



MISR EL NOUR

for U.P.V.C. PIPES

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for U.P.V.C. PIPES





Mr. Nour El-din Mahmoud
Chairman

Misr El Nour Group is one of the strongest Egyptian establishment that contributed to Egyptian industrial renaissance since 20 years ago. Due to the promotion and support of national industries, Misr El Nour group became a monumental industrial establishment.

Misr El Nour Group started its industrial business with Misr El Nour Company for plastic packages, followed by Misr El Nour Company for Marble and Granite, and now with:

Misr El Nour Company for plastics and metals ,this factory production is plastic pipes made of Unplasticized Poly Vinyl Chloride therefore its advantages exceeds pipes made of other materials, UPVC pipes can be used in many

purposes according to of the specification global technology, where they can be used for feeding water networks, sanitation, ventilation, modern irrigation

systems and telephone lines in accordance with telecom Egypt (TC-161A) specifications.

Misr El Nour Company for plastics and metals was born giant in its field since its beginning and was able to support the local Egyptian market as well as international markets with updated techniques, at the same standard of European and American levels.

Our factory 's range of production of UPVC pipes starts 20 mm diameter up to 800 mm diameter, and it started with capacity of 45000 tons annually where it covered the Egyptian

market and exported to many countries like Sudan – Iraq – Libya – Algeria - Guinea – Jordan – Lebanon – Senegal .

Our production is subject to continuous surveillance through quality control and quality assurance during all the production steps of pipes and its related parts and fittings, this is all done by a qualified team of specialists in quality control, quality assurance and laboratories affairs.

Our factory has all the equipment and devices that allow us to ensure our products conformity with the international standards or the specific standards contracted with customers.

We apply all needed tests on our production included chemical, physical and mechanical properties tests.

Misr El Nour Company has highly qualified teams for installation of plastic pipes and we are fully ready to visit our customer 's sites and give our consultation for pipes installation.

May god be with us all

Mr. Nour El -Din Mahmoud
Signature

May Allah have mercy on him

COMPANY'S CERTIFICATES

- 1- National organization for potable water & Sanitary Drainage.
- 2- LICENCE of Quality Mark from Egyption organization for Standardization &Quality.
- 3- ISO 9001 : 2008 Certificate.

Ministry of Trade & Industry Egyptian Organization for Standardization & Quality			
LICENCE OF QUALITY MARK			
Company's Name: Misr El - Nour Co. for Plastic & Metals			
Address		: 10th of Ramadan City , Industrial Zone No B3	
product(s) Certified		: Unplasticized Poly Vinyl Chloride (PVC-U) Pipes for Sewage	
Standard(s)		: ES. 1717/ 2008	
Date of Issue		:	
Validity		:	
Chairman of EOS (<i>Hay Baraa</i>)		Quality General Manager (<i>Omaya Ali Hassan</i>)	

Ministry of Trade & Industry Egyptian Organization for Standardization & Quality			
LICENCE OF QUALITY MARK			
Company's Name: Misr El - Nour Co. for Plastic & Metals			
Address		: 10th of Ramadan City , Industrial Zone No B3	
product(s) Certified		: Unplasticized Poly Vinyl Chloride (PVC-U) Pipes for Potable Water	
Standard(s)		: ES. 848-1/ 2008	
Date of Issue		:	
Validity		:	
Chairman of EOS (<i>[Signature]</i>)		Quality General Manager (<i>Omaya Ali Hassan</i>)	

RAW MATERIAL MIXING PLANT

Misr El Nour 's pipes, made of UPVC, have many advantages as it is produced by using the most updated technology in the world to assure the full fusion of raw PVC this gives the product high quality with supposable life of about more than fifty years.

We reached the highest international specifications by using production lines controlled by computers and fully automatic control systems monitoring all production stages.

The Factory is equipped with a mixing plant working with Windows Control Center (Win CC) program which is the latest advanced program in the world, ensuring the accuracy of weighting and mixing to get stable and accurate product.

This system gives us the facility to detect any troubles and overcome them in the right time.

Best technology and best production lines help the company to be one of the leading producers of UPVC pipes in Egypt and the Middle East.





LABORATORIES

Misr EL Nour Company for plastics and metals is one the leading companies in the field of producing UPVC pipes in Egypt and middle east .

Misr EL Nour Company had its own laboratories which have the updated testing equipment imported from the international leading companies to get high testing accuracy to guarantee the high quality of the pipes during all manufacturing steps according to international standards.

Misr EL Nour Company laboratories are considered a reference to many research organizations and quality assurance committees in Egypt .

Our Laboratories is fully loaded with all the contain much to apply all the test .

TEST TO BE APPLIED

A- Raw Materials Tests.

- 1- Bulk density test.
- 2- K – VALUE test.
- 3- Particle size by sieve analysis.

B- Tests carried on pipes.

- 1- Visual inspection.
- 2- Dimensional measures .
- 3- Go in go out test .
- 4- Heat reversion test.
- 5- Impact test .
- 6- Internal pressure test .
- 7- Water absorption test .
- 8- Methylene chloride test .
- 9- Acetone test .

Misr EL Nour pipes for water supply irrigation pressure from 2 bar up to 16 bar According to German specification Din 8061-8062

Nominal Outside Diameter mm	Socket Depth mm	Class I bar 2		Class II bar 4		Class III bar 6		Class IV 10bar		Class V bar 16	
		No.Thick Of wall mm	No .wt Kg/m	No.Thick Of wall mm	No .wt Kg/m	No.Thick Of wall mm	No .wt Kg/m	No.Thick Of wall mm	No .wt Kg/m	No.Thick Of wall mm	No .wt Kg/m
10		-	-	-	-	-	-	-	-	1.0	0.045
12		-	-	-	-	-	-	-	-	1.0	0.055
16		-	-	-	-	-	-	-	-	1.2	0.090
20		-	-	-	-	-	-	-	-	1.5	0.137
25		-	-	-	-	-	-	1.5	0.174	1.9	0.212
32		-	-	-	-	-	-	1.8	0.264	2.4	0.342
40		-	-	-	-	1.8	0.334	1.9	0.350	3.0	0.525
50	75	-	-	-	-	1.8	0.422	2.4	0.552	3.7	0.809
63	100	-	-	-	-	1.9	0.562	3.0	0.854	4.7	1.289
75	110	-	-	1.8	0.642	2.2	0.782	3.6	1.22	5.6	1.82
90	110	-	-	1.8	0.774	2.7	1.13	4.3	1.75	6.7	2.61
110	115	1.8	0.950	2.2	1.16	3.2	1.64	5.3	2.61	8.2	3.90
125	120	1.8	1.08	2.5	1.48	3.7	2.13	6.0	3.34	9.3	5.01
140	125	1.8	1.21	2.8	1.84	4.1	2.65	6.7	4.18	10.4	6.27
160	132	1.8	1.39	3.2	2.41	4.7	3.44	7.7	5.47	11.9	8.17
180	145	1.8	1.57	3.6	3.02	5.3	4.37	8.6	6.88	13.4	10.4
200	145	1.8	1.74	4.0	3.70	5.9	5.37	9.6	8.51	14.9	12.8
225	152	1.8	1.96	4.5	4.70	6.6	6.76	10.8	10.8	16.7	16.1
250	160	2.0	2.40	4.9	5.65	7.3	8.31	11.9	13.2	18.6	19.9
280	170	2.3	3.11	5.5	7.11	8.2	10.4	13.4	16.6	20.8	24.9
315	180	2.5	3.78	6.2	9.02	9.2	13.2	15.0	20.9	23.4	31.5
355	180	2.9	4.87	7.0	11.4	10.4	16.7	16.9	26.5	26.3	39.9
400	200	3.2	6.10	7.9	14.5	11.7	21.1	19.1	33.7	29.7	50.8
450	200	3.6	7.65	8.9	18.3	13.2	26.8	21.5	42.7	-	-
500	250	4.0	9.37	9.8	22.4	14.6	32.9	23.9	52.6	-	-
560	260	4.5	11.8	11.0	28.1	16.4	41.4	26.7	65.8	-	-
630	300	5.0	14.7	12.4	35.7	18.4	52.2	30.0	83.2	-	-
710	320	5.7	18.9	14.0	45.3	20.7	66.1	-	-	-	-
800	360	6.4	23.9	15.7	57.2	23.3	83.9	-	-	-	-
900	410	7.2	30.2	17.7	72.5	26.3	106	-	-	-	-
1000	455	8.0	37.1	19.7	89.6	29.2	131	-	-	-	-

- The Length Of Pipe 6 Meter Include socket or as requested.
- Each pipe has one rubber ring to connection.
- The color's D.grey or as requested.

Misr EL Nour Pipes For Drainage and sewerage under Gravity According to German Specification Din 19534

Nominal size mm	Outside Diameter		Wall thickness		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	7.00
300	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
630	630	1.1	15.4	1.8	300	43.944

- The length of pipe 6 – meter include socket or as requested .
- Each pipe has one rubber ring to connection .
- The color's D – gray or as requested .

Misr El Nour Pipes for telephone duct According to ARENTO specification T.C 161 A

Nominal size mm	Outside diameter		Wall thickness		Socket depth MM
	(S)	Tolerance	(S)	Tolerance	
50	50	0.2	1.8	0.4	80
110	110	0.3	3.2	0.6	170

- Length of pipe 6 meter not incl . the socket .
- Eash pipe has one rubber ring to connection .

MISR EL NOUR PIPES FOR WATER SUPPLY AND IRRIGATION

ACCORDING TO EGYPTIAN STANDARD

ES : 848 – 1/2008 – ISO 4422 - / 1996

SCHEDULE NO (1)

Nominal outside diameter DN	6 bar S 16.7 SDR 34.4 PN 6		8 bar S 12.5 SDR 26 PN 8		10 bar S 10 SDR 21 PN 10		12.5 bar S 8 SDR 17 PN 12.5		16 bar S 6.3 SDR 13.6 PN 16		25 bar S 4 SDR 9 PN 25	
	No. thick of wall mm	No. wt kg/m	No. thick of wall mm	No. wt kg/m	No. thick of wall mm	No. wt kg/m	No. thick of wall mm	No. wt kg/m	No. thick of wall mm	No. wt kg/m	No. thick of wall mm	No. wt kg/m
20	-	-	-	-	-	-	-	-	1.5	0.137	2.3	0.196
25	-	-	-	-	-	-	1.5	0.170	1.9	0.212	2.8	0.294
32	-	-	-	-	1.6	0.264	1.9	0.277	2.4	0.342	3.6	0.482
40	-	-	1.6	0.291	1.9	0.350	2.4	0.437	3.0	0.525	4.5	0.750
50	-	-	2.0	0.422	2.4	0.552	3.0	0.683	3.7	0.809	5.6	1.16
63	1.9	0.562	2.5	0.717	3.0	0.854	3.8	1.09	4.7	1.29	7.1	2.04
75	2.2	0.782	2.9	0.990	3.6	1.122	4.5	1.54	5.6	1.82	8.4	2.60
90	2.7	1.13	3.5	1.43	4.3	1.75	5.4	2.21	6.7	2.61	10.1	4.14

SCHEDULE NO (2)

Nominal outside diameter DN	bar 8 S 16 SDR 33 PN 8		bar 12.5 S 10 SDR 21 PN 12.5		bar 20 S 6.3 SDR 13.6 PN 20		bar 25 S 5 SDR 11 PN 25	
	No. thick of wall/mm	No. wt kg/m	No. thick of wall/mm	No. wt kg/m	No. thick of wall/mm	No. wt kg/m	No. thick of wall/mm	No. wt kg/m
110	3.4	1.70	5.3	2.61	8.1	3.90	10.0	5.00
125	3.9	2.21	6.0	3.34	9.2	5.01	11.4	6.48
140	4.3	2.74	6.7	4.18	10.3	6.27	12.7	8.09
160	4.9	3.57	7.7	5.47	11.8	8.17	14.6	10.63
180	5.5	4.51	8.6	6.88	13.3	10.4	16.4	13.40
200	6.2	5.64	9.6	8.51	14.7	12.8	18.2	16.57
225	6.9	7.06	10.8	10.8	16.6	16.1	-	-
250	7.7	8.76	11.9	13.2	18.4	19.9	-	-
280	8.6	10.96	13.4	16.6	20.6	24.9	-	-
315	9.7	13.91	15.0	20.9	23.2	31.5	-	-
355	10.9	17.62	16.9	26.5	26.1	39.9	-	-
400	12.3	22.40	19.1	33.7	29.4	50.8	-	-
450	13.8	28.27	21.5	42.7	33.1	67.82	-	-
500	15.3	34.83	23.9	52.6	36.8	83.77	-	-
560	17.2	43.85	26.7	65.8	-	-	-	-
630	19.3	55.36	30.0	83.2	-	-	-	-
710	21.8	70.47	-	-	-	-	-	-
800	24.5	89.24	-	-	-	-	-	-

- The Length Of Pipe 6 Meter Incl. Socket or as requested

Each Pipe Has One Rubber Ring To Connection And The Color D. grey or as requested.

- S is The Pipe Series And Equals $\frac{DN-EN}{2 EN}$

- SDR is The Standard Dimension Ratio And Equal $\frac{DN}{EN}$

- S And SDR Are Related By The equation $[SDR] = 2 (S) + 1$

• Dn= Nominal Outside Diameter

• En= Nominal Wall Thickness

**MISR EL NOUR PIPES FOR SEWERAGE ACCORDING TO EGYPTIAN
STANDARDS ES 1717 / 2008 – ISO 4435 / 2003**

Nominal outside diameter DN	SN 2 SDR 51		SN 4 SDR 41		SN 8 SDR 34	
	No. thick of wall mm	No. wt kg/m	No. thick of wall mm	No. wt kg/m	No. thick of wall mm	No. wt kg/m
110	-	-	3.2	1.64	3.2	1.64
125	-	-	3.2	1.82	3.7	2.13
160	3.2	2.41	4.0	2.91	4.7	3.44
200	3.9	3.7	4.9	4.46	5.9	5.37
250	4.9	5.65	6.2	7.06	7.3	8.31
315	6.2	9.02	7.7	11.11	9.2	13.2
355	7.0	11.4	8.7	14.06	10.4	16.7
400	7.9	14.5	9.8	17.8	11.7	21.1
450	8.8	18.3	11.0	22.53	13.2	26.8
500	9.8	22.4	12.3	28.00	14.6	32.9
630	12.3	35.7	15.4	43.944	18.4	52.2
710	13.9	45.3	17.4	56.15	-	-
800	15.7	57.2	19.6	71.39	-	-

**MISR EL NOUR PIPES FOR SEWERAGE ACCORDING TO ASTM D 1785
SCHEDULE 40,80**

Normal size inch	Outside diameter mm		Schedule (40)				Schedule (80)			
			Thickness mm		Weight kg/m	pressure rating bar	Thickness mm		Weight kg/m	pressure rating bar
	Min	Max	Min	Max			Min	Max		
1/2 «	21.2	21.2	2.8	3.3	0.24	41.4	3.7	4.2	0.31	58.6
3/4 «	26.6	26.9	2.9	3.4	0.33	33.1	3.9	4.4	0.41	47.6
1 «	33.4	33.7	3.4	3.9	0.48	31.0	4.6	5.1	0.60	43.4
1 1/4 «	42.1	42.4	3.6	4.1	0.65	25.5	4.9	5.4	0.84	35.9
1 1/2 «	48.1	48.4	3.7	4.2	0.77	22.8	5.1	5.7	1.03	32.4
2 «	60.2	60.5	3.9	4.4	1.04	19.3	5.5	6.2	1.41	27.6
3 «	88.7	89.1	5.5	6.2	2.14	17.9	7.6	8.5	2.88	25.5
4 «	114.1	114.5	6.0	6.7	3.05	15.2	8.6	9.6	4.22	22.1
6 «	168.0	168.5	7.1	8.0	5.37	12.4	11.0	12.3	8.05	19.3
8 «	218.8	219.4	8.2	9.2	8.11	11.0	12.7	14.2	12.23	17.2

- The length of pipe 6 meter or as requested.
- The pipes are without socket and the color is white

**MISR EL NOUR THREADED PIPES FOR SUPPLY AND IRRIGATION WATER
PRESSURE 9 BAR ACCORDING TO B.S 3505**

Normal size	Outside diameter	Wall thickness	Weight / meter
1/2 «	21.2	2.6	0.226
3/4 «	26.6	3.0	0.320
1 «	33.4	3.5	0.470
1 1/4 «	42.1	3.75	0.630
1 1/2 «	48.0	4.3	0.815
2 «	60.0	5.3	1.250

- Length of pipe 6 meter or as requested.

MISR EL NOUR PIPES FOR WATER SUPPLY ACCORDING TO EUROPEAN STANDARD EN 1452-2

NOMINAL OUTSIDE DIAMETER DN	NOMINAL MIN WALL THICKNESS							
	PIPE SERIES S							
	S 20	S 16,7	S 16	S 12,5	S 10	S 8	S 6,3	S 5
	(SDR 41)	(SDR 34,4)	(SDR 33)	(SDR 26)	(SDR 21)	(SDR 17)	(SDR 13,6)	(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=2,0tt							
	PN 6	PN 7,5	PN 8	PN 10	PN 12,5	PN 16	PN 20	PN 25
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	12,1	15,0	18,7	23,2	-
355	8,7	10,4	10,9	13,6	16,9	21,2	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	-	-	-	-	-

Misr EL NOUR Co. is one of the greatest and most powerful Egyptian foundation of producing U.P.V.C pipes, our pipes range between (20mm – 800mm) diameters which is produced from poly Vinyl chloride, We have one of the test central control system with computer rooms to control and supervise all production sequences avoiding any manual control to reach any defect and resolve it immediately .

CHARACTERISTICS OF THE PIPES

- 1-Insulates the Electricity .
- 2-Easy in maintenance and installation.
- 3-Rustproof, erosion proof and light in weight .
- 4-Strong and resistant to shocks, acid and alkali .
- 5-No effect in color or taste or smell of the transported fluid.
- 6-Fire resist because the UPVC resin isn't flammable .
- 7-Have no harmful effects on health and resistant to rodents and bacteria .
- 8-High efficiency for the transportation of liquids due to the inner surface smoothness and low friction coefficient , and no deposits on the inner surface affecting the liquids flow.
- 9-UPVC pipes are the best type of pipes for use in the very aggressive lands, due to its high resistance of highly concentrated salty soils .

Misr EL NOUR UPVC Pipes all manufacturing stages is fully computerized, which lead to the stability of the dimensions and measurements along the pipe . The form and dimension of the head are applicable to technical specification very carefully , which ensures absence of problems during installation .

OUR PIPES ARE PRODUCED ACCORDING TO THIS INTERNATIONAL SPECIFICATION

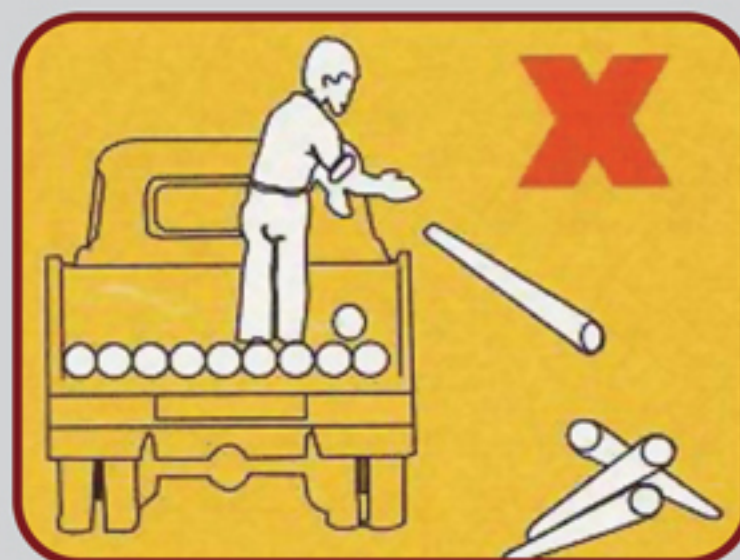
- 1-German specifications DIN 8061-8062.
- 2-German specification DIN 19534 .
- 3-German specification DIN 19531 .
- 4-German specification DIN 4925 , DIN 4926 .
- 5-Egyption specification standards ES: 848 – 1/2008 & ISO4422/1996.
- 6-Egyption standards ES: 1717-2008 & ISO 4435 / 2003.
- 7-British specification B.S 3505.
- 8-ARENTO specification T.C.161A.
- 9-American specification ASTM D 1785 .
- 10- American specification ASTM D 2241 .
- 11-Europen specification E.N 1452-2 .
- 12-British specification B.S 5481 .
- 13- ISO specification 4422-2/1996.
- 14- ISO specification 4435/2003.
- 15- Specification BSEN5008-2-4/1994.



CHEMICAL RESISTANCE OF MISR EL NOUR'S PIPES

REAGENTS	C 20°	C 40°	C 60°	REAGENTS	C 20°	C 40°	C 60°
(% HYDROCHLORIC ACID (35	○	○	○	SODIUM HYDROXIDE	○	○	○
(SULPHURIC ACID (60%	○	○	○	POTASSIUM HYDROXIDE	○	○	○
(SULPHURIC ACID (98%	○	Δ	X	AMMONIA WATER	○	○	○
(FURNING SULPHURIC ACID (100%	X			CALCIUM HYDROXIDE	○	○	○
(NITRIC ACID (70%	○	○	●	ACETONE	X		
(NITRIC ACID (95%	X	X	X	ALCOHOL	○	○	
(ACETIC ACID (BELOW 90%	○	○	●	CARBON TETRACHLORIDE	X	X	X
(ACETIC ACID (OVER 90%	●	X	X	FORMALIN	○	○	●
OXALIC ACID	○	○	○	GASOLINE	○	○	●
(CHLORINE GAS (DRY 100%	Δ	X	X	NATURAL	○	○	
(CHLORINE GAS (WET 5%	Δ	X	X	COAL GAS	○	○	
(CYCLOHEXANOL (100%	X			(FREON 12 (100%	○	○	
(TOLUENE (100%	●			(XYLENE (100%	X	X	X
(STEARIC ACID (100%	○	○	○	(VINYL ACETATE (100%	X	X	X
SEA WATER	○	○	●	(PHOSPHORUS TRICHLORIDE (100%	X	X	X
(PROPANE LIQUID (100%	○			(THIONYL CHLORIDE (100%	X	X	X
(PROPANE GAS (100%	○			(TRICHLOROETHYLENE (100%	○		
SODIUM CHLORIDE DILUTED	●	X	X	(TRIETHANOL AMINE (100%	X	X	X
(CYCLOHEXANONE (100%	X			W.GASES NITROUS NITROUS TRACES			○
(POTASSIUM CHLORIDE (10%		○	●	W.GASES NITROUS NITROUS HIGHER			X
(.POTASSIUM CHLORIDE (SAT			○	(WAX ALCOHOL (100%			○
(POTASSIUM CHLORIDE (40%	○			(PHENOL (UP TO 90%		●	
(POTASSIUM NITRATE (10%		○	●	(PHENOL (1%	○	○	●
(.POTASSIUM NITRATE (SAT			○	(METHYLALCOHOL (100%			
(ZINC CHLORIDE (10%		○	●	(METHYLALCOHOL (100%	X		
(.ZINC CHLORIDE (SAT			○	GLYCERINE AQUEOUS	○	○	○
(ZINC SULFATE(10%		○	●	(GLYCOL AQUEOUS (COMM			○
(.ZINC SULFATE(SAT			○	(HYDROGEN (100%			○
WHISKY		○	○	(OZONE (100%	○		
(WINE (COMM	○			(OLEIC ACID (COMM			○
(BENZINE (BENZOL) (100%	X			(OLEUM (10%	X		
(BENZENE (100%			○	(W.GASES (SO) (LOWR			○
(.BENZINE (ALL CON	○	○	●	(W.GASES (SO) (50%		○	
(URINE (NORMAL		○	○	GAS WATER USUAL	●		
(BUTANE GASEOUS (50%	○			CHLORINE WATER (SATU	●		
(ETHYL ACETATE (100%	X	X	X	(BUTANOL (UP TO 100%		○	●
(ETHYLALCOHOL (AQUA.ANY	○			(MILK (COMM	○		
(ETHYLALCOHOL (96%			●	(SODA AQUEOUS (DILUTED		○	●
(ETHYL ETHER (100%	X			(SODA AQUEOUS (SATU			○
FATTY ACIDS			○	(BROMINE LIQUID (100%	X		
<p>COMPLETELY UNAFFECTED :○ MAY BE USED</p> <p>SLIGHTLY AFFECTED MAY :● BE USED</p> <p>AFFECTED MAY BE USED :Δ WITH CARE</p> <p>DO NOT USE :X</p>							

HANDLING OF TRANSPORTATION AND STORAGE OF PIPES

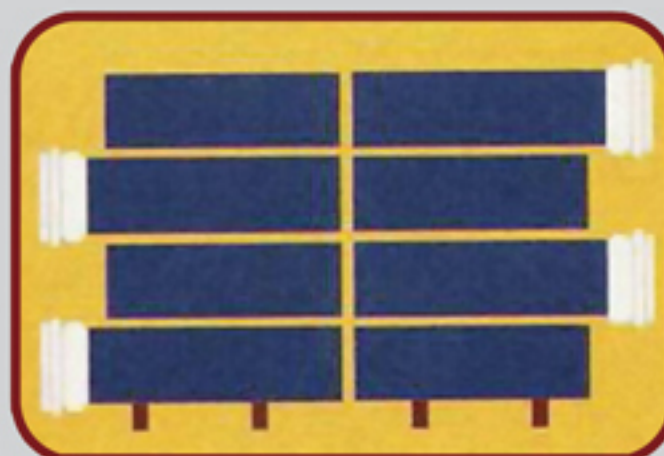


Plastic pipes made of PVC is strong and light in weight as its specific about 20% of the specific weight of pipes made of cast iron.

Handling and transportation of this kind of pipes is easier compared with other Kinds of pipes made of metal or asbestos cement and similar

FOR HANDLING AND STORAGE :

- 1-PVC pipes needs attention and care during loading , unloading and storing specially during unloading from trucks into ground .
- 2-It is not recommended to put plumbing in large piles, especially in summer or at hot weather to avoid any distortion of pipes at the bottom of the patch , so it is difficult to pipe interference operation .
- 3-Storage pipes must be at reciprocal manner by the head and tail .
- 4-In long – tern storage , a private shelf must be ensured for storing, if not , wooden planks with about 75 mm width at 100cm apart between each two planks are used for pipes starting from 160mm diameter and up .
- 5-In case of storing pipes with different sizes at the same time on the same shelves , bigger sizes must be below pipes of smaller size .
- 6-For temporary storage at working site , the storing area must be flat and free of stones or similar .
- 7-At unloading pipes , they must be rolled gently on the wooden planks and not to be thrown one on the other or on unequipped floor in case of crane or truck absence .
- 8- Storage area must be equipped with convenient shed to prevent direct sun light affect on pipes .



INSTRUCTIONS FOR UPVC PIPES INSTALLATION :

Method of installation for pipes having a head (Anger Socket pipes) using rubber ring .



F1



F2



F3

1-Insert the tail of the pipe into the head of another pipe without the rubber ring and mark along the circumference of the pipe to fix the interference distance between the tail and the head .

2-Clean the rubber ring and the inner surface of pipe head (F1).

3-For easy installation of rubber ring into the cavity at pipe head , follow up procedure as shown (F2).

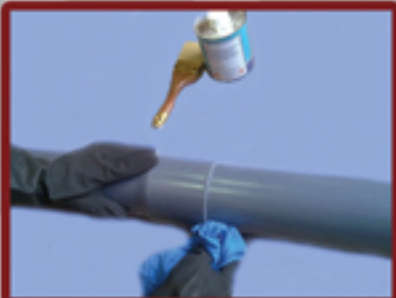
4-clean the chamfered side at the pipe tail (F3) to remove any object , oil or grease using cleaning liquid and then insert the rubber ring in the cavity .

5-Paint chamfered head with liquid soap or with vegetable grease and the same at the edge of the rubber ring to facilitate the installation operation .

6-Put the head and the of pipe straight at the same line and push them to gether at same time to complete the installation .

7-For big sizes of pipes more than 280mm diameter , we must use special clamp to introduce the tail of the pipe into the other pipe .

INSTALLATION OF UPVC SOLVENT SOCKET PIPES WITH GLUE



1-Mark up around the circumference of the tail and the interference distance between head and tail .

2-Chamfering of the pipe tail by suitable rasp around the circumference of the pipe , specially in case of cutting the pipes at site .

3-Clean the tail and the head of the tow pipes with dry cloth .

4-Prepare and shake the glue before using .

5-Paint the glue with suitable brush to the pipe diameter in one direction at the tail and the head .

6- Insert the tail of one pipe up to the marked length into the head of other pipe and without twisting the pipes .

7-After 24 hours of completing the installation the pipe line can be tested .

8- After using the glue close it so that isn't spoiled.

TECHNICAL DATA FOR INSTALLATION OF PIPELINES:

For pipeline installation the ground of the pipeline tunnel should be done very carefully, And it should be filled with sand to protect the pipeline due to the following reasons :

- Reduce applied stresses on the pipeline .
- Prevent the movement of the pipeline in the direction of liquid flow which may cause extra forces that may cause its failure .
- Protect the pipeline from breakage or scratching at the outer surface due to the presence of aggregates or stones which may cause heavy stresses .
- Present of suitable layer under pipeline leads to high efficiency of pipeline operation and this layer shouldn't be less than 1/3 of the pipeline diameter and not less than 15cm .

HYDRAULIC TEST:

- Hydraulic test must be done at site for pipeline during installation for installed distance between 500 meter and more than 1000 meter . Pipeline tunnel must be filled with fine sand to cover pipeline except at joints to be sure from the success of installation at joints
- Testing pressure must be 1.5% of the working pressure and for half hour at least.
- Before hydraulic test pipeline must be evacuated from air by using air valves and materials inside the pipes coming from drilling or during installation .
- As reference for testing we can refer to :
 - o Egyptian specifications 848 issue 1978 .
 - o Egyptian code for pipes .
 - o British standard BS 5955 – part 6/1980.

DRILLING DIMENSION:

Drilling of pipeline cavity includes three dimensions :

- 1.Cover (over pipeline)
- 2.Width of cavity.
- 3.Setting layer under pipeline .

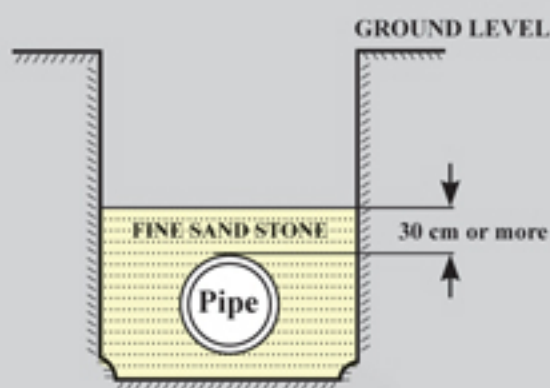
Cover over pipeline table :

In case of pipelines near buildings 30cm distant is the minimum apart from the building.
Depth of pipeline cavity

Minimum covering layer	Installation field	
120 cm	Middle of road	General roads
90 cm	Side of road	
60 cm	Subsidiary roads	
45 cm	Cultivating areas	

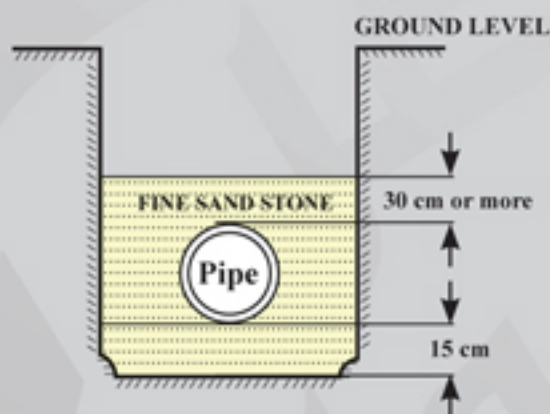
TRENCHING DEPTH

The layer under the pipes should assure continuous protection for the pipeline, therefore the type of the ground and the expected loads that may occur on pipes at the sites must be taken into consideration.



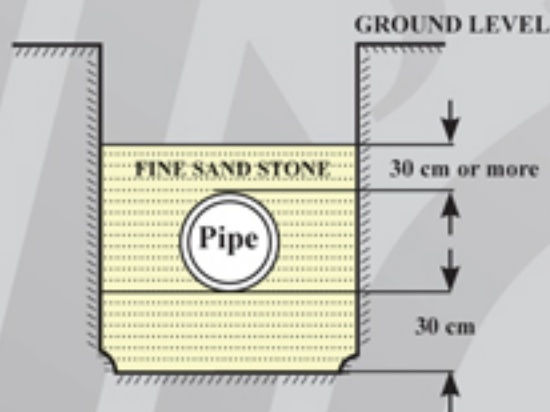
1-Good Ground:

Free of rough sand stones or rocks or stones ,it is possible to use the bottom of the cavity as setting layer for pipeline directly .



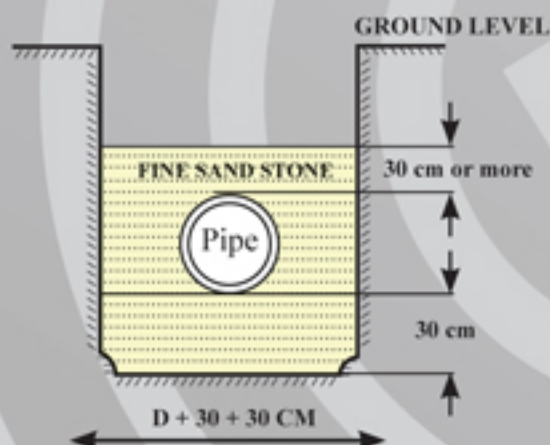
2-Normal ground :

For normal ground 15cm at the cavity bottom must be filled with compacted layer of fine sand for setting the pipes on it .



3-Rocky ground or roughs sandy ground :

30 cm at the bottom of the cavity must be filled with compacted fine sand to get suitable setting layer for pipes and any deposits found under the pipe must be removed .



4-Width of cavity:

Width of cavity must be enough to allow easily; Installation of pipeline check up and testing normal width 3 times of outer pipe diameter + 30cm clear from all sides around pipeline .

FABRICATION FITTINGS

MISR EL NOUR CO For UPVC pipes produces all kinds of fabrication fittings as requested and it includes tee, bend, flange socket, reducer and double socket we can test it under all pressure. Fabrication fitting has an advantage as it is lower in price than injection fittings.



T two socket with sand



Elbow 45°



Flanged socket



Reducer



Elbow 90°



Double socket

FABRICATED CASING AND SCREEN PIPES FOR WATER WELLS

Specification :

The slot number, width, length and joint are as requests

The advantage of this pipe

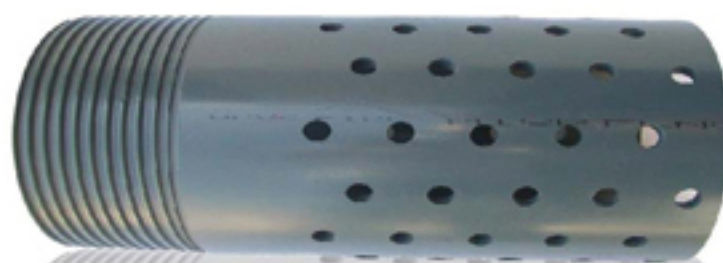
- 1-Smooth surface .
- 2-Easy for handling installation .
- 3-Resistant to corrosion & salts and soil chemical.

Kind of pipes according to its connection

- 1-Slotted pipes with rubber ring joint.
- 2-Slotted pipes with solvent cement joint.
- 3-Slotted pipes with thread joint.
- 4-Perforated pipes .



Slotted Pipe



Perforated Pipe



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