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Chairman Message

ROXY FOR MODERN WATER SYSTEMS

Roxy factories for modern water systems, a member of Momen group for investments, were established in 2005 due to the tremendous development in the pipe and fittings industry to cover the needs of national and international markets.

Our main products include UPVC, HDPE, PP and PPR-C (pipes & fittings) in all types, colors, and different standards (ASTM, DIN, BS, EN, ISO, IQS AND EGYPTIAN) depending on the client's needs.

Our head office is located in Heliopolis, Cairo, Egypt, and our factories are located in Obour city and 10th of Ramadan City.

A team of quality assurance specialists in laboratory affairs carry out continuous monitoring processes on the plastic pipes and all the other related parts of the system, such as the fittings and the related accessories.

We also have a developed quality assurance system that uses a series of developed devices that allow us to ensure that the production process is up to the international standards and special requirements contracted with our customers.

There is a series of experiments conducted on our plant's production process that include chemical, physical and mechanical properties.


Adding to that, there is a full range of specialists in the field of plastic pipe installation who are fully prepared to provide our customers with technical advice.

Now **Roxy** Plast is considered as one of the largest companies that produces and processes pipes and its accessories in the Egyptian market as well as the Arab world and Africa.

Our products are accredited in different regions, such as: Egypt, Africa, the Arab world and Europe.

Not only are our distribution channels in Africa and the MENA region, but we have also opened new markets in the last two years in north Asia and South America.

Chairman



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Why Roxy?

ROXY FOR MODERN WATER SYSTEMS

Roxy for Modern water systems (pipe systems) is an Egyptian company under the umbrella of the holding company Momen group, which has been established in 1989. Investing in several fields, one of its investments is water systems manufacturing.

Our mission is to establish a circle of trust for every client by providing the best quality, service and price.

We apply the latest German technological innovations in our manufacturing process in addition to the usage of the best European and American materials such as Borealis, boroung, basell, shintech and Topilene.

A proud Egyptian product with German technology.

Massive production capacity that enables us to deliver in a very short time period with the best quality and competing price.

We work on a stock basis, not by order production so we can maintain fast delivery.

Our products are accredited by most of the big consultancy firms, and are frequently tested in the big Egyptian and German labs.

We have a well-trained quality assurance department that assures that our products meet the standards. Adding to that, **Roxy** Plast gives a warranty on all our systems for 50 years.

We manufacture our products according to the DIN, ASTM, EN, BS, ISO, IQS and ES standards.





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ROXY FOR MODERN WATER SYSTEMS



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Features & Advantages of Roxy U-PVC Systems

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Features of Roxy U-PVC Systems Lead free product

UPVC (pipes & fittings) are produced and manufactured from raw materials completely free from heavy metals. This pipe is %100 safe for use in various applications related to drinking water. It is also environmental friendly and at the same time preserves its physical and material properties.

Meets health specifications.

Meets the followed standard physical and mechanical proprieties, in addition to its characteristic of stability and thermal balance.

The latest technological innovations are used in the manufacturing process of **Roxy** Plast U-PVC (pipes & fittings), from the manufacturing stage till the product reaches the end user, in order to ensure the highest levels of quality assurance and reduce any defects or errors in the production and process.

Non-toxic

Roxy Plast U-PVC (pipes & fittings) are produced and manufactured from non-toxic materials, which ensures that this category of pipes can be used in drinking water pipes without any risk. In addition, Roxy Plast U-PVC (pipes & fittings) do not change the taste, smell of water, or other liquids, nor do they allow the growth and accumulation of bacteria or parasites.

Flexibility

Roxy Plast U-PVC (pipes & fittings) systems can be categorized as "flexible system in design", and this feature of "flexibility" offers a tremendous advantage for this type of system compared with other types of systems that may not be flexible enough to make the installation process easy.



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Features & Advantages of Roxy U-PVC Systems

ROXY FOR MODERN WATER SYSTEMS

For flexible pipes in terms of design: - The soil supports the pressures and loads on the pipe (including the weight of the soil), and as a result a slight distortion of the pipe, but it is not broken. For pipes made of conventional materials, the soil directly concentrates the loads and pressures on the pipe head which can result in huge damage to the pipe body. There are no deformities of this type of pipe, but it collapses, resulting in fractures. For most good soil types (for example, granular soil), the soil supports all loads and pressures. Due to the ease of doing work in this category of soil, the distortion ratio of **Roxy** Plast U-PVC (pipes & fittings) ranges from 1 to only %2, which does not affect the functional properties or the intensity of the coherence and cohesion of the network at all. For all pipe materials, the very difficult soil conditions may require extensive examination and inspection or calculations by qualified civil engineers to do so. Some European and national requirements also require certain calculations for piping systems.

Fire resistance

Roxy Plast U-PVC (pipes & fittings) are mainly characterized by flame-retardant properties because they contain chloride, even in the absence of fire retardants. For example, the ignition temperature of PVC is 455 ° C, an extremely high temperature, and it is less likely to be exposed to fire hazards because of the difficulty of igniting it. In addition, the heat emitted by combustion is significantly less in the case of PVC when compared to materials such as polyethylene and polypropylene. Therefore, U-PVC pipes have high fire resistance.

Chemical resistance

Due to the nature of the polymer chain formation, which is formed through the individual bonds of the carbon atoms, U-PVC is characterized by its tremendous chemical resistance to other plastics used for general purposes, for example, polyethylene, polypropylene or polystyrene.



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Features & Advantages of Roxy U-PVC Systems

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Long life time and High Resistance

The capacity of Roxy Plast U-PVC (pipe & fittings) is similar to that of all other thermoplastic materials with the degree of chemical degradation of polymers used in the manufacture and production of these pipes. However, unlike all other thermoplastic pipes, U-PVC pipes are non-oxidant. The stabilizers are used in U-PVC pipes to prevent polymer degradation during the evaporation process and the storage of pipes before burying them in the ground. However, when burying underground pipes, no chemical degradation is expected. For this reason, it is expected that the potential of U-PVC material in buried pipes will be very good (perhaps more than 1,000 years). In the standard of drinking water and drainage pipe lines **Roxy** Plast U-PVC (pipe & fittings) meets the expected shelf life of U-PVC pipes under pressure that can be stabilized in the light of pressure tests up to (20,000) hours, which would allow the possibility of estimating probability through extrapolation and predicting age under pressure Between 50 and 100 years. The practical experience in Germany has shown that U-PVC pipes buried underground that have been tested after 60 years of active use are still in good condition for the purposes for which they were designed. Therefore these tubes have the ability to work and endure for a period of another 50 years.

Stability and mechanical stability

Roxy Plast U-PVC (pipe & fittings) are made of chemically stable materials that have minor changes in the structure of the molecule and are subject to very minor changes in their mechanical resistance. However, long chain polymers are rubber viscous materials, which may be deformed by external application of external forces, even if the external force is less than the point of submission. This is called change in shape. Although U-PVC pipes are made of rubber sticky materials, the change in shape may be very slight compared to other types of plastic pipes because of the limited movement of the molecule at normal temperature, as opposed to polyethylene, polypropylene, characterized by the massive movement of their molecules in the non-shaped sectors.

Impact Resistance

Roxy Plast U-PVC (pipe & fittings) are highly resistant to collisions from their cast iron pipe or ceramic pipes, which are subject to a lot of loss due to fracture and improper handling of these pipes during transportation, storage and installation.

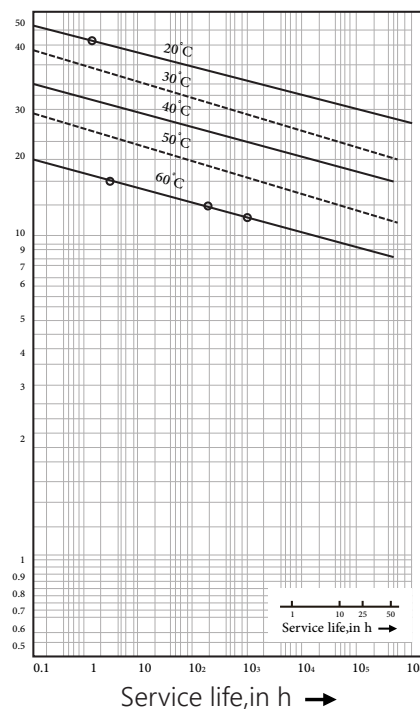
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Technical & Chemical Properties

ROXY FOR MODERN WATER SYSTEMS

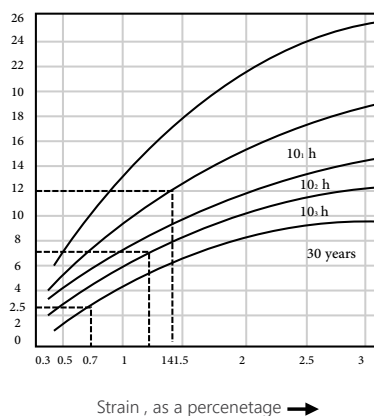
PIPES

Behaviour of U-PVC pipes under long-term pressure

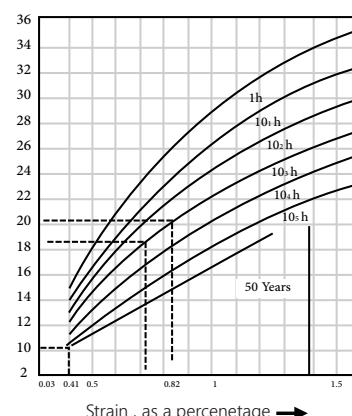


Long Term
Hydrostatic
Strength (Mpa)

FITTING



Stress - Strain Diagram
for U-PVC at 20°C



Stress - Strain Diagram
for U-PVC at 60°C

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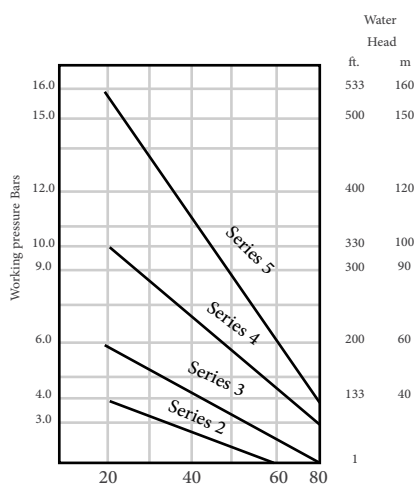
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Technical & Chemical Properties

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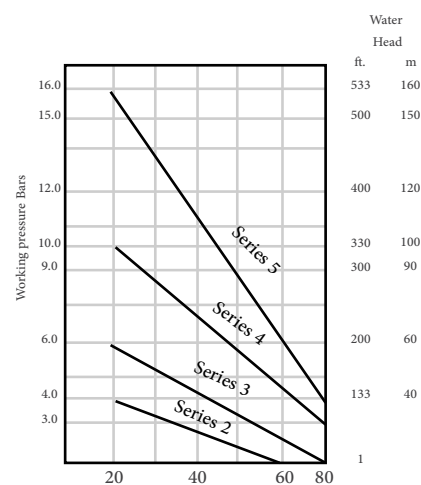
When U-PVC pressure pipe operates at temperature other than the temperature at which the pipe is rated (20° - OR 23°C) pressure rating should be established on thermal design factors
EXAMPLES GIVEN BELOW ARE FOR GUIDANCE ONLY

PRESSURE TEMP. RELATIONSHIP
Ambient variable internal temp. 20°



AMBIENT TEMPERATURE OF 40°C
required working pressure of 6.5 bars
use a 10 bar rated pipe

PRESSURE TEMP. RELATIONSHIP
internal variable Ambient temp. 20°



Required Working pressure of 7.0 bars
use with a liquid temperature of 40°C
therefore a 10 bar rated pipe to be used

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PVC-U (Pips and Fitting) Chemical Resistance

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U-PVC			U-PVC			U-PVC		
chemicals	23°C	60°C	chemicals	23°C	60°C	chemicals	23°C	60°C
A.cetaldehyde	NR	NR	Antimony trichloride	R	R	Caprylic acid	#	#
Acetamide	#	#	Aqua regia	*	NR	Carbon dioxide.wet	R	R
Acetic acid %10	R	R	Aromatic hydrocarbons	NR	NR	Carbon dioxide dry	R	R
Acetic acid %20	R	R	Arsenic acid	R	R	Carbon disulphide	NR	NR
Acetic acid %50	R	*	Aryl sulphoic acid	R	R	Carbon monoxide	R	R
Acetic acid %80	R	*	B Barium carbonate	R	R	Carbon tetrachloride	NR	NR
Acetic acid glacial	*	NR	Barium chloride	R	R	Carbonic acid	R	R
Acetic anhydride	NR	NR	Barium hydroxide	R	R	Caster oil	R	R
Acetone	NR	NR	Barium nitrate	R	#	Caustic potash	R	R
Acetophenone	NR	NR	Barium sulphate	R	R	Cellosolve	R	NR
Acetyl Chloride	#	#	Barium sulphide	R	R	Cellosolve acetate	R	#
Acetylene	*	*	Butyl phenol	R	NR	Cellosolve acetate	R	#
Acetyl Nitride	NR	NR	Butyl stearate	R	#	Chloracetic acid	R	NR
Acrylic acid Ethyl ester	NR	NR	Butyne diol	R	NR	Chlorine gas wet	NR	NR
Acrylonitrile	NR	NR	Butyric acid	R	NR	Chlorine (liq)	NR	NR
Adipic 105 acid	R	R	Butane	R	R	Chlorine water (Sat.)	R	R
Allyl alcohol	*	*	Beer	R	R	Chloracetic acid	R	NR
Amyl alcohol	NR	NR	Beer sugar liquors	R	R	Chloroacetyl chloride	R	#
Alcohol Benzyl	NR	NR	Benzaldehyde	NR	NR	Chlorobenzene	NR	NR
Alcohol 1 ry Butyl	R	R	Benzalkonium chloride	NR	NR	t-hiorobenzyl chloride	NR	NR
Alcohol 2ry Butyl	R	NR	Benzene	NR	NR	Chloroform	NR	NR
Aleohol.diacetone	#	#	Benzene. benzol	NR	NR	Chloropicrin	NR	NR
Alcohol Ethyl	R	R	Benzene sulphonic acid	NR	NR	Chlorosulphonic acid	R	NR
Alcohol Hexyl	R	R	Benzoic acid	R	R	Chromic acid %10	R	R
Alcohol Isopropyl	R	R	Bismuth carbonate	R	R	Chromic acid %30	R	*
Alcohol Methyl	R	R	Black liquor	R	R	Chromic acid %40	R	*
Alcohol Propargyl	R	R	Bleach household	R	R	Chromic acid %50	NR	NR
Alcohol Propyl	R	R	Bleach %12.5active Cl2	R	R	Chromium nitrate	#	#
Allyl chloride	NR	NR	Bleach %5.5active Cl2	R	R	Citric acid	R	R
Alum	R	R	Borax	R	R	Citric acid %10	#	#
Alum Ammonium	R	R	Boric acid	R	R	Coconut oil	R	R
Alum. Chrome	R	R	Brine acid (sat.)	#	#	Coke oven gas	NR	NR
Alum. Potassium	R	R	Brine acid	R	#	Copper carbonate	R	R
Aluminum chloride	R	R	Bromic acid	R	R	Copper chloride	R	R
Aluminum Floride	R	NR	Bromine (Uq.)	NR	NR	Copper cyanide	R	R
Aluminum hydroxide	R	R	Bromine (yap. %25)	R	R	Copper fluoride	R	R
Aluminum nitrite	R	R	Bromine water	R	R	Copper nitrate	R	R
Aluminum oxychloride	R	R	Bromobenzene	NR	NR	Copper sulphate	R	R
Aluminum Sulfate	R	R	Bromotoluene	NR	NR	Corn oil	*	*
Ammonia gas	R	R	Butadiene	R	R	Corn syrup	*	*
Ammonia (Aq. %10)	R	NR	Butyacetate	NR	NR	Cotton seed oil	R	R
Ammonia Liq.	NR	NR	Butyl alcohol	R	R	Cresol	NR	NR
Ammonium acetate	R	R	Butyl Cellosolve	R	#	Oresylic acid %50	R	R
Ammonium benzoate	#	#	Butyl phthalate	NR	NR	Croton aldehyde	NR	NR
Ammonium bifloride	R	R	Butylene	NR	NR	Crude oil	R	*
Ammonium bisulphide	R	R	C Cadmium acetate	#	#	Cupric fluoride	R	R
Ammonium carbonate	R	R	Chloral hydrate	R	R	Cupric sulphate	R	R
Ammonium chloride	R	R	Chloramines	R	#	Cuprous chloride	R	R
Ammonium citrate	#	#	Chloric acid %20	R	R	Cyclohexane	NR	NR
Ammonium dichromate	R	#	Chlorinated solvents	NR	NR	Cyclohexanol	NR	NR
Ammonium fluoride %10	R	R	Chlorine Gas Dry	NR	NR	Cyclohexanone	NR	NR
Ammonium fluoride %25	R	*	Cadmium chloride	#	#	D Desocycophedrine hydrochloride	R	R
Ammonium hydroxide	R	*	Cadmium cyanide	R	R	Detergents	R	R
Ammonium metaphosphate	R	R	Cadmium sulphate	#	#	Detergent solution(Heavy duty)	R	R
A.mmorlium nitrate	R	R	Caffeine citrate	#	#	Dextrin	R	R
Ammonium persulphate	R	R	Calcium acetate	R	R	Dextrose	R	R
Ammonium phosphate	R	R	Calcium bisulphide	R	R	Diazo salts	R	R
Ammonium sulphamate	#	#	Calcium bisulphate	R	R	Dibutoxy ethyl phthalate	NR	NR
Ammonium sulphate	R	R	Calcium carbonate	R	R	Dibutyl phthalate	NR	NR
Ammonium SULphide	R	#	Calcium chlorate	R	R	Dibutyl sebacate	R	NR
Ammonium thiocyanate	R	R	Calcium chloride	R	R	Dichlorobenzene	NR	NR
Ammonium tartrate	#	#	Calcium hydroxide	R	R	Dichloroethylene	NR	NR
Amyl acetate	NR	NR	Calcium hypochlorite	R	R	Diesel fuels	*	NR
Amyl chloride	NR	NR	Calcium nitrate	R	R	Diethylamine	NR	NR
Aniline	NR	NR	Calcium Oxide	R	R	Diethyl cellosolve	#	#
Aniline chlorohydrate	NR	NR	Calcium sulphate	R	R	Diethyl ether	R	#
Aniline hydrochloride	NR	NR	Camphor crystals	R	#	Diglycolic acid	R	R
Anthraquinone	R	R	Cane sugar liquors	R	R	Dimethylamine	R	R
Anthraquinone sulfonic acid	R	R	Carbitol	R	#	Dimethyl formamide	NR	NR

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Technical & Chemical Properties

ROXY FOR MODERN WATER SYSTEMS

U-PVC			U-PVC			U-PVC		
Chemicals	"UPVC	"UPVC	Chemicals	"UPVC	"UPVC	Chemicals	"UPVC	"UPVC
Dimethyl hydrazine	NR	NR	Hydrobromic acid %50			Mercurous nitrate	R	R
Diethyl phthalate	NR	NR	Hydrobromic acid %18			Mercury	R	R
Dioxane	NR	NR	Hydrobromic acid conc%20	R	*	Methane	R	R
Dioxane .1,4	NR	NR	Hydrocyanic acid	R	R	Methanol	*	NR
Disodium phosphate	R	R	Hydrobromic acid %10	R	R	Methylene chlorobromide	NR	NR
Dis. Water	R	R	Hydrofluoric acid dil.	R	NR	Methoxyethyl oleate	R	#
Divinylbenzene	NR	NR	Hydrofluoric acid %30	R	NR	Methyl amine	NR	NR
Epsom salt	R	#	Hydrofluoric acid %40	R	NR	Methyl bromide	NR	NR
Esters	NR	NR	Hydrofluoric acid %50	R	NR	Methyl cellosolve	NR	NR
Ethanol	#	#	Hydrofluosilicic acid	R	R	Methyl chloride	NR	NR
Ethers	NR	NR	Hydrogen	R	R	Methyl chloroform	NR	NR
Ethyl acetate	NR	NR	Hydrogen cyanide	R	NR	Methyl ethyl ketone	NR	NR
Ethyl acetoacetate	NR	NR	Hydrogen fluoride.anhyd	NR	NR	Methyl isobutyl ketone	NR	NR
Ethyl acrylate	NR	NR	Hydrogen peroxide %30	R	#	Methyl methacrylate	R	#
Ethyl chloride	NR	NR	Hydrogen peroxide %50	R	R	Methyl sulphate	R	*
Ethyl chloroacetate	NR	NR	Hydrogen peroxide %90			Methyl sulphuric acid	R	
Ethyl ether	NR	NR	Hydrogen phosphide	R	R	Methylene bromide	NR	NR
Ethylene bromide	NR	NR	Hydrogen sulphide. dry	R	R	Methylene chloride	NR	NR
Ethylene chloride	NR	NR	Hydrogen sulphide(aq. Sol.n)	R	R	Methylene iodine	NR	NR
Ethylene chlorohydrin	NR	NR	Hydroquinone	R	R	Methyl isobutyl carbinol	#	#
Ethylene diamine	#	#	Hydroxylamine sulphate	R	R	Milk	R	R
Ethylene dichloride	NR	NR	Hypochlorous acid	R	R	Mineral oil	R	R
Ethylene glycol			Hydrazine	NR	NR	Molasses	R	R
Ethylene oxide	NR	NR	Iodine	NR	NR	Monoethanol amine	NR	NR
Fatty acid	R	R	Iodine solution %10	NR	NR	Motor oil	R	R
Ferric acetate	R	NR	Isopropanol	NR	NR	Naphtha	R	R
Ferric chloride	R	R	Isopropyl ether	NR	NR	Naphthalene	NR	NR
Ferric hydroxide	R	R	Isoodane	#	#	Natural gas	R	R
Ferric nitrate	R	R	Jet fuel. J P4	*	NR	Nickel acetate	R	#
Ferric sulphate	R	R	Jet fuel. J P5-	*	NR	Nickel chloride	R	R
Ferrous chloride	R	R	Kerosene	R	*	Nickel nitrate	R	R
Ferrous hydroxide	R	R	Ketones	NR	NR	Nickel sulphate	R	R
Ferrous nitrate	R	#	Kraft liquor	R	R	Nicotine	R	R
Ferrous sulphate	R	R	Lactic acid %25	R	R	Nicotinic acid	R	R
Fish soluble	R	R	Lactic acid %80	R	R	Nitric acid %10	R	
Fluorine gas. Wet	NR	NR	Lard oil	R	R	Nitric acid %20	R	
Fluobric acid	R	R	Lauric acid	R	R	Nitric acid %30	R	
Fluosilicic acid	R	R	Lauryl chloride	R	R	Nitric acid %40	R	
Formaldehyde %35	R	R	Lead acetate	R	R	Nitric acid %50	R	*
Formaldehyde %37	R	R	Lead chloride	R	R	Nitric acid %70	R	NR
Formaldehyde %50	R	R	Lead nitrate	R	R	Nitric acid %100	NR	R
Formic acid	R	NR	Lead sulphate	R	R	Nitrobenzene	NR	NR
Formic acid(anhydrous)	#	#	Lemon oil	#	#	Nitroglycerine	NR	NR
Freon F11-	R	R	Ligroin	#	#	Nitrous acid %10	R	NR
Freon F12-	R	R	Lime sulphur	R	R	Nitrous oxide	R	
Freon F21-	NR	NR	LiOIC acid	R	R	Nitro glycol	NR	NR
Freon F22-	NR	NR	Unoleic oil	R	R0	-1octanol	#	#
FreonF113-	R	R	Linseed oil	R	R	Oils Vegetable	*	
FreonF114-	R	R	Unseed oil blue	#	#	Oils Sour crude	#	#
Fructose	R	R	Liqueurs	R	R	Oleic acid	R	R
Fruit Juices. Pulp	R	R	Lithium bromide	R	R	Oleum	NR	NR
Furfural	NR	NR	Lithium sulphate	R	R	Olive oil	#	#
Gallic acid	R	R	Lubricating oil ASTM1#	R	R	Oxalic acid	R	R
Gas. Natural			Lubricating oil ASTM2#	R	R	Oxalic acid %20	#	#
Gasoline. leaded	*	NR	Lubricating oil ASTM3#	R	R	Oxalic acid %50	R	R
Gasoline. Unleaded	*	NR	Machine oil	R	R	Oxygen gas	R	R
Gasoline. Sour	*	NR	Magnesium carbonate	R	R	Ozone	#	#
Gelatin	R	R	Magnesium chloride	R	RP	Palmitic acid	#	#
Gin	#	#	Magnesium citrate	R	R	Palmitic acid %10	R	R
Glucose	R		Magnesium hydroxide	R	R	Palmitic acid %70	R	NR
Glycerin	R	R	Magnesium nitrate	R	R	Paraffin	R	R
Glycelin. glycerol	R	R	Magnesium sulphate	R	R	Peanut oil	#	#
Glycolic acid	R	R	Manganese sulphate	R	R	Peracetic acid %40	R	NR
Glycols	R	R	Maleic acid	R	R	Perchlone acid %10	R	
Grape sugar	R	R	Maleic acid %50	#	#	Perchlone acid %70	R	NR
Green liquor. Paper	R	R	Maleic acid	R	R	Perphosphate	R	#
Heptane		R	Mercuric chloride	R	R	Petroleum oils. Sour	R	*
Hexane			Mercuric cyanide	R	R	Petroleum Oils. Refined	R	R
Hydrobromic acid. %20	R	R	Mercuric sulphate	R	R	Phenol		Nii

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Technical & Chemical Properties

ROXY FOR MODERN WATER SYSTEMS

U-PVC			U-PVC			U-PVC		
Chemicals	°23C 60°C"	°23C 60°C"	Chemicals	°23C 60°C"	°23C 60°C"	Chemicals	°23C 60°C"	°23C 60°C"
Phenyl hydrazine	NR	NR	Sienlc acid	R	R	Sulphur trioxide, gas	R	R
Phenyl hydrazine hydrochloride	*	NR	Silicone oil	R	R	Sulphorl acid %10	R	R
Phosgene liq.	NR	NR	Silver cyanide	R	NR	Sulphorl acid %20	R	R
Phosgene Gas	R	*	Silver nitrate	R	R	Sulphorl acid %30	R	R
Phosphonic acid %10	R	R	Silver sulphate	R	R	Sulphorl acid %50	R	R
Phosphonic acid %25	R	R	Soaps	R	R	Sulphorl acid %60	R	R
Phosphonic acid %50	R	R	Sodium acetate	R	R	Sulphorl acid %70	R	R
Phosphonic acid %70	R	R	Sodium arsenate	#	#	Sulphorl acid %80	R	*
Phosphonic acid %85	R	R	Sodium alum	R	R	Sulphorl acid %90	R	*
Phosphorus yellow	R	*	Sodium benzoate	R	R	Sulphorl acid %93.5	*	NR
Phosphorus red	R	R	Sodium bicarbonate	R	R	Sulphorl acid %94	*	NR
Phosphorus pentoxide	R	*	Sodium bisulphate	R	R	Sulphorl acid %95	NR	NR
Phosphorus trichloride	NR	NR	Sodium bisulphate	R	R	Sulphorl acid %96	NR	NR
Photographic solution	R	R	Sodium bisulphite	R	R	Sulphorl acid %98	NR	NR
Picric acid	NR	NR	Sodium borate	R	#	Sulphorl acid %100	R	NR
Plating solution brass	R	*	Sodium bromide	R	R	Sulphurous acid	R	NR
Plating solution cadmium	R	*	Sodium carbonate	R	R	T Tall oil	R	NR
Plating solution chrome	R	*	Sodium chlorate	R	R	Tannic acid	R	NR
Plating solution copper	R	*	Sodium chloride	R	#	Tannic acid %30	R	R
Plating solution gold	R	*	Sodium chlorite	R	R	Tannic liquors	NR	NR
Plating solution lead	R	*	Sodium cyanide	R	*	Tar	R	#
Plating solution nickel	R	*	Sodium dichromate	R	R	Tartaric acid	R	R
Plating solution rhodiwn	R	*	Sodium ferricyanide	NR	NR	Tetraethyl lead	*	*
Plating solution silver	R	*	Sodium ferrocyanide	NR	NR	Tetrahydrofuran	*	NR
Plating solution tin	R	*	Sodium fluoride	NR	NR	TelaethylOfurane	NR	NR
Plating solution zinc	R	*	Sodium formate	NR	NR	Tetra sod. Pyrophosphate	NR	NR
Polyethylene glycol	R	*	Sodium hydroxide %10	R	R	Thionyl chloride	R	#
Potash	R	R	Sodium hydroxide %15	R	*	Tread cutting oils	R	R
Potassium alum	R	R	Sodium hydroxide %25	R	*	Transformer oil DTE/30	#	#
Potassium aluminum sulphate	R	#	Sodium hydroxide %30	R	*	Tributyl phosphate	NR	NR
Potassium amyl xanthate	R	NR	Sodium hydroxide %50	R	*	Tributyl citrate	R	#
Potassium bicarbonate	R	R	Sodium hydroxide %70	R	*	Trichloroacetic acid	R	R
Potassium bicarbonate	R	R	Sodium hypochlorite %15	R	*	Trichloroethane	NR	NR
Potassium borate	R	R	Sodium hypochlorite	R	#	Trichloropentylene	NR	NR
Potassium bromate	R	R	Sodium iodide	#	#	Trithanoamine	R	R
Potassium bromide	R	R	Sodium metaphosphate	R	#	Trithylamine	R	R
Potassium carbonate	R	R	Sodium nitrate	R	R	Trithylpropane	R	R
Potassium chlorate.(Aq.)	R	R	Sodium nitrite	R	R	Trisodium phosphate	R	R
Potassium chloride	R	R	Sodium palmitate sol.n %5	#	#	Turpentine	R	R
Potassium chromate	R	R	Sodium perborate	R	R	Urea	NR	NR
Potassium chlorate	R	R	Sodium perchlorate	R	R	Urine	*	*
Potassium cyanate	R	R	Sodium peroxide	R	R	Vaseline	R	R
Potassium cyanide	R	R	Sodium phosphate, alk	R	#	Vegetables oils Vinegar	#	#
Potassium cichromate	R	R	Sodium phosphate, Acidic	R	#	Vinegar, white Vinyl	NR	NR
Potassium ethyl xanthate	R	NR	Sodium phosphate neutlal	R	#	acetate	R	R
Potassium ferricyanide	R	R	Sodium silicate	#	#	Wwater	R	R
Potassium ferr oyanlde	R	R	Sodium sulphate	R	R	Water, acid mine	R	R
Potassium fluoride	R	R	Sodium sulphide	R	R	Water, Demineralized	R	R
Potassium hydroxide	R	R	Sodium sulphite	R	R	Water, disilled or flesh	R	R
Potassium iodide	R	R	Sodium thiosulphate	R	R	Water, Potable	R	R
Potassium nitrate	R	R	Sour crude oil	R	R	Water, Salt Water, Sea	R	R
Potassium nitrate	R	R	Stannic chloride	R	R	Water, Sewage	R	R
Potassium perchlorate sat	R	R	Stannous chloride	*	*	Whiskey-	R	R
Potassium permanganate %25	#	#	Stannous sulphate	R	R	White liquor Wines	R	R
Potassium persulphate sat	R	R	Starch	R	R	X Xylene (Xylol) Z Zinc	NR	NR
Potassium phosphate	#	#	Steam acid	NR	NR	acetate	R	R
Potassium sulphate	R	R	Stoddards solvent	*	*	Zinc chlolide	R	R
Propane	R	R	Strontium chloride	RR	R	Zinc nitrate	R	R
Propylene dichloride	NR	NR	Succinic acid	NR	NR	Zinc sulphate	R	R
Propylene glycol	*	*	Sulphated detergent	#	#			
Propylene oxide	NR	NR	Sulphate liquors	#	#			
Pyridine	NR	NR	Sulfite liquor	R	R			
Pyrogallia acid	R	R	Sulphur	R	R			
Salicylic acid	R	R	Sulphur chloride	#	#			
Salic ylaldehyde	NR	NR	Sulphur dioxide, Dry	R	R			
Sea water	R	R	Sulphur dioxide, Wet	R	R			
			Sulphur trioxide	R	R			

R: RECOMMENDED & **NR:** NOT RECOMMENDED

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Resin and Compounds Materials Data Sheets

ROXY FOR MODERN WATER SYSTEMS

SHINTECH INC.
Q.A. LABORATORY
SE-950 PRODUCT SPECIFICATIONS
DOCUMENT NUMBER: QAQPS1009

EFFECTIVE DATE: 06/02/17
PREPARED BY: Jeanette Wilson-Hawkins
APPROVED BY: 
PAGE 1 OF 1



Shintech Inc., 5618 Highway 332 East, Freeport, Texas 77541, (979) 233-7861

CONTROLLED
DOCUMENT

Polyvinyl Chloride Resin Product Specifications

Effective Date: 06/02/17
Supersedes: 03/03/03

SE-950

General Description

Type : Polyvinyl Chloride Homopolymer
Polymerization Process : Suspension
Appearance : White, free flow powder

Features and Uses

Extrusion : Pipe, Siding, Profiles

Specification

Resin Properties	Unit	Specification	Test Method
		Range	
Inherent Viscosity		0.890 – 0.920	ASTM D 1243
K Value ❶		65.7 – 67.1	ISO 1628-2/DIN 53726
Bulk Density	lbs./ft. ³	33.0 – 37.0	ASTM D 1895
	g/cc	0.528 – 0.593	
Particle Size	%		ASTM D 1921
40 mesh on		0.5 maximum	
pan		5.0 maximum	
Volatile	%	0.3 maximum	ASTM D 3030
Residual VCM	ppm	1.0 maximum	EPA 107
Foreign Matter		10 maximum	QAWT 1008
(10g PVC/Liter of water)			

❶ K Value (reference) from a viscosity conversion table.


Shintech warrants only that the product will comply with the foregoing specifications. All other warranties, expressed and implied, including the implied warranties of merchantability and fitness for a particular purpose, are expressly disclaimed. While "Typical Value" represents Shintech's experience with respect to the resin's properties, no

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Resin and Compounds Materials Data Sheets

ROXY FOR MODERN WATER SYSTEMS

SHINTECH INC.
Q.A. LABORATORY
SE-650F PRODUCT SPECIFICATIONS
DOCUMENT NUMBER: QAQPS1002

EFFECTIVE DATE: 06/02/17
PREPARED BY: Jeannette Wilson-Hawkins
APPROVED BY: 
PAGE 1 OF 1



Shintech Inc., 5618 Highway 332 East, Freeport, Texas 77541, (979) 233-7861

CONTROLLED
DOCUMENT

Polyvinyl Chloride Resin Product Specifications

Effective Date: 06/02/17
Supersedes: 03/03/03

SE-650F

General Description

Polyvinyl Chloride Homopolymer Type :
Suspension Polymerization Process :
White, free flow powder Appearance :

Features and Uses

Film Sheet, Profiles, Blow Molding Extrusion :
Film Calendering :
Fittings Injection Molding

Specification

Resin Properties	Unit	Specification	Test Method
Range			
Inherent Viscosity		0.650 – 0.700	ASTM D 1243
K Value ❶		55.0 – 57.3	ISO 1628-2/DIN 53726
Bulk Density	lbs./ft. ³	36.5 – 39.5	ASTM D 1895
	g/cc	0.584 – 0.633	
Particle Size	%		ASTM D 1921
40 mesh on		0.5 maximum	
pan		5.0 maximum	
Volatile	%	0.3 maximum	ASTM D 3030
Residual VCM	ppm	1.5 maximum	EPA 107
Foreign Matter		30 maximum	QAWT 1008
(250g PVC/Liter of water)			

❶ K Value (reference) from a viscosity conversion table.

Shintech warrants only that the product will comply with the foregoing specifications. All other warranties, expressed and implied, including the implied warranties of merchantability and fitness for a particular purpose, are expressly disclaimed. While "Typical Value" represents Shintech's experience with respect to the resin's properties, no warranty is given that the product will achieve Typical Values; Shintech only warrants that the product will be within the applicable specification range.

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Resin and Compounds Materials Data Sheets

ROXY FOR MODERN WATER SYSTEMS



Formosa Plastics®

Formolon® PVC

Formolon® 622F

Homopolymer/Film Grade Resin

F622F is a medium molecular weight PVC homopolymer suitable for both rigid extrusion applications and many flexible applications. This product has good bulk density and excellent dry flow characteristics, making it desirable for dry blending applications where uniform feed rate to an extruder is important.

Suggested Applications:

Flexible and Rigid Film and Wire and Cable

Properties	Test Method	Typical Value
Relative Viscosity	estimated	2.20
Inherent Viscosity	ASTM D-5225	0.93
K-Value	estimated	67
Volatiles (%)	ASTM D-6980	0.20
Bulk Density (lbs/ft ³)	ASTM D-1895	32
(g/cc)		0.52
Sieve Analysis	Malvern	
% thru 40 Mesh		99.9
% thru 200 Mesh		5.0
Residual VCM (ppm)	GC Head Space Method	<1.0
Gel Count	GP Gel Method	20
Contamination Count	OCS per 100g	20

Effective as of November 2015

Any inquiries regarding this data sheet should be addressed to: 9 Peach Tree Hill Road • Livingston, NJ 07039 • Phone: (888) FPCUSA3 • Fax: (973) 422-7724

The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions concerning uses or applications are only the opinion of FORMOSA PLASTICS CORPORATION, U.S.A., and users should perform their own tests to determine the suitability of these products for their own particular purposes. However, because of numerous factors affecting the results, FORMOSA PLASTICS CORPORATION, U.S.A. MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, other than that the material conforms to the applicable current Standard Specifications. Statements herein, therefore, should not be construed as representations or warranties. The responsibility of FORMOSA PLASTICS CORPORATION, U.S.A., for claims arising out of breach of warranty, negligence, strict liability or otherwise is limited to the purchase price of the material. Statements concerning the use of the products of Formolons described herein are not to be construed as recommending the infringement of any patent and no liability for infringement arising out of any such use is assumed.

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3.0.0

Resin and Compounds Materials Data Sheets For Non Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

General properties	UPVC VALUE	UNITS
Density	1.42	g/cm ³
Water absorption	1,04	Mg/cm ²
Flammability	Self extinguishing	

Mechanical Properties

Ultimate tensile strength	500	Kg/cm ²
Compressive strength	668	Kg/cm ²
Flexural strength (rock well)	950	Kg/cm ²
Modulus of Elasticity	3x10	Kg/cm ²
Impact strength (charpy)	No break > %10	-
Shore hardness(Rockwell)	115	R

Thermal Properties

Softening point	fittings	Pips
v.s.t. 5kg	≥79° ≥76°	°c
Max.operating temperature	60	°c
Coefficient of thermal expansion	3.0 x 10 ⁻⁵	In/In/°F
Specific Heat	0.25	Cal/g. °c
Thermal conductivity	0.13	Kcal/m.h. °c

Electrical Properties

Volume resistivity	>10 ¹⁴	Ohm.cm
Surface resistance	>40	Kv/mm
Power factor (at 10 ⁶ cycle)	3.3	

NOTES

Upvc are non-conductor of electricity and are not subjected to galvanic or electric attack .
All the above-mentioned values at 20°c .

General properties	UPVC VALUE	UNITS
Density	1.42	g/cm ³
Water absorption	<1.05	Mg/cm ²
Flammability	Self extinguishing	

Mechanical Properties

Ultimate tensile strength	500	Kg/cm ²
Compressive strength	668	Kg/cm ²
Flexural strength (rock well)	950	Kg/cm ²
Modulus of Elasticity	3x10	Kg/cm ²
Impact strength (charpy)	No break > %10	-
Shore hardness(Rockwell)	115	R

Thermal Properties

Softening point	Pipes	fittings
v.s.t. 5kg	≥ 79° ≥ 76°	°c
Max.operating temperature	60	°c
Coefficient of thermal expansion	3.0 x 10 ⁻⁵	In/In/ °F
Specific Heat	0.25	Cal/g. °c
Thermal conductivity	0.13	Kcal/m.h. °c

Electrical Properties

Volume resistivity	>10 ¹⁴	Ohm.cm
Surface resistance	>40	Kv/mm
Power factor (at 106cycle	3.3	

NOTES

Upvc are non-conductor of electricity and are not subjected to galvanic or electric attack .
All the above-mentioned values at 20°c .



4.0.0

Transport and Storage

ROXY FOR MODERN WATER SYSTEMS

PIPES

On trucks the 6 or long pipes must be fully supported on the loading area. Avoid loading at the same time with sharp objects.

Pipes should not be thrown or dragged along the ground.

Pipes should be given adequate support at all times.

Pipes should not be stacked in large piles, especially in warm temperature conditions as the lower layers may distort, resulting in difficulties in jointing and pipe alignment. Any pipe with ends prepared for jointing (sockets and spigot joints, a joints, etc.) should be stacked in layers with sockets placed at alternate ends of the stacks and with the sockets protruding to avoid unstable stacks and the possibility of imparting a permanent set to the pipes.

For long-term storage, pipe racks should provide continuous support, but if this is not possible timber of at least 3 inch (75mm) bearing width at spacing not greater than 3 feet (915mm) centers for pipe sizes 160mm and above, should be placed beneath the pipes and at 6 ft. (1.8m) centers at the side, if the stacks are rectangular. These spacing apply to pipe size 160 mm and above.

Closer supports will be required for sizes below 160mm in such pipe racks. Pipes may be stored not more than seven layers, or 6 feet (1.8m) high, whichever is the lesser.

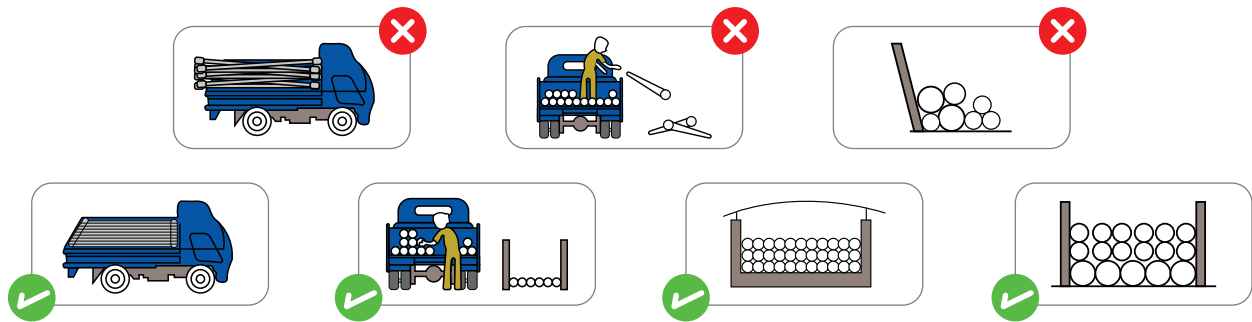
But if different classes of pipe are kept in the same racks, than the thickness classes of largest diameter must always be placed at the bottom.

When loading pipes on to vehicles, care must be taken to avoid their coming into contact with any sharp corners such as cope irons, loose nail-heads, etc.

4.0.0

Transport and Storage

ROXY FOR MODERN WATER SYSTEMS



As pipes may be damaged by being rubbed against these during transit. Whilst in transit, pipes shall be well secured over their entire length and not allowed to project unsecured over the tailboard of the lorry pipes may be off-loaded from lorries by rolling them gently down timbers, care being taken to ensure that pipes do not fall one upon an-other, nor on to any hard or uneven surfaces



FITTINGS STORAGE

Fittings should be stored in the factory original packaging, and if the fittings are removed from their packaging store them in geometric way.

Never ever mix the MM fittings with the ASTM fittings to avoid miss use. Fittings should be stored in a place away from flames and fire, as U-PVC materials are flammable materials.

Its recommended to store the fittings in a closed secured place to avoid any lose, as the fittings are easy to be stolen.

Cutting

Pipes must be squarely cut to allow the proper interfacing of the pipe end and the fitting socket bottom. This can be accomplished with miter box saw.

Deburring

Use file to remove burrs from the end of the pipe. A slight chamfer about 15 should be added at the end to the permit easier insertion of the pipe into the fitting. Failure to chamfer the edge of the pipe may remove cement from the socket, causing the joint to leak.

**Inspection and cleaning**

Visually inspect the inside of the pipe and fitting sockets and remove all dirt, grease or moisture with a clean dry rag. Measure the fitting socket depth and mark this distance on the pipe. Clean the surface of the pipe and fitting socket by using a cleaner.

**Application of solvent cement**

Apply the solvent cement eventually and quickly around the outside of the pipe at which a little greater than the depth of the fitting socket. Apply a light coat of cement eventually around the inside of the fitting socket.

**Joint assembly**

Immediately insert the pipe into the socket up to the entry mark, align pipe and socket, hold in position for a few seconds.

Clean up

Remove all excess cement from around the pipe and the fitting with a dry cotton rag. This must be done while the cement is still soft.

Testing

Allow 8 hours to elapse applying working pressure or 24 hours for tests pressure with pipe sizes up to 50mm, its impossible to reduce this time. Allow one hour for each 3.5 atmospheres of pressure.



Expansion and Contraction

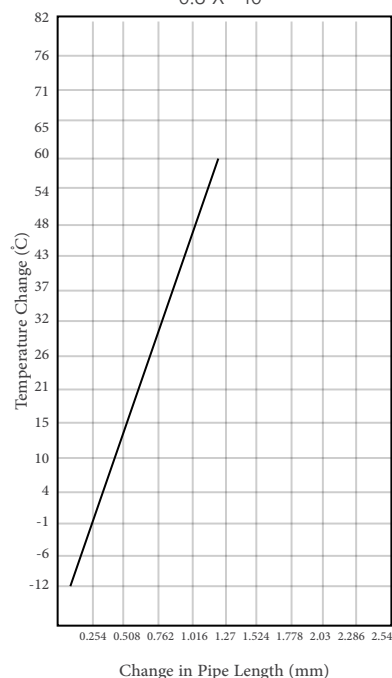
All piping products expand and contract with changes in temperature. Linear expansion and contraction of any pipe on the longitudinal axis relates to the coefficient of thermal expansion for the specific material used in the manufacturing of the product. Variation in pipe length due to thermal expansion or contraction depends on the coefficient of thermal expansion and the variation in temperature (T).

It should be noted that change in pipe diameter or wall thickness with piping material properties remaining constant does effect a change in rates of change in rates of thermal expansion or contraction.

Approximate coefficients of thermal expansion for different pipe materials are presented below.

Expansion and contraction of PVC piping in response to change in temperature will vary slightly with changes in PVC compounds. However, these coefficients can be considered reasonably accurate.

Piping material	Coefficient of linear thermal expansion (k^{-1})	Thermal Conductivity (W.k-1.m-1)
UPVC	0.8×10^{-5}	0.16



Coefficients Of Thermal Expansion

**5.0.0**

Expansion and Contraction ROXY FOR MODERN WATER SYSTEMS



LENGTH OF RUN 10 METER

Temp. Change ΔT °C	10	15	20	30	35	40
Thermal Expansion (ΔT) In mm of UPVC	15	17	19	22	25	26

LENGTH OF RUN 20 METER

Temp. Change ΔT °C	10	15	20	30	35	40
Thermal Expansion (ΔT) In mm of UPVC	32	38	45	51	58	64

LENGTH OF RUN 15 METER

Temp. Change ΔT °C	10	15	20	30	35	40
Thermal Expansion (ΔT) In mm of UPVC	23	27	32	37	41	46

LENGTH OF RUN 25 METER

Temp. Change ΔT °C	10	15	20	30	35	40
Thermal Expansion (ΔT) In mm of UPVC	36	44	51	58	66	73

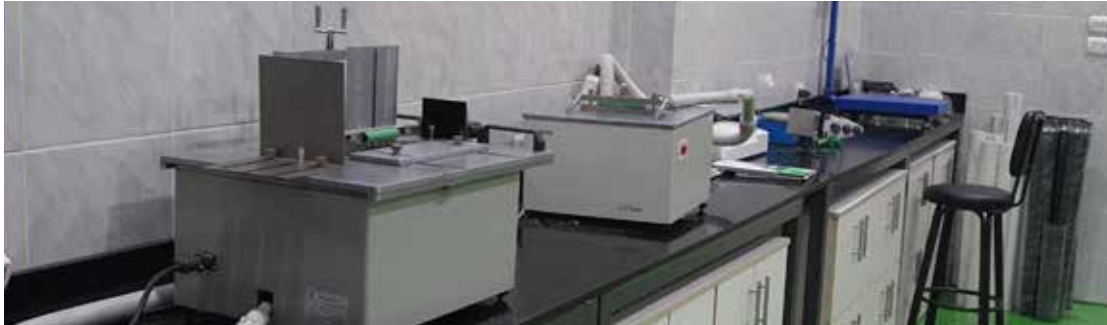
LENGTH OF RUN 30 METER

Temp. Change ΔT °C	10	15	20	30	35	40
Thermal Expansion (ΔT) In mm of UPVC	46	55	64	73	82	91

6.0.0

Quality Control

ROXY FOR MODERN WATER SYSTEMS



It is our mission at **Roxy** Plast to maintain the highest level of quality through clear operating procedures, work instructions as well as forms and records. Statistical quality control and sound documentation ensure that traceability is maintained at anytime in the future.

This means that all corporate and plant functions within **Roxy** Plast, whether commercial or operational, are required to be clearly stated and documented, ensuring that the quality of our product is never compromised or coincidental.

Roxy Plast always maintains the highest standards of quality for its users. This is why it warrants a 50-year guarantee for all its piping network components starting from the date of purchase.



Roxy Plast maintains a comprehensive quality control system. From designing the required specifications and controlling the incoming raw materials, processing, packing, storing and shipping the product to the customer, to the after-sale service. This is accomplished in parallel to the Quality Assurance Program, with the objective to ensure that total quality, not only localized quality, is maintained as required.

The overall quality system operation and documented by **Roxy** Plast is implemented throughout the plant. It has been designed to exceed requirements stated by national and international authorities and institutions. Regular checks are done to further eliminate any chance of quality deviation.

Below you will find some of the tests done in our plants laboratory to ensure high **Roxy** Plast quality:

1- For PIPES

- Hydrostatic pressure test
- Free falling impact test.
- Pendulum impact test.
- Heat Reversion test.
- Density test.
- Resistance to dichloro methane test (Methylene Chloride)

2- For FITTINGS

- Heat Reversion



7.0.0

Products

ROXY FOR MODERN WATER SYSTEMS

ROXY U-PVC PRESSURE PIPES

ACCORDING TO FOLLOWING STANDARDS



Din standard 8061 / 8062, DIN 19534

Egyptian standard (ES) 848

Egyptian standard (ES) 1717

British Standard threaded (BS) 3505, 4514, 5255, 4660 and 5481

According to Arento telephone duct specification T.C 161A

According to (EN) standard / ISO 1452

According to ASTM standard / ISO 15847 / 3

According to ASTM standard

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Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

ACCORDING TO GERMAN STANDARD DIN 8061 / 8062

Nominal Outside Diameter DN	Socket Depth (mm)	Class I 2 bar		Class II 4 bar		Class III 6 bar		Class IV 10 bar		Class V 16 bar	
		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	0.95	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	8.7	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	11.80	11.0	28.1	16.4	41.4	27.7	65.8	...	...
630	300	5.0	14.70	12.4	35.7	18.4	52.2	30.0	83.2	...	...
710	320	5.7	18.90	14.0	45.3	20.7	66.1	...	...	...	...
800	360	6.4	23.90	15.7	57.2	23.3	83.9	...	...	...	...

NOTES

The color D-gray or as the client request

Each pipe comes with one rubber sealing ring

The standard length is 6 meter long with the socket or as the client request

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Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

ACCORDING TO DIN 19534

Nominal Size mm	Outside Diameter		Wall Thickness		Insertion mm	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

ACCORDING TO EGYPTIAN STANDARD ES 848

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 17 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/mm	No.thick of wall mm	No.wt kg/mm	No.thick of wall mm	No.wt kg/mm	No.thick of wall mm	No.wt kg/mm	No.thick of wall mm	No.wt kg/mm	No.thick of wall mm	No.wt kg/mm
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	0.294
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	1.22	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

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Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

ACCORDING TO EGYPTIAN STANDARD ES 848

Nominal Outside Diameter DN	8 bar S 16 - SDR 33 PN 8		12.5 bar S 10 - SDR 21 PN 12.5		20 bar S 10 - SDR 21 PN 12.5		25 bar S 10 - SDR 21 PN 12.5	
	No.thick of wall mm	No.wt kg/mm	No.thick of wall mm	No.wt kg/mm	No.thick of wall mm	No.wt kg/mm	No.thick of wall mm	No.wt kg/mm
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	21.3	68.1	...	...	...	...	...	...
800	24.5	88.22	...	...	...	...	...	...

7.1.0

Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

ACCORDING TO BS 3505

Nominal SIZE (inch) % It	Outside Diameter (mm)		Class 'O' W.T (mm)		Class 'C' W.T (mm)		Class 'D' W.T (mm)		Class 'E' W.T (mm)	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1/2	21.2	21.5	...	...	...	...	...	...	1.7	2.1
3/4	26.6	26.9	...	...	...	...	...	...	1.9	2.5
1	33.4	33.7	...	...	...	...	...	...	2.2	2.7
1 1/4	42.1	42.4	...	...	...	...	2.2	2.7	2.7	3.2
1 1/2	48.1	48.4	1.8	2.2	...	...	2.5	3	3.1	3.7
2	60.2	60.5	1.8	2.2	2.5	3	3.1	3.7	3.9	4.5
2 1/2	75	75.3	1.8	2.2	3	3.5	3.9	4.5	4.8	5.5
3	88.7	89.1	1.8	2.2	3.5	4.1	4.6	5.3	5.7	6.6
4	114.1	114.5	2.3	2.8	4.5	5.2	6	6.9	7.3	8.4
6	168	168.5	3.1	3.7	6.6	7.6	8.8	10.2	10.8	12.5
8	218.8	219.4	3.1	3.7	7.8	9	...	...	...	...

NOTE

Stocks are available with plain ends and solvent socket.

Manufactured to BS 3505, 3506, 1969

Standard Length 4, 5.8 & 6 Meters

Color Dark Gray

Socket type Solvent Weld or Plain-end

ROXY THREADED PIPES FOR SUPPLY AND IRRIGATION WATER B.S3505

Nominal Size (Inch)	Outside Diameter (mm)	Wall Thickness (mm)	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

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Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

U-PVC SOIL & WASTE PIPE - ACCORDING TO BS 4514

Nominal Size (mm)	Outside Diameter (mm)		Wall Thickness	
	MIN	MAX	MIN	MAX
(3")82	82.4	82.8	3.2	3.8
(4")110	110	110.4	3.2	3.8
(6")160	160	160.6	3.2	3.8

U-PVC SOIL & WASTE PIPE - ACCORDING TO BS 5255

Nominal Size (mm)	Outside Diameter (mm)		Wall Thickness	
	MIN	MAX	MIN	MAX
1¼"	36.1	36.3	1.9	2.2
1½"	42.75	43.05	1.9	2.3
2"	55.75	56.05	2	2.4

NOTE

Stocks are available with plain ends and solvent socket

Manufactured to	BS 4515 - Soil Pipe, BS 522 - Soil & Waste Pipe
Standard Length	4, 5.8 & 6 Meters
Color	Light Gray
Socket Type	Solvent Weld

7.1.0

Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

U-PVC UNDERGROUND DRAINAGE & SEWER PIPE ACCORDING TOBS 4660

Nominal Size (mm)	Outside Diameter (mm)		Wall Thickness (mm)	
	MIN	MAX	MIN	MAX
82 (3")	82.4	82.8	3.2	3.8
110 (4")	110	110.4	3.2	3.8
160 (6")	160	160.6	4.1	4.8

U-PVC GRAVITY SEWER PIPE ACCORDING TO BS 5481

Nominal Size (mm)	Outside Diameter (mm)		Wall Thickness (mm)	
	MIN	MAX	MIN	MAX
200	200	200.6	4.9	5.6
250	250	250.7	6.1	7
300	300	300.8	7.3	8.4
350	350	350.9	8.5	9.8

NOTE

Stocks are available with plain ends and solvent socket

Standard Length	5.8 & 6 Meters
Color	Golden Brown
Socket type	Solvent Weld or Plain-end

7.1.0

Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

According to ISO 1452

Nominal Outside Diameter DN	Pipe series S						
	Nominal (minimum) Wall Thickness						
	S 20 (SDR 41)	S 16 (SDR 33)	S 12,5 (SDR 26)	S 10 (SDR 21)	S 8 (SDR 17)	S 6,3 (SDR 13,6)	S 5 (SDR 11)
	Nominal Pressure PN Based on Design Coefficient C = 2,5						
		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	—	1,6	2,0	2,4	3,0	3,7	4,6
63	—	2,0	2,5	3,0	3,8	4,7	5,8
75	—	2,3	2,9	3,6	4,5	5,6	6,8
90	—	2,8	3,5	4,3	5,4	6,7	8,2
	Nominal pressure PN based on design coefficient C = 2,0a						
	PN 6	PN 8	PN 10	PN 12.5	PN 16	PN 20	PN 25
110	2,7	3,4	4,2	5,3	6,6	8,1	10,0
125	3,1	3,9	4,8	6,0	7,4	9,2	11,4
140	3,5	4,3	5,4	6,7	8,3	10,3	12,7
160	4,0	4,9	6,2	7,7	9,5	11,8	14,6
180	4,4	5,5	6,9	8,6	10,7	13,3	16,4
200	4,9	6,2	7,7	9,6	11,9	14,7	18,2
225	5,5	6,9	8,6	10,8	13,4	16,6	—
250	6,2	7,7	9,6	11,9	14,8	18,4	—
280	6,9	8,6	10,7	13,4	16,6	20,6	—
315	7,7	9,7	12,1	15,0	18,7	23,2	—
355	8,7	10,9	13,6	16,9	21,1	26,1	—
400	9,8	12,3	15,3	19,1	23,7	29,4	—
450	11,0	13,8	17,2	21,5	26,7	33,1	—
500	12,3	15,3	19,1	23,9	29,7	36,8	—
560	13,7	17,2	21,4	26,7	—	—	—
630	15,4	19,3	24,1	—	—	—	—
710	17,4	21,8	27,2	30,0	—	—	—
800	19,6	24,5	30,6	—	—	—	—
900	22,0	27,6	—	—	—	—	—
1 000	24,5	30,6	—	—	—	—	—

7.1.0

Roxy U-PVC Pressure Pipes

ROXY FOR MODERN WATER SYSTEMS

ACCORDING TO EGYPTIAN STANDARD 1717

Nominal Outside Diameter DN	SN2 SDR51		SN4 SDR41		SN8 SDR34	
	No.thick of wallmm	No.wt kg/m	No.thick of wallmm	No.wt kg/m	No.thick of wallmm	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	3.70	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	11.40	8.7	14.06	10.4	16.7
400	7.9	14.50	9.8	17.80	11.7	21.1
450	8.8	18.30	11.0	22.53	13.2	26.8
500	9.8	22.40	12.3	28.00	14.6	32.9
630	12.3	35.70	15.4	43.944	18.4	52.2
710	13.9	45.30	17.4	55.56	...	...
800	15.7	57.20	19.6	70.57	...	...

ACCORDING TO ARENTO TELEPHONE DUCT SPECIFICATION T.C 161A

Nominal Size (mm)	Outside Diameter		Wall Thickness		Socket Depth (mm)
	(S)	Tolerance	(S)	Tolerance	
50	50	0.2	1.6	0.4	80
110	110	0.3	3.2	0.6	170

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7.2.0

Rubber Sealing

ROXY FOR MODERN WATER SYSTEMS



Roxy Plast rubber sealing

How **Roxy** Plast rubber sealing for Water, drainage, sewerage and irrigation U-PVC pipes can make a difference to you?

Pure raw materials used in the manufacturing process of the rubber sealing that gives an approximate 100 years life time.

High accuracy of the dimensions of the rubber sealing ensures the integrity of the installation and avoids leakage over time.

Ease of installation suiting the needs of your main contractor, our rubber sealing are very easy to install and carry marks that indicate the right way of insertion.

Roxy Plast rubber sealing are manufactured to the latest DIN standards.

They meet safety requirements and are economic friendly.

Tough designs for high impact and pressure because we understand the stresses and pressure that underground pipes are exposed to.

Health and safety assurance because our rubber sealing are made from internationally approved and accredited materials that can be used in drinking water pipe lines.

Hold high tensile strength up to 6 MPa and 60-55 hardness degree.

7.3.0

Gully Trap

ROXY FOR MODERN WATER SYSTEMS

Roxy Plast Gully-trap

Advantages of **Roxy** Plast Gully-trap

Easy Installation

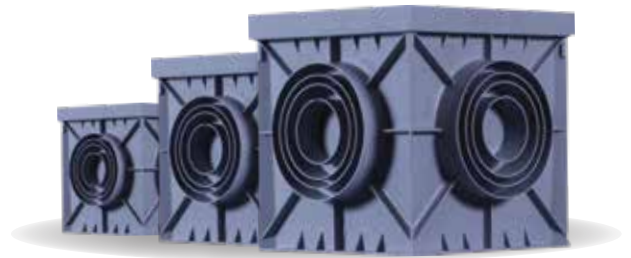
The simplicity and ease of installation of the Gully-trap with plastics that gives adaptability and flexibility. While in the concrete and brick manholes any movement or vibration in the soil can produce a break in the body or in the rigid joins that are connected to the pipe; in the plastic Gully-trap both the adaptation to the soil as its flexibility makes it suitable for many applications and can be used in different atmospheres

High Resistance

The concrete and brick Gully-trap don't assure the resistance to the effect of the waste waters that can corrode the walls due to the agents they have. However, the Gully-trap built with poly propylene (pp) plastic materials assure the resistance to salts, acids and other materials which are present in the waste water that can be harmful for the environment. The concrete neither guarantees the resistance of the walls and the bottom to chemical products or leachates, while the plastic materials are capable of supporting chemical waste and of landfills so they are ideal for the evacuation of waste water.

Easy Maintenance

The plastic Gully-trap is easier in the maintenance process than the concrete and the bricks gully-trap due to the modern design that gives an easy access to the body of the gully-trap. Although the plastic gully-trap can be replaced easily with another one in the case of changing the pipes diameter or installing bigger pipe line unlike the concrete gully-trap that will cost you a lot to remove it. Moreover the plastic gully-trap can be moved from one place to another without being damaged, while the concrete gully-trap cannot be moved once it's installed.



7.3.0

Gully Trap

ROXY FOR MODERN WATER SYSTEMS

Lower price

The plastic gully-trap is way cheaper than the concrete one as %25 cost can be saved in any project if the plastic gully-trap is used as well as it can be stored over each other unlike the concrete gully-trap, so a smaller place is needed to store massive amount of gully-traps.

Roughness

The roughness of the concrete plays against it as it is necessary to clean it frequently due to the components of the liquids and solids which are dragged by the waste water and remain in it, while the plastic Gully-trap have an internal flat surface, without any type of roughness or corners. Although they have slopes towards the outlets which allow a good flow of the liquids unlike the concrete gully-trap.

Branches

The diversity of exit slots helps to be used to different pipe diameters

U.V Resistance

Manufactured from materials that make it highly resistant to ultraviolet radiation.

Different applications

It has many uses, including drainage as well as cables and telephone ducts.

Different colors and dimensions

The color is dark gray or as requested and available in different sizes.



Kind	Dimension(L-W-H)	Entry & Exit Holes
20/z	20x20x20 cm	50/75/90/110mm
30/z	30x30x30 cm	50/75/90/110/125/160cm
40/z	40x40x40 cm	50/75/90/110/125/160/200/225mm

7.4.2

U-PVC Pipes ASTM System

ROXY FOR MODERN WATER SYSTEMS



U-PVC Drainage ASTM System

ACCORDING TO ASTM D-2241 (SDR) SERIES

Normal Diameter (inches)	Outside Diameter (mm)		SDR 64 (4.3 bar) (63 psi) Thickness (mm)	SDR 41 (6.9 bar) (100 psi) Working Pressure (bar)	SDR 32.5 (11 bar) (160 psi) Working Pressure (psi)	SDR 21 (13.8 bar) (200 psi) Thickness (mm)	SDR 17 (17.2 bar) (250 psi) Working Pressure (bar)	SDR 13.5 (27.7 bar) (315 psi) Working Pressure (psi)	SDR 13.5 (27.7 bar) (315 psi) Working Pressure (psi)
	MIN	MAX							
1/2	21,24	21,44	...	...	...	...	...	...	1.57
3/4	26,57	26,77	...	...	...	...	1.52	1.57	1.98
1	33,27	33,53	...	...	...	1.52	1.60	1.96	2.46
1 1/4	42,03	42,29	...	...	1.52	1.63	2.01	2.49	3.12
1 1/2	48,11	48,41	...	...	1.52	1.85	2.29	2.84	3.58
2	60,17	60,47	...	...	1.85	2.31	2.87	3.56	4.47
2 1/2	72,84	73,20	...	...	2.24	2.79	3.48	4.29	5.41
3	88,70	89,1	...	2.16	2.74	3.43	4.24	5.23	6.58
4	114,07	114,53	1.78	2.79	3.51	4.39	5.44	6.73	8.46
6	168	168,56	2.64	4.11	5.18	6.48	8.03	9.91	12.47
8	218,70	219,46	3.43	5.33	6.73	8.43	10.41	12.90	...

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7.4.2

U-PVC Pipes ASTM System

ROXY FOR MODERN WATER SYSTEMS



ACCORDING TO ASTM D-1785 (SCH40 & SCH80) (ASTM D2665)

Normal Diameter (inches)	Outside Diameter (mm)		SCH40			SCH80			ASTM D2665 Drain, Wast, Vent	
	MIN	MAX	Thickness (mm)	Working Pressure (bar)	Working Pressure (psi)	Thickness (mm)	Working Pressure (bar)	Working Pressure (psi)	MIN	MAX
1/2	21,24	21,44	2,77	41,4	600	3,73	58,6	850	...	...
3/4	26,57	26,77	2,87	33,1	480	3,91	47,6	690	...	...
1	33,27	33,53	3,38	31	450	4,55	43,4	630	...	...
1 1/4	42,03	42,29	3,56	25,5	370	4,85	35,9	520	3.56	4.07
1 1/2	48,11	48,41	3,68	22,8	330	5,08	32,4	470	3.68	4.19
2	60,17	60,47	3,91	19,3	280	5,54	27,6	400	3.91	4.42
2 1/2	72,84	73,20	5,16	20,7	300	7,01	29	420	...	...
3	88,70	89,1	5,49	17,9	260	7,62	25,5	370	5.49	6.15
4	114,07	114,53	6,02	15,2	220	8,56	22,1	320	6.02	6.73
6	168	168,56	7,11	12,4	180	10,97	19,3	280	7.11	7.97
8	218,70	219,46	8,18	11	160	12,7	17,2	250	8.18	9.17

7.4.2

U-PVC Pipes MM System

ROXY FOR MODERN WATER SYSTEMS



WHITE COLOR WITH BLUE LINE

AVAILABLE IN MULTI LAYER AND SINGLE LAYER

Dia (mm)	48	60	75	110	160
Size (inch)	1½	2	3	4	6
Thikness (mm)	2.5	2.7	3	3	3
	3.7	3.9	4	4	4
	3.9	4.0	5	5	5

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7.4.3

U-PVC Fittings ASTM System

ROXY FOR MODERN WATER SYSTEMS

ELBOW 90° SANITARY



Item No.	1	2	3	4	5	6	7	8	9
Nominal size (inch)	1/2 inch	3/4 inch	1 inch	1 1/4 inch	1 1/2 inch	2 inch	3 inch	4 inch	6 inch

ELBOW 90° SANITARY WITH DOOR



Item No.	1	2	3	4
Nominal size (inch)	2 inch	3 inch	4 inch	6 inch

ELBOW 45° SANITARY



Item No.	1	2	3	4	5	6	7	8	9
Nominal size (inch)	1/2 inch	3/4 inch	1 inch	1 1/4 inch	1 1/2 inch	2 inch	3 inch	4 inch	6 inch

TEE 90° SANITARY



Item No.	1	2	3	4	5	6	7	8	9
Nominal size (inch)	1/2 inch	3/4 inch	1 inch	1 1/4 inch	1 1/2 inch	2 inch	3 inch	4 inch	6 inch

TEE 90° SANITARY WITH DOOR



Item No.	1	2	3	4
Nominal size (inch)	2 inch	3 inch	4 inch	6 inch

7.4.3

U-PVC Fittings ASTM System

ROXY FOR MODERN WATER SYSTEMS

TEE REDUCER 90°



Item No.	1	2	3	4
Nominal size (inch)	3 / 2	4 / 2	4 / 3	6 / 4

TEE REDUCER 90° WITH DOOR



Item No.	1	2	3	4
Nominal size (inch)	3 / 2	4 / 2	4 / 3	6 / 4

TEE 45°



Item No.	1	2	3	4	5
Nominal size (inch)	1 1/2	2	3	4	6

TEE REDUCER 45°



Item No.	1	2	3
Nominal size (inch)	4 / 2	4 / 3	6 / 4

TEE CROSS 87.5°



Item No.	1	2
Nominal size (inch)	3	4

VENT



Item No.	1	2
Nominal size (inch)	3	4

7.4.3

U-PVC Fittings ASTM System

ROXY FOR MODERN WATER SYSTEMS

SOCKET



Item No.	1	2	3	4	5	6	7	8	9
Nominal size (inch)	1/2	3/4	1	1 1/4	1 1/2	2	3	4	6

REDUCING BUSH



Item No.	1	2	3	4	5	6	7
Nominal size (inch)	3/4 / 1/2	1 / 1/2	1 / 3/4	1 1/2 / 1/2	1 1/2 / 3/4	1 1/2 / 1	2 / 1/2



Item No.	8	9	10	11	12	13	14
Nominal size (inch)	2 / 3/4	2 / 1	2 / 1 1/2	3 / 2	4 / 2	4 / 3	6 / 4

CLEAN OUT



Item No.	1	2	3	4	5
Nominal size (inch)	1 1/2	2	3	4	6

GREGORY



Item No.	1	2
Nominal size (inch)	3	4

P-TRAP



Item No.	1	2
Nominal size (inch)	3	4

END CAP



Item No.	1	2	3	4	5	6	7	8	9
Nominal size (inch)	1/2	3/4	1	1 1/4	1 1/2	2	3	4	6

7.4.3

U-PVC Fittings ASTM System

ROXY FOR MODERN WATER SYSTEMS



COUPLING-S.T



Item No.	1	2
Nominal size (inch)	1 1/2 / 1 1/2	1 1/2 / 1 1/4

ELBOW-S.T 90°



Item No.	1	2
Nominal size (inch)	1 1/2 / 1 1/2	1 1/2 / 1 1/4

FLOOR TRAP



Item No.	1	2	3	4	5	6	7	8
Nominal size (inch)	3 / 1 1/2 10 cm	3 / 2 10 cm	2 / 1 1/2 10 cm	2 / 2 10 cm	2 / 1 1/2 10 cm	1 1/2 / 1 1/2 10 cm	2 / 1 1/2 7 cm	2 / 2 8 cm

SLIDE SOCKET



Item No.	1	2
Dimension (inch)	3	4

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7.4.4

U-PVC Fittings MM System

ROXY FOR MODERN WATER SYSTEMS

ELBOW 90°



Item No.	1	2	3	4	5	6	7	8	9	10
Nominal size (mm)	20	25	32	40	50	63	75	90	110	160

ELBOW 45°



Item No.	1	2	3	4	5	6	7	8	9	10
Nominal size (mm)	20	25	32	40	50	63	75	90	110	160

ELBOW 90° WITH DOOR



Item No.	1	2	3	4	5
Nominal size (mm)	63	75	90	110	160

TEE 90°



Item No.	1	2	3	4	5	6	7	8	9	10
Nominal size (mm)	20	25	32	40	50	63	75	90	110	160

TEE 90° WITH DOOR



Item No.	1	2	3	4	5
Nominal size (mm)	63	75	90	110	160

7.4.4

U-PVC Fittings MM System

ROXY FOR MODERN WATER SYSTEMS

TEE 45°



Item No.	1	2	3	4	5	6
Nominal size (mm)	50	63	75	90	110	160

TEE REDUCER 45°



Item No.	1	2	3	4	5
Nominal size (mm)	110/50	110/63	110/75	160/110	110/2"

TEE REDUCER 90°



Item No.	1	2	3	4	5	6
Nominal size (mm)	110/50	110/63	110/75	160/110	75/2"	110/2"

TEE REDUCER 90° WITH DOOR



Item No.	1	2	3	4	5	6
Nominal size (mm)	110/50	110/63	110/75	160/110	75/2"	110/2"

TEE CROSS 90°



Item No.	1	3
Nominal size (mm)	75	110

P-TRAP



Item No.	1	2
Dimension (mm)	75	110

7.4.4

U-PVC Fittings MM System

ROXY FOR MODERN WATER SYSTEMS

SOCKET



Item No.	1	2	3	4	5	6	7	8	9
Nominal size (mm)	20	25	32	40	50	63	75	110	160

END CAP



Item No.	1	2	3	4	5	6	7	8	9
Nominal size (mm)	20	25	32	40	50	63	75	110	160

CLEAN OUT



Item No.	1	2	3	4	5	6
Nominal size (mm)	50	63	75	90	110	160

VENT



Item No.	1	2
Nominal size (mm)	75	110

GREGORY



Item No.	1	2
Nominal size (mm)	75	110

ELBOW-S.T 90°



Item No.	1	2
Nominal size (mm)	50/1 1/4"	50/1 1/2"

COUPLING-S.T





Item No.	1	2
Nominal size (mm)	50/1 1/4"	50/1 1/2"

7.4.4


U-PVC Fittings MM System

ROXY FOR MODERN WATER SYSTEMS


REDUCING BUSH(A)

	Item No.	1	2	3	4	5	6	7	8	9	10
	Nominal size (mm)	25/20	32/20	32/25	40/20	40/25	40/32	50/32	50/40	63/40	63/50
	Item No.	11	12	13	14	15	16	17	18	19	20
	Nominal size (mm)	75/50	75/63	90/50	90/63	90/75	110/50	110/63	110/75	110/90	160/110


FLOOR TRAP

	Item No.	1	2	3	4	5	6	7
	Nominal size (mm)	75/50 10 cm	75/63 10 cm	63/50 10 cm	63/63 10 cm	50/50 10 cm	60/50 7 cm	63/63 8 cm

DRAINAGE SOCKET

	Item No.	1	2	3	4
	Nominal size (mm)	110/1 1/2 / 1 1/2"	110/75/1 1/2"	110/50/50	110/75/50

REDUCER

	Item No.	1	2	3	4
	Nominal size (mm)	50 x 75	110 x 50	110 x 75	160 x 110

SLIDE SOCKET

	Item No.	1	2
	Nominal size (mm)	75	110


TEE CROSS 45 °

	Item No.	1
	Nominal size (mm)	110

UNION

	Item No.	1
	Nominal size (mm)	32

MALE ADAPTER

	Item No.	1
	Dimension (inch)	32m x 1"

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7.5.0

U-PVC Solvent Cement Glue

ROXY FOR MODERN WATER SYSTEMS



ROXY-WELD 914 -917 HEAVY BODIED CPVC CEMENT - ORANGE

DESCRIPTION:

A heavy bodied high strength, **Fast setting**, CPVC solvent cement formulated for application in joining larger CPVC piping systems schedule 40 and 80 through 6 inches. Meets and exceeds ASTM Standard. We recommend using primer prior to cementing CPVC pipe and fittings are specially designed for high temperature uses, e.g. hot water systems, to 80°C. .

PHYSICAL DESCRIPTION:

- Color : Orange
- Viscosity (Brookfield viscometer RV "spindle 4, speed 20") : (at 22°C) 2500 - 3000 cps
- Cementing time : 1 hour
- Evaporation rate : 1.5 (Ether = 1)
- Shelf life : 24 months

SURFACE PREPARATION:

The pipe and fittings to be cemented must be clean and dry; free of oils, dirt, moisture, grease, etc. Clean pipe and fitting of any foreign material, using clean rag with cleaner. Glossy appearance of pipe should be removed. We recommend primer Hi Etch on all pressure pipe and all pipe 5" in diameter or larger prior to cement application. Any water present in joint can cause trouble and should be removed to insure a suitable application.

APPLICATION:

1. Square cut pipe and remove all dirt and burrs.
2. Check dry fit of pipe and fitting. Pipe should easily go into fitting ¼ of the way.
3. Clean pipe.
4. Apply thin coat of cement to fitting; avoid puddling inside.
5. Apply liberal coat of cement to pipe; leave no void area.
6. Enough cement must be used to completely fill any gaps in joint.
7. Assemble quickly while cement is still wet.
8. Push pipe into fitting using a ¼ turning motion until pipe bottoms out.
9. Hold Pipe and fitting together for 30 seconds, wipe off excess on collar.
10. Allow 15 minutes for good handling strength.
11. Allow joint 24 to 48 hours before applying pressure.

CLEAN UP:

Cleaner can be used to clean up any excessive adhesive or spills.

CAUTION:

(EXTREMELY FLAMMABLE MIXTURE)

DANGER! EXTREMELY FLAMMABLE DO NOT USE NEAR FIRE OR FLAME. PUT OUT ALL PILOT LIGHTS AND ALL IGNITION SOURCE. THIS INCLUDES ELECTRIC PILOT LIGHTS, SPARK IGNITION DEVICES. THESE ARE ELECTRIC PILOT LIGHTS FOR GAS APPLIANCES SUCH AS FURNACES, STOVES AND WATER HEATERS, THEREFORE, IT IS IMPERATIVE THAT THE GAS SUPPLY AND ALSO THE ELECTRIC SUPPLY TO THESE APPLIANCES BE SHUT DOWN OR DISCONNECTED FROM THE APPLIANCE ITSELF.

HAZARDOUS INGREDIENTS:

Organic solvents:

Use with adequate ventilation. Avoid contact with eyes and skin. Keep away from heat and open flame. If swallowed give milk or water, don't induce vomiting and call physician immediately. In case of eye or skin contact, flush repeatedly with water for 15 minutes.

KEEP OUT OF REACH OF CHILDREN.

LIMITED WARRANTY:

We guarantee this product is made with materials of the finest quality and to rigid specifications of applicable standards. Properly used, this product will perform complete satisfaction; this is based on both laboratory and field experience. However, since we cannot control conditions when the product is used, our only obligation we will replace defective cement. Installers should verify for themselves that they can make satisfactory joints under existing conditions. Keep tightly closed when not in use .

The technical data in this sheet are based on information we believe to be reliable. They are offered in good faith without guarantee, as conditions and methods of use of our product are beyond our control. We recommend that the prospective user determine the suitability of our material and suggestions before adopting on commercial scale.

7.5.0

U-PVC Solvent Cement Glue

ROXY FOR MODERN WATER SYSTEMS

ROXYWELD 717-714 HEAVY BODIED PVC CEMENT - GREY

DESCRIPTION:

A specially formulated heavy bodied, medium setting, PVC solvent cement designed for joining larger pipe sizes; PVC pressure pipe and fittings schedule 40 and 80 through 12 inches. Applications also include conduit, gas, potable water, sewer and DWV (drain, waste and vent) piping systems. Meets and exceeds ASTM Standard when used for pressure applications, pipe and fittings 5 inches or larger and schedule 80 systems we recommend to use PRIMER prior to cementing. Temperature application range is 4°C – 44°C.

PHYSICAL DESCRIPTION:

- Color : Grey
- Viscosity (Brookfield viscometer RV "spindle 4, speed 20") : (at 22°C) 2500-3000 cps
- Cementing time : 2 hours
- Internal pressure efficiency : 36 bar
- Evaporation rate : 3 (Ether = 1) - Shelf life : 36 months

SURFACE PREPARATION:

The pipe and fittings to be cemented must be clean and dry; free of oils, dirt, moisture, grease, etc. Clean pipe and fitting of any foreign material, using clean rag with cleaner. Glossy appearance of pipe should be removed. We recommend primer Hi Etch on all pressure pipe and all pipe 5" in diameter or larger prior to cement application. Any water present in joint can cause trouble and should be removed to insure a suitable application.

APPLICATION:

1. Square cut pipe and remove all dirt and burrs.
2. Check dry fit of pipe and fitting. Pipe should easily go ¼ of the way into fitting.
3. Clean pipe.
4. Apply thin coat of cement to fitting; avoid puddling inside.
5. Apply liberal coat of cement to pipe; leave no void areas.
6. Enough cement must be used to completely fill any gaps in joint.
7. Assemble quickly while cement is still wet.
8. Push pipe into fitting using a ¼ turning motion until pipe bottoms out.
9. Hold Pipe and fitting together for 30 seconds, wipe off excess on collar.
10. Allow 15 minutes for good handling strength.

11. Allow joint 24 to 48 hours before applying pressure.

CLEAN UP:

Cleaner can be used to clean up any excessive adhesive or spills.

CAUTION:

(EXTREMELY FLAMMABLE MIXTURE)
DANGER ! EXTREMELY FLAMMABLE DO NOT USE NEAR FIRE OR FLAME. PUT OUT ALL PILOT LIGHTS AND ALL IGNITION SOURCES. THIS INCLUDES ELECTRIC PILOT LIGHTS, SPARK IGNITION DEVICES. THESE ARE ELECTRIC PILOT LIGHTS FOR GAS APPLIANCES SUCH AS FURNACES, STOVES AND WATER HEATERS, THEREFORE, IT IS IMPERATIVE THAT THE GAS SUPPLY AND ALSO THE ELECTRIC SUPPLY TO THESE APPLIANCES BE SHUT DOWN OR DISCONNECTED FROM THE APPLIANCE ITSELF.

HAZARDOUS INGREDIENTS:

Organic solvents

Use with adequate ventilation. Avoid contact with eyes and skin. Keep away from heat and open flame. If swallowed give milk or water, don't induce vomiting and call physician immediately. In case of eye or skin contact, flush repeatedly with water for 15 minutes.

Notes: This product is THF free

KEEP OUT OF REACH OF CHILDREN.

LIMITED WARRANTY:

We guarantee this product is made with materials of the finest quality and to rigid specifications of applicable standards. Properly used, this product will perform complete satisfaction; this is based on both laboratory and field experience. However, since we cannot control conditions when the product is used, our only obligation we will replace defective cement. Installers should verify for themselves that they can make satisfactory joints under existing conditions. Keep tightly closed when not in use.

The technical data in this sheet are based on information we believe to be reliable. They are offered in good faith without guarantee, as conditions and methods of use of our product are beyond our control. We recommend that the prospective user determine the suitability of our material and suggestions before adopting on commercial scale.



8.0.0

Certificates

ROXY FOR MODERN WATER SYSTEMS

National Organization
For Potable Water & Sanitary Drainage
Administration of Testing & Industry Supervision

الهيئة القومية
لمياه الشرب والصرف الصحي
إدارة الاختبارات والرقابة على الصناعة

شهادة اعتماد منشأة إنتاجية

(مواسير بلاستيك)

اسم المنشأة : مصنع روكسي للمنتجات المعدنية والبلاستيكية
عنوان الإدارة : ٢٩ ش مراد بك ميدان الاسماعيلية - مصر الجديدة - القاهرة
عنوان المصنع : قطع رقم ٤ - بلوك ٢٠٠٣٦ المنطقة الصناعية الامتداد الغربي مدينة العجوز
السجل التجاري : ١٤١٢٢ مكتب سجل تجاري : استشار القاهرة : محافظة القاهرة
بعض رقم تسجيل ضريبي : ٤٦٢ - ٦٥٧ - ٢٦٤ مأمورية : الاستثمار محافظة القاهرة
سجل صناعي رقم : ٣٤٢٢٠ سنة الإصدار : ٢٠٠٩ نوعية الصناعة : كيدوية
رخصة : (دائمة) مسلسل رقم : ٢٠٠٩/١٠٠ (مدينة) : العجوز محافظة : القاهرة
مواصفة شئون البيئة : رقم القرار : التاريخ : الجهة :

أهم المنتجات المعتمدة لدى الهيئة :

- ١ - مواسير بلاستيك UPVC للشرب والصرف حتى قطر ٤٥٠ مم بحسب مواصفات مختلفة.
- ٢ - مواسير وقطع PPR بولي بروبيلين حتى قطر ١١٠ مم .

طبقا للمواصفات القياسية المصرية والمعمية والقرار الوزاري رقم ١٦٤ لسنة ٢٠١٥

- يتم الالتزام بتعليمات الإدارة و المواصفة خلفه وفي حالة مخالفتها يعتبر لاغي
- شهادة الاعتماد لا يعمل بها كبديل عن شهادات الاختبار التي تصدر لكل أمر توريد على حده

المشرف العام
مهندسة /
" ايمن احمد سليم "

صادرة في ١٤ / ١٢ / ٢٠١٩
ساري حتى ١٦ / ١٢ / ٢٠١٩

٢١٩
٢٠١٨/١١/٢٤

sheren

الهيئة العامة لشئون المطابع الأميرية ١٣٢٨٤ من ٢٠١٤ - ١٩٠٠

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Technical & Chemical properties

ROXY FOR MODERN WATER SYSTEMS

Quality Management System

CERTIFICATE OF APPROVAL

No. 008-0059-Q

This is to certify that the Quality Management System at

Roxy for metal and plastic products

of

El Obour City – Industrial Zone Area No4 Block 20036-
Egypt

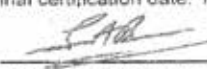
Has been examined by assessors of QMS Certification Services and found to be
conforming to the requirements of:

ISO 9001:2015
Quality Management Systems

In respect of the following activities:

Manufacture and Sales of PIPES (UPVC & PPR & PVC) –
FITTING (UPVC & PPR & PVC)

This certificate is valid from: 15/09/2018 to 15/09/2021
Original certification date: 15/06/2015


Gerry Bonner CPEng, BEng, FIE Aust, Chairman - QMSCS Pty Ltd
Approval: QMSCS Pty Ltd Trading as QMS Certification Services
To verify the validity of this certificate please visit www.as-anz.org/register

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Suite 107 - 17 Botton Street,
Newcastle NSW 2300 Australia



Accreditation Number S1410994MA

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