact strength	ASTM D 256	4.75	Joule
Thermal	Specific Heat		0.25	Kcal./kg/°C
	Thermal Conductivity	ASTM C 518	0.13	kcal/c..m.h
	Vicat Softening point	ASTM D1525	80	°C
	Heat Distortion Temperature	ASTM D 648	75	°C
	Co-efficient of linear expansion	ASTM D 696	5X10 ⁻⁵	mm/ °C
Chemical	Resistance to chemicals	ASTM D 543	Good	
Electrical	Volume Resistivity	ASTM D 257	10 ¹⁵	Ohms/cm
	Di Electric Strength	ASTM D 149	>40	KV/mm
Flammability				Self Extinguishing
	Limiting Oxygen Index	ASTM D 2863	47	

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A-SAFA U-PVC PRESSURE PIPES

A-1 SAFA UPVC PRESSURE PIPES according to Saudi & DIN standards

(SAS 14&15/1996, Din 8062, DIN 19532, ISO/DIN 442)

APPLICATIONS: PRESSURE PIPES.

Class		Class 1		Class 2		Class 3		Class 4		Class 5	
Nominal pressure in Bars		2BAR		4BAR		6BAR		10BAR		16BAR	
NOM-OD mm	Tolerance On Nom-OD mm	Nom-thick Of Wall mm	Nom-wt. Kg/m	Nom-thick Of Wall mm	Nom-wt. Kg/m	Nom-thick Of Wall mm	Nom-wt. Kg/m	Nom-thick Of Wall mm	Nom-wt. Kg/m	Nom-thick Of Wall mm	Nom-wt. Kg/m
10	+0.2									1.0	0.045
12	+0.2									1.0	0.055
16	+0.2									1.2	0.090
20	+0.2									1.5	0.137
25	+0.2							1.5	0.174	1.9	0.212
32	+0.2							1.8	0.264	2.4	0.342
40	+0.2					1.8	0.334	1.9	0.350	3.0	0.525
50	+0.2					1.8	0.422	2.4	0.552	3.7	0.809
63	+0.2					1.9	0.562	3.0	0.854	4.7	1.290
75	+0.3			1.8	0.642	2.2	0.782	3.6	1.220	5.6	1.820
90	+0.3			1.8	0.774	2.7	1.130	4.3	1.750	6.7	2.610
110	+0.3	1.8	0.950	2.2	1.160	3.2	1.640	5.3	2.610	8.2	3.900
125	+0.3	1.8	1.080	2.5	1.480	3.7	2.130	6.0	3.640	9.3	5.010
140	+0.4	1.8	1.210	2.8	1.840	4.1	2.650	6.7	4.180	10.4	6.270
160	+0.4	1.8	1.390	3.2	2.410	4.7	3.440	7.7	5.470	11.9	8.170
180	+0.4	1.8	1.570	3.6	3.020	5.3	4.370	8.6	6.880	13.4	10.400
200	+0.4	1.8	1.740	4.0	3.700	5.9	5.370	9.6	8.510	14.9	12.800
225	+0.5	1.8	1.960	4.5	4.700	6.6	6.760	10.8	10.800	16.7	16.100
250	+0.5	2.0	2.400	4.9	5.650	7.3	8.310	11.9	13.200	18.6	19.900
280	+0.6	2.3	3.110	5.5	7.110	8.2	10.400	13.4	16.600	20.8	24.900
315	+0.6	2.5	3.780	6.2	9.020	9.2	13.200	15.0	20.900	23.4	31.500
355	+0.7	2.9	4.880	7.0	11.400	10.4	16.700	16.9	26.500	26.3	39.900
400	+0.7	3.2	6.100	7.9	14.500	11.7	21.100	19.1	33.700	29.7	50.800
450	+0.8	3.6	7.650	8.9	18.300	13.2	26.800	21.5	42.700		
500	+0.9	4.0	9.380	9.8	22.400	14.6	32.900	23.9	52.600		
560	+1.0	4.2	11.800	11.0	28.100	16.4	41.400	26.7	65.800		
630	+1.1	2.0	14.700	12.4	35.700	18.4	52.200	30.0	83.200		
710	+1.2	5.7	18.900	14.0	45.300	20.7	66.100				
800	+1.3	6.4	23.900	15.7	57.200	23.3	83.900				

*Rubber joint (r/j) type supplied from sizes 63mm up to 800 mm

*solvent cement (sc/j) type supplied from sizes 16 mm up to 800 mm

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A-2 SAFA UPVC pipes ACCORDING TO ASTM D -1785, SCHEDULE 40 & SCHEDULE 80

APPLICATIONS: WATER DISTRIBUTION & IRRIGATION SYSTEMS

Nominal pipe size Inch	O.D.(mm)		SCHEDULE 40					SCHEDULE 80				
	min	max	Wall thickness (mm)		Nominal weight (kg/M)	Bars	PSI	Will thickness(mm)		Nominal weight (kg/M)	Bars	PSI
			min	max				min	max			
½	21.24	21.44	2.77	3.28	0.240	41.3	600	3.73	4.24	0.300	58.6	850
¾	26.57	26.77	2.87	3.38	0.330	33.1	480	3.91	4.42	0.430	47.5	690
1	33.27	33.53	3.38	3.89	0.480	31.0	450	4.55	5.08	0.610	43.5	630
1 ¼	42.03	42.29	3.56	4.07	0.650	25.5	370	4.85	5.44	0.870	35.8	520
1 ½	48.11	48.41	3.68	4.19	0.770	22.8	330	5.08	5.69	1.030	32.4	470
2	60.17	60.47	3.91	4.42	1.040	19.3	280	5.54	6.20	1.430	27.6	400
2 ½	72.84	73.20	5.16	5.77	1.570	20.7	300	7.01	7.85	2.200	29.0	420
3	88.70	89.10	5.49	6.15	2.140	17.9	260	7.62	8.53	2.910	25.5	370
4	114.10	114.50	6.02	6.73	3.050	15.2	220	8.56	9.58	4.260	22.0	320
5	141.05	141.55	6.22	7.34	4.180	13.1	190	9.52	10.67	6.420	20.0	290
6	168.00	168.56	7.11	7.98	5.370	12.4	180	10.97	12.29	8.130	19.3	280
8	218.70	219.46	8.18	9.17	8.110	11.0	160	12.70	14.22	12.230	17.2	250

A-3 SAFA UPVC pipes based on ASTM D 2241

APPLICATION: PRESSURE RATED PIPES

Nominal Pipe Size inch	outside Diameter (mm)		Wall thickness (mm)													
			Standard Dimension Ratio (SDR).													
			SDR64 w.p:4 Bar		SDR41 w.p:6.9 Bar		SDR32.5 w.p:8.6 Bar		SDR26 w.p:11 Bar		SDR21 w.p:13.8 Bar		SDR17 w.p:17.2 Bar		SDR13.5 w.p:21.7 Bar	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1/2	21.24	21.44													1.57	2.08
3/4	26.57	26.77									1.52	2.03	1.57	2.08	1.98	2.49
1	33.27	33.53							1.52	2.03	1.60	2.11	1.96	2.46	2.46	2.97
1 1/4	42.03	42.29					1.52	2.03	1.63	2.13	2.01	2.52	2.49	3.00	3.12	3.63
1 1/2	48.11	48.41					1.52	2.03	1.85	2.36	2.29	2.80	2.84	3.35	3.58	4.09
2	60.17	60.47					1.85	2.36	2.31	2.82	2.87	3.38	3.56	4.06	4.47	4.98
3	88.70	89.10			2.16	2.67	2.74	3.25	3.43	3.94	4.24	4.75	5.23	5.87	6.58	7.37
4	114.07	114.53	1.77	2.28	2.80	3.30	3.51	4.01	4.39	4.90	5.44	6.10	6.73	7.54	8.46	9.47
6	168.00	168.56	2.63	3.14	4.11	4.62	5.18	5.79	6.48	7.26	8.03	9.00	9.91	11.10	12.47	13.97
8	218.70	219.46	3.40	3.91	5.33	5.97	6.73	7.54	8.43	9.45	10.41	11.66	12.90	14.45		

* LENGTH: 5.8 & 6 meters.

* COLOUR: Gray / White.

* SOCKETTYPE: plain, solvent cement (sc/j)

* Non standard lengths & colors are available on request.

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A-4 SAFA UPVC pipes According to BS 3505 / 3506

APPLICATIONS: WATER SUPPLY, IRRIGATION SYSYEMS, INDUSTRIAL USE.

Nominal Size Inch.	Outside Diameter mm		WALL THICKNESS (mm)													
			Class 'B'		Class 'C'		Class 'D'		Class 'E'		Class 'O'		Class '6'		Class '7'	
	min	max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
3/8	17.0	17.3							1.5	1.9			2.3	2.8	3.2	3.8
1/2	21.2	21.5							1.7	2.1			2.8	3.3	3.7	4.3
3/4	26.6	26.9							1.9	2.5			2.9	3.4	3.9	4.5
1	33.4	33.7							2.2	2.7			3.4	4.0	4.5	5.2
1 1/4	42.1	42.4					2.2	2.7	2.7	3.2			3.6	4.2	4.8	5.5
1 1/2	48.1	48.4					2.5	3.0	3.1	3.7	1.8	2.2	3.7	4.3	5.1	5.9
2	60.2	60.5			2.5	3.0	3.1	3.7	3.9	4.5	1.8	2.2			5.5	6.3
2 1/2	75.0	75.3			3.0	3.5	3.9	4.5	4.8	5.5	1.8	2.2				
3	88.7	89.1	2.9	3.4	3.5	4.1	4.6	5.3	5.7	6.6	1.8	2.2				
4	114.1	114.5	3.4	4.0	4.5	5.2	6.0	6.9	7.3	8.4	2.3	2.8				
5	140.0	140.4	3.8	4.4	5.5	6.4	7.3	8.4	9.0	10.4	2.6	3.1				
6	168.0	168.5	4.5	5.2	6.6	7.6	8.8	10.2	10.8	12.5	3.1	3.7				
8	218.8	219.4	5.3	6.1	7.8	9.0	10.3	11.9	12.6	14.5	3.1	3.7				

* Classes B, C, D & E are BS 3505 / 3506

Classes 0, 6 & 7 are to BS 3506 / 1969

Classes 6&7 equivalent to ASTM D – 1785, SCH 40 & SCH 80 respectively.

* LENGTH: 5.8 & 6 meters.

* Color: Gray / White.

* SOCKETTYPE: Plain, solvent cements (sc/j).

* Non standard lengths & colors are available on request.

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A-5 SAFA UPVC Pressure Pipes according to EN 1452

APPLICATIONS: PRESSURE PIPES.

Nominal Outside Diameter dn	Nominal (minimum) wall thickness							
	Pipe Series S							
	s 20 (SDR 41)	s (16,7) (SDR 34,4)	s 16 (SDR 33)	s 12,5 (SDR26)	s 10 (SDR 21)	s 8 (SDR 17)	s 6,3 (SDR 13,6)	s 5 (SDR 11)
	Nominal Pressure PN based on service (design) coefficient c=2,5							
		PN 6	PN 6	PN 8	PN 10	PN 12,5	PN 16	PN 20
12		—	—	—	—	—	—	1,5
16		—	—	—	—	—	—	1,5
20		—	—	—	—	—	1,5	1,9
25		—	—	—	—	1,5	1,9	2,3
32		—	—	1,5	1,6	1,9	2,4	2,9
40		—	1,5	1,6	1,9	2,4	3,0	3,7
50		1,5	1,6	2,0	2,4	3,0	3,7	4,6
63		1,9	2,0	2,5	3,0	3,8	4,7	5,8
75		2,2	2,3	2,9	3,6	4,5	5,6	6,8
90		2,7	2,8	3,5	4,3	5,4	6,7	8,2
Nominal pressure PN based on service (design) coefficient c=2,0								
	PN 6	PN 7,5	PN 8	PN 10	PN 12,5	PN 16	PN 20	PN25
110	2,7	3,2	3,4	4,2	5,3	6,6	8,1	10,0
125	3,1	3,7	3,9	4,8	6,0	7,4	9,2	11,4
140	3,5	4,1	4,3	5,4	6,7	8,3	10,3	12,7
160	4,0	4,7	4,9	6,2	7,7	9,5	11,8	14,6
180	4,4	5,3	5,5	6,9	8,6	10,7	13,3	16,4
200	4,9	5,9	6,2	7,7	9,6	11,9	14,7	18,2
225	5,5	6,6	6,9	8,6	10,8	13,4	16,6	—
250	6,2	7,3	7,7	9,6	11,9	14,8	18,4	—
280	6,9	8,2	8,6	10,7	13,4	16,6	20,6	—
315	7,7	9,2	9,7	21,1	15,0	18,7	23,2	—
355	8,7	10,4	10,9	13,6	16,9	21,1	26,1	—
400	9,8	11,7	12,3	15,3	19,1	23,7	29,4	—
450	11,0	13,2	13,8	17,2	21,5	26,7	33,1	—
500	12,3	14,6	15,3	19,1	23,9	29,7	36,8	—
560	13,7	16,4	17,2	21,4	26,7	—	—	—
630	15,4	18,4	19,3	24,1	30,0	—	—	—
710	17,4	20,7	21,8	27,2	—	—	—	—
800	19,6	23,3	24,5	30,6	—	—	—	—
900	22,0	26,3	27,6	—	—	—	—	—
1000	24,5	29,2	30,6	—	—	—	—	—

* LENGTH: 5.8 & 6 meters.

* COLOUR: Gray

* SOCKET TYPE: Rubber joint (R/J) type , cement (SC/J)

* Non standard lengths & colors are available on request.

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SAFA AL ARABIA FACTORY FOR PLASTIC PRODUCTS CO. LTD.

B- SAFA U-PVC SEWER & DRAIN PIPES

B-1 SAFA UPVC Sewer Pipes (Gravity) According to DIN 19534.

APPLICATIONS: SEWER PIPE GRAVITY

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Insertion Depth	Weight kg/m
	(D)	Tolerance	(S)	Tolerance		
110	110	0.3	3.0	+0.5	115	1.630
125	125	0.3	3.0	+0.5	120	1.870
160	160	0.4	3.6	+0.6	132	2.650
200	200	0.4	4.5	+0.7	145	4.120
250	250	0.5	6.1	+0.9	160	7.000
315	315	0.6	7.7	+1.0	180	11.110
400	400	0.7	9.8	+1.2	200	17.800
500	500	0.9	12.2	+1.5	250	27.649
600	630	1.1	15.4	+1.8	300	43.944

* LENGTH: 5.8 & 6 meters.

* COLOUR: Gray.

* SOCKET TYPE: Solvent cement (SC/j) type. Rubber joint(R/J) type.

* Non standard lengths & colors are available on request.

B-2 SAFA UPVC Sewer Pipes (Gravity) According to DIN 8061/DIN 8062.

APPLICATIONS: SEWER PIPE GRAVITY

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Weight kg/m
	(D)	Tolerance	(S)	Tolerance	
110	110	0.3	3.2	+0.6	1.640
125	125	0.3	3.7	+0.6	2.130
160	160	0.4	4.7	+0.7	3.440
200	200	0.4	5.9	+0.8	5.370
250	250	0.5	7.3	+1.0	8.310
315	315	0.6	9.2	+1.2	13.200
400	400	0.7	11.7	+1.4	21.100
500	500	0.9	14.6	+1.7	32.900
630	630	1.1	16.4	+2.2	52.200

* LENGTH: 5.8 & 6 meters

* COLOUR: Gray

* Socket Type: Solvent cement (SC/J) type. Rubber joint(R/J) type.

* Non standard lengths & colors are available on request.

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B-3 SAFA UPVC Drain Pipes According to Din 19531

APPLICATIONS: DRAINAGE ABOVE GROUND.

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Weight kg/m
	Min	Max	Min	Max	
40	40.0	40.2	1.8	2.2	0.381
50	50.0	50.2	1.8	2.2	0.481
75	75.0	75.3	1.8	2.2	0.642
110	110.0	110.3	2.2	2.7	1.160
125	125.0	125.3	2.5	3.0	1.480
160	160.0	160.4	3.2	3.8	2.410

B-4 SAFA UPVC Underground Sewer Pipe (Gravity) According to BS 5481

APPLICATIONS: SEWER PIPE GRAVITY.

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Weight kg/m
	Min	Max	Min	Max	
200	200.0	200.6	4.9	5.6	4.500
250	250.0	250.7	6.1	7.0	7.010
315	315.0	315.9	7.7	8.7	11.070
400	400.0	401.0	9.8	11.0	17.830

B-5 SAFA UPVC Underground Drainage & Sewer Pipes according to BS 4660

APPLICATIONS: DRAINAGE UNDER GARDENS, FIELDS, DRIVEWAYS & ROADS.

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Weight kg/m
	Min	Max	Min	Max	
110(4")	110	110.4	3.2	3.8	1.640
160(6")	160	160.6	4.1	4.8	3.040

B-6 SAFA UPVC Aboveground Soil Pipes according to BS 4514.

APPLICATIONS: Soil ABOVEGROUND.

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Weight kg/m
	Min	Max	Min	Max	
82(3")	82.4	82.8	3.2	3.8	1.210
110(4")	110	110.4	3.2	3.8	1.640
160(6")	160	160.6	3.3	3.9	2.470

* LENGTH: 4, 5.8 & 6meters.

* COLOUR: Gray

* SOCKET TYPE: Solvent cement (SC/J) typ. Rubber Joint (R/J) type.

* Non standard lengths & colors are available on request.

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B-7 SAFA UPVC Aboveground Waste Pipes according to BS 5255.

APPLICATIONS: WASTE ABOVEGROUND

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Weight kg/m
	Min	Max	Min	Max	
32(1 1/4")	36.15	36.45	1.8	2.2	0.301
40(1 1/2")	42.75	43.05	1.9	2.3	0.376
50(2")	55.75	56.05	2.0	2.4	0.519

* Note: For Waste Pipes-Cold Water

* LENGTH: 4, 5.8 & 6 meters.

* COLOUR: Gray.

* SOCKET TYPE: solvent cement (SC/J) type. Rubber joint (R/J) type.

* Non standard lengths & colors are available on request.

B-8 SAFA UPVC Drain, Waste, Vent pipes according to ASTM D -2665.

APPLICATIONS: DRAIN, WASTE, VENT.

Nominal size mm	Outside Diameter mm		Wall Thickness mm		Weight kg/m
	Min	Max	Min	Max	
1 1/4	42.03	42.29	3.56	9.06	0.650
1 1/2	48.11	48.41	3.68	4.19	0.770
2	60.17	60.47	3.91	4.42	1.040
3	88.07	89.1	5.49	6.15	2.140
4	114.1	114.5	6.02	6.73	3.050
6	168	168.56	7.11	7.98	5.370
8	218.7	219.46	8.18	9.17	8.110

* LENGTH: 5.8 & 6 METERS

* COLOUR: White

* SOCKET TYPE: plain, solvent cement (SC/J).

* Non standard lengths & colors are available on request.

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SAFA AL ARABIA FACTORY FOR PLASTIC PRODUCTS CO. LTD.

C-SAFA U-PVC ELECTRICAL & TELEPHONE PIPES / DUCTS

C-1 SAFA UPVC Electrical Conduits according to SSA 14 & DIN 8061/2.

APPLICATIONS: ELECTRICAL INSTALLATIONS.

Nominal OD (mm)	Class 2		Class 3	
	wall Thickness (mm)	Weight kg/m	wall Thickness (mm)	Weight kg/m
40	-	-	1.8	0.334
50	-	-	1.8	0.422
63	-	-	1.9	0.562
75	1.8	0.642	2.2	0.782
90	1.8	0.774	2.7	1.130
110	2.2	1.160	3.2	1.640
125	2.5	1.480	3.7	2.130
140	2.8	1.840	4.1	2.650
160	3.2	2.410	4.7	3.440
200	4.0	3.700	5.9	5.370
225	4.5	4.700	6.6	6.760
250	4.9	5.650	7.3	8.310
280	5.5	7.110	8.2	10.400
315	6.2	9.020	9.2	13.200
400	7.9	14.500	11.7	21.100

* LENGTH: 6 meters.

* COLOUR: Gray / White

* SOCKET TYPE: Solvent cement (SC/J)

* Non standard lengths & colors are available on request.

C-2 SAFA UPVC Electrical conduits according to SSA 255.

APPLICATIONS: ELECTRICAL INSTALLATIONS.

Nominal Size	Inside Diameter (mm)	Wall Thickness (mm)
16	13.0	1.50
20	16.9	1.55
25	21.4	1.80
32	27.8	2.10

* LENGTH: 6 meters.

* COLOUR: Gray / White

* SOCKET TYPE: Plain, Solvent Cement (sc /J).

* Non standard lengths & colors are available on request.

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C-3 SAFA UPVC Electrical conduits according to BS 6099

APPLICATIONS: ELECTRICAL INSTALLATIONS.

Nominal Size (mm)	Minimum Inside Diameter (mm)			Maximum Wall Thickness (mm)			Weight kg/m		
	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy
16	13.7	13.0	12.2	1.15	1.5	1.9	0.080	0.100	0.125
20	17.4	16.9	15.8	1.3	1.55	2.1	0.120	0.140	0.180
25	22.1	21.9	20.6	1.45	1.8	2.2	0.165	0.200	0.240
32	28.6	27.8	26.6	1.7	2.1	2.7	0.245	0.296	0.370
40	35.8	35.4	34.4	2.1	2.3	2.8	0.352	0.406	0.485
50	45.1	44.3	43.2	2.45	2.85	3.4	0.540	0.622	0.707
63	57.0	-	-	3.0	-	-	0.830	-	-

* LENGTH: 3 meters.

* COLOUR: Gray / White

* SOCKET TYPE: Plain. Solvent Cement (sc/J) type

* Non standard lengths & colors are available on request.

C-4 SAFA UPVC Electrical conduits & Tubing according to NEMA TC - 2

APPLICATIONS: EPT Electrical PLASTIC TUBING FOR ENCASEMENT IN CONCRETE. EPC 40 Electrical PLASTIC CONDUIT FOR DIRECTBURIAL UNDERGROUND. EPC 80 Electrical PLASTIC CONDUITS FOR HEAVY DUTY.

Nominal Size Inch	Outside Diameter (mm)		Wall Thickness (mm)						Weight kg/m		
			EPT		EPC 40		EPC 80		EPT	EPC 40	EPC 80
	Min	Max	Min	Max	Min	Max	Min	Max			
1/2	21.24	21.44	1.52	2.03	2.77	3.28	3.73	4.24	0.155	0.240	0.300
3/4	26.57	26.77	1.52	2.03	2.87	3.38	3.91	4.24	0.197	0.330	0.430
1	33.27	33.53	1.52	2.03	3.38	3.89	4.55	5.08	0.250	0.480	0.610
1 1/4	42.03	42.29	1.78	2.29	3.56	4.07	4.85	5.44	0.365	0.650	0.870
1 1/2	48.11	48.41	2.03	2.54	3.68	4.19	5.08	5.69	0.470	0.770	1.030
2	60.17	60.47	2.54	3.05	3.91	4.42	5.54	6.2	0.717	1.040	1.430
2 1/2	72.84	73.2	2.79	3.30	5.16	5.77	7.01	7.85	0.952	1.570	2.200
3	88.70	89.1	3.18	3.68	5.49	6.15	7.62	8.53	1.310	2.140	2.910
4	114.1	114.5	3.81	4.32	6.02	6.73	8.56	9.58	2.000	3.050	4.260
5	141.05	141.55	-	-	6.22	7.347	9.52	10.67	-	4.180	6.420
6	168.0	168.56	-	-	7.11	7.98	10.97	12.29	-	5.370	8.130

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C-5 SAFA UPVC Utilities Duct according to NEMA TC-6 & ASTM F 512.

APPLICATIONS: TYPE EB FOR ENCASED BURIAL IN CONCRETE. YPE DB FOR DIRECT BURIAL WITHOUT CONCRETE.

Nominal Size (Inch)	Outside Diameter (mm)	PVC Type EB 20		PVC Type DB 60	
		Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m
2	60.17	1.52	0.465	1.52	0.465
3	88.70	1.55	0.703	2.34	1.000
4	114.10	2.08	1.170	3.07	1.650
5	141.05	2.62	1.710	3.86	2.500
6	168.00	3.18	2.530	4.62	3.570

C-6 SAFA UPVC Utilities Duct according to NEMA TC-8 & ASTM F 512.

APPLICATIONS: TYPE EB FOR ENCASED BURIAL IN CONCRETE. TYPE DB FOR DIRECT BURIAL WITHOUT CONCRETE.

Nominal Size (Inch)	Outside Diameter (mm)	PVC Type EB 135		PVC Type DB 120	
		Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m
1	33.27	-	-	1.52	0.251
1 1/2	48.11	-	-	1.52	0.369
2	60.17	1.52	0.465	1.96	0.576
3	88.70	1.93	0.847	3.00	1.250
4	114.10	2.54	1.390	3.91	2.050
5	141.05	3.2	2.090	4.85	3.120
6	168.00	3.86	3.020	5.77	4.420

* LENGTH: 5.8 & 6 meters

* COLOUR: Gray

* Solvent Cement (sc /J) type. : SOCKET TYPE

* Non standard lengths & colors are available on request.

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D-SAFA CPVC PIPES

SAFA CPVC Pipes manufactured from Chlorinated polyvinyl chloride compound and has chemical and physical properties according to USA Standard (ASTMF441). So it had been manufactured for many purpose and usages especially to resist hot and cold portable water which is reach some times the boiling point.

In addition to that, SAFA CPVC Pipes take an easy usages and installments, and for the same reason it is worldwide used in the internal connection in buildings which is compatible with environment and weather.

Hence, SAFA always obtain for the sake of quality the best raw-material from the specialist international companies in this field. And in same time SAFA CPVC Fittings also available in all sizes and to be connected and completed the glob of SAFA CPVC Pipes in same quality and same compound .

SAFA UPVC PIPES PROPERTIES

property	characteristics	test method	value	units
physical	specific gravity	ASTM D 792	1.55	g/cc
	Hardness	ASTM D 785	120	Rockwell R
	Water Absorption	ASTM D 570	0.05	mg/ cm2
	Tensile Strength@20°C	ASTM D 638	550	kg/ cm2
	Ultimate Elongation .min.	ASTM D 638	80	%
	Compressive Strength	ASTM D 695	675	kg/ cm2
	Modulus of Elasticity	ASTM D 5934	1500	Mpa
	Modulus of Rigidity	ASTM D 1043	12000	kg/ cm2
	Charpy Impact strength	ASTM D 256	4.75	Joule
	Izod Impact strength	ASTM D 256	80	J/M
Thermal	Specific Heat	ASTM D 2766	0.25	Kcal./kg/°C
	Thermal Conductivity	ASTM C 518	0.04	kcal/c..m.h
	Vicat Softening point	ASTM D1525	110	°C
	Heat Distortion Temperature	ASTM D 648	103	°C
	Co-efficient of linear expansion	ASTM D 696	5.6x10 ⁻⁵	mm/ °C
Chemical	Resistance to chemicals	ASTM D 543	Good	
Electrical	Volume Resistivity	ASTM D 257	10 ¹⁵	Ohms/cm
	Di Electric Strength	ASTM D 149	>40	KV/mm
Flammability				Self Extinguishing
	Flammability Rating	UL-94	V-0	
	Limting Oxygen Index	ASTM D 2863	60	



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D-1 SAFA CPVC Pipes based on ASTM F 441 Pressure rating applies for water at 23°C and for unthreaded Pipes

Normal size in Inch	Outside Diameter		Schedule 80 Minimum Wall Thickness		Normal Weight kg./m	Water pressure Rating	
	Inch	mm	Inch	mm		psi	bar
¼	0.540	13.70	0.119	3.02	0.230	1130	77.8
½	0.840	21.34	0.147	3.73	0.337	850	58.6
¾	1.050	26.67	0.154	3.91	0.457	690	47.6
1	1.315	33.40	0.179	4.55	0.671	630	43.4
1 ¼	1.660	42.20	0.191	4.85	0.928	520	35.9
1 ½	1.900	48.30	0.200	5.08	1.130	470	32.4
2	2.5375	60.33	0.218	5.54	1.560	400	27.6
3	3.500	88.90	0.300	7.62	2.900	370	25.5
4	4.500	114.30	0.337	9.52	4.300	320	22.1
6	6.625	168.30	0.432	10.97	8.100	280	19.3

D-2 SAFA CPVC According to DIN 8079 APPLICATIONS: HOT & COLD POTABLE WATER.

Nominal size mm	Pressure Rating At 20° C					
	PN16		PN20		PN25	
	Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m	Wall Thickness (mm)	Weight kg/m
16	1.2	0.100	1.5	0.118	1.8	0.136
20	1.5	0.151	1.9	0.183	2.3	0.217
25	1.9	0.234	2.3	0.379	2.8	0.326
32	2.4	0.379	3.0	0.455	3.6	0.534
40	3.0	0.582	3.7	0.701	4.5	0.830
50	3.7	0.896	4.6	1.090	5.6	1.290
63	4.7	1.430	5.8	1.720	7.0	2.020
75	5.6	2.020	6.9	2.420	8.4	2.880
90	6.7	2.880	8.2	3.460	10.0	4.100
110	8.2	4.310	10.0	5.130	12.3	6.160

* LENGTH: 5.8 & 6 meters.

* COLOUR: Beige

* SOCKET TYBE: Plain.

* Non standard lengths & colors are available on request.

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