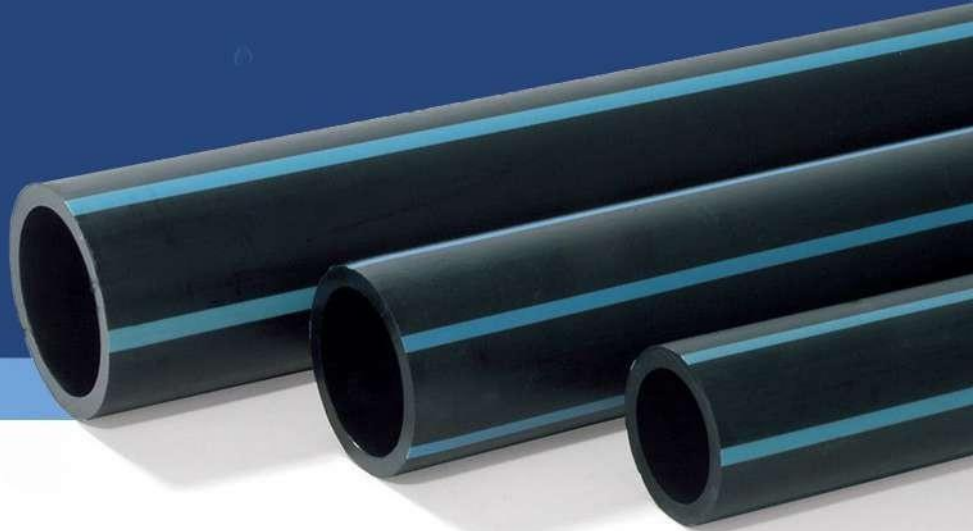




ROYAL PVC Co.LTD

رایل پی وی سی کمپنی لمیٹید

THE COMPANY PROFILE





THE COMPANY PROFILE & CERTIFICATES

- 1 About us
- 2 CEO Message
- 3 Vision, Mission, INNOVATION & ADVANTAGES
- 4 QUALITY POLICY & QUALITY CONTROL
- 5 OUR QUALITY OBJECTIVE
- 6 POWER OF ONE
- 7 PRODUCTS APPROVED
- 8 Authorized Deller
- 9 ISO Certificate

About us !

Royal, the brand name that spells Royalty Quality. It resonates dependable quality and innovation in products. For, those listening to the popular Royal Brand, we are a world class Poly Vinyl Chloride (PVC) and un plasticized Poly Vinyl Chloride (uPVC) pressure and non-pressure pipe & fittings system for cold potable water, hot water, Sewerage, Electrical & other industrial used conforming to (BSS 3505/ ASTM D 1785 – 94/ ASTM D-2665-04a / ASTM D 3034 – 98 / ASTM-D 2466-05 ANSI(American National Standard Institute)

/ UL651/ SDR Series, HDPE Pipe According to DIN 8074 Standard, PPRC Pipe & Fittings DIN 8077/8078 / DIN 16962 and other international Standards manufacturer located at Kabul Jalal Abad Road, Near to Naw Abad, Bagrami District12#, Kabul, Afghanistan. The group is respected all over Afghanistan for their exceptionally product range and unbelievable great quality that comes with each and every product. Being an ISO 9001:2015, ISO 14001:



2015 with Products meeting international standards, this company boasts of having the manpower and systems to deliver products of high quality consistently. The management of the company, with more than 22 years of experience in the field of PVC , has a strong vision of growth of this product. The plant is equipped with the latest and most modern machinery from Germany, Austria and Taiwan with production capacity of 6000 m.Ton annually. PVC Pipe, fittings, PP-R and Polyethylene tube for gas and Water transportation

The company is headed by a group of experienced and visionary businessmen who believe in delivering quality products to the customer. The management and the executers both work in harmony to manufacture as well as distribute products so as to make the buying experience and functionality of the product acceptable to the consumers.



CEO message

Dr. Ahmad Shafiq “Ahmadi”
(Chief Executive Officer)

We are very thankful to God Almighty Who has given us the opportunity to serve our customers and Rebuild Afghanistan by supplying quality products as per International Standard.

ROYAL PVC CO.LTD is a customer caring company which aims to produce and supply quality products to the end user.

Royal believes that there should not be any sort of compromise on quality. In order to ensure the quality of our products we have adopted international quality standards. Customer satisfaction & Afghanistan Rebuilding is one of our key goals so all these quality standards are practiced strictly.

With my faith in Allah and belief in the dedication of our staff, I see ROYAL to become the leading quality manufacturer and supplier in years to come.

All these goals cannot be achieved without having professional work force. Fortunately, the staff at ROYAL is extremely professional and committed. We will leave no stone unturned in striving for excellence and will utilize all our capabilities to make ROYAL one of the acclaimed industries of this era. May Allah ease and bless our way in accomplishing our goals (Ameen).

VISION

Our vision is to be the industry's preferred and trusted supplier, of quality piping solutions by maintaining a high level of friendly service and being the acknowledged leader of innovative new appropriate technology, to the industry. With a vision for the future, ROYAL has spent large amount of resources in Research & Development and Capacity Building.

It has envisioned the product need, quantum of supply and has build a large capacity. To meet the needs of the age for the development of the economy of our country, we are sharing hard in achieving goal of excellence. So our aim is not to compromise on materials and services to valuable customers.



MISSION

Our mission is to position our business, to supply a comprehensive range of appropriate quality technology – predominantly plastic piping solutions - to the Construction, Agricultural Mining and Industrial market sectors in Afghanistan. Royal means superior class of really No. 1. We are Royal and will remain cream of means satisfaction of customers' needs.

INNOVATION & ADVANTAGES

"Transforming needs into products" that has been the key words given by our founder, which still motivate the entire company.

The spirit of innovation feeds us to grow aggressively into various businesses and products, by accessing global technologies, transforming them to achieve local and international purpose.

- Leader PVC, HDPE, PPR and fittings in Afghanistan
- Manufacturing Capacity 6,000M TPA.
- Excellent Technical Support – Laboratory and Field Based
- Continuous R&D in line with Client Needs and New opportunities
- Competitive prices for high quality, internationally certified products

This has made ROYAL the First largest manufacturer of PVC Pipe, HDPE & PPR Pipe Fittings. Our large capacity helps us serve our Distributors and Mega Projects.

Even with such large operations ROYAL is an agile organization, which has the ability to Provide Large Diameter quickly as per the needs of its customers.

Distribution & Distributors have been the corner stone of ROYAL's success story.

We have over 10 stock points and Distributors in Afghanistan, all of which help us serve the customers better.

These Sub office & stock points are owned both by the company and distributors as well.

At Innovation and diversification is ROYAL's belief for future success.

At ROYAL we are constantly trying to improve and increase our product offering to make our customers more inclined towards our business. We understand their needs and turn them into solutions.



QUALITY POLICY & QUALITY CONTROL

We at ROYAL ensure that we provide its customers with the consistent quality of PVC, HDPE, PPR Pipes & its Fittings and others products year on year, thereby reducing onsite hassles. Constant customer satisfaction and improved quality of products has ensured, that the customers are happy with us.

OUR QUALITY OBJECTIVE

- To plan quality related training programs once in 3 months
- To reduce customer complaints to less than 2% per year
- To increase customer feedback by 10% per year
- To carry out customer survey discussion every 3 months
- To ensure implementation of all finalized proposals in the customer survey discussion

POWER OF ONE

ROYAL has always believed in the philosophy of "POWER OF ONE". It culminates into having maximum number of products under one roof for its customers.

These are beneficial to customers in the following way

- Customers service
- Inventory management & logistics
- Hassle free operation
- Advanced stock out day
- Better Pricing
- Increases customers product offers
- Increased organizational base
- Improves all round loyalty

Royal Production Sector

- PVC Pressure & Non Pressure Pipe system for cold potable water.
- Duct system for telephone and power cables.
- Industrial piping for chemicals.
- Tube well / Agriculture Irrigation purpose.
- Electrical conduits.
- Drainage and Sewer system.
- Casing of Tube wells.
- PVC Fitting.
- PPR-C Pipe & Fittings for hot and cold water
- HDPE Pipe

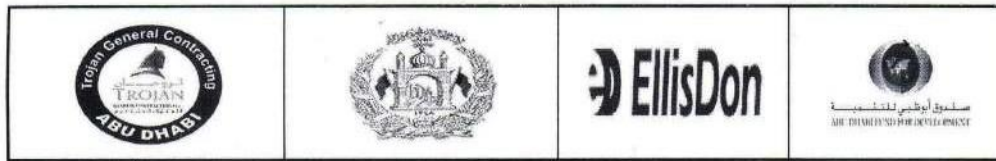


PRODUCTS APPROVED BY:

ROYAL products are approved by following organization and companies

- USAID United States Agency for International Development
- USACE United States Army Corps of Engineers
- UNICEF UNITED NATIONS CHILDREN EMERGENCY FUND
- FOR PAKISTAN AND AFGHANISTAN.
- DACCAR DANISH COMMITTEE FOR AID TO AFGHAN REFUGEE.
- IRC INTERNATIONAL RESCUE COMMITTEE.
- SCA SWIDISH COMMITTEE FOR AFGHANISTAN.
- CARE CARE INTERNATIONAL NGO IN AFGHANISTAN.
- GAA GERMAN AGRO ACTION.
- AUWSSC Afghanistan Urban Water Supply & Sewerage Corporation
- AND OTHER COMPANIES + LOCAL MARKET.





Material Submittal Approval Request

Project Title : AL QASABA RESIDENTIAL LOW COST HOUSING	Consultant : ELISSDON CONSTRUCTION INC
Client : ABU DHABI FUND FOR DEVELOPMENT	Contractor : TROJAN GENERAL CONTRACTING LLC

Submittal Ref No	Revision	Date of Submittal
TRO/203-10/M/MS/049	00	09-Mar-14

Document Technical Submittal:	N/A
-------------------------------	-----

No	Material Description	Manufacturer/supplier	Origin/Model
1	PVC Pipe & fittings for Drainage(Building)	Royal	Afghanistan

Attachments:	Catalog + Samples	Type:	☒ New Submittal ☐ Re-submittal
--------------	-------------------	-------	---

Prepared by: QA/QC manager	MEP Manager	Received by Consultant
Date: 9/3/14	Date: 09 MAR 2014	Date: 09 MAR 2014
Reviewed by: Sr. Project Manager	Signature: [Signature]	Signature: [Signature]
Engr. Saadat Ghabayen	Stamp: [Stamp]	Stamp: [Stamp]

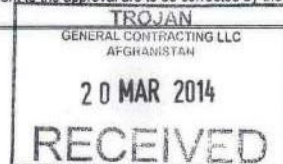
For Use By Consultant:

Comments:

Approval Status: ☒ A Approved ☐ B Approved As Noted ☐ C Revise & Resubmit ☐ D Rejected

Consultant Name: Victor Dussling Signature: [Signature] Date: 18/03/2014

Note: The above comments / or approval does not relieve the Contractor from his obligation in the contract to ensure conformance to the specification. Any deviations found subsequent to the approval are to be corrected by the contractor to the satisfaction of the Client / Consultant.



[illegible][illegible]

[illegible]

ENG FORM 4025, MAR 95

(ER 415-1-10)

EDITION OF SEP 93 IS OBSOLETE.

SHEET 1 OF 1

(Proponent: CEMP-CE)

[illegible]

ENG FORM 4025, MAR 95

(ER 415-1-10)

EDITION OF SEP 93 IS OBSOLETE

SHEET 1 OF 1

(Proposed: CEMP-CE)

14



US Army Corps of Engineers

Afghanistan Engineer District North

®

Design and construction of ANCOP 1st Brigade Expansion

Kabul/Afghanistan

HDPE PIPES

Contract No: W5J9JE-10-D-0006-0010

Submitted To

US Army Corps of Engineers

Kabul Afghanistan

Prepared By:

EMTA INSAAT A.S

Submitted By

EMTA INS.A.S

01.20.2014

CONTRACTOR





AUTHORIZED DEALER FOR SPEARS MANUFACTURING COMPANY USA



**SPEARS MANUFACTURING COMPANY
EXPORT DEPARTMENT**

PO Box 9203, Sylmar, California, 91392 USA
15853 Olden Street, Sylmar, California 91342 USA
Phone: (818) 364-1611 Fax: (818) 898-3774

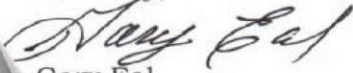
30 April 2010

Royal Standard Company
Shahr-E-Now
Between Haji Yaquooob & Ansari Square
Kabul
Afghanistan

To Whom It May Concern:

This is to advise that Royal Standard Company is a Spears Distributor.

Sincerely,



Gary Eal
Director, International Sales
Spears Manufacturing Company





**AUTHORIZED DEALER FOR UNECOL PRODUCTS (SOLVENT CEMENTS)
MADE IN SPIAN****UNECOL ADHESIVE IDEAS, S.L.****AUTHORIZED DISTRIBUTOR IN AFGHANISTAN***Certificate issued to***ROYAL STANDARD COMPANY. LTD****2019***Mallick*

Natasha Mallick
International Business Director
Unecol Adhesive Ideas, S.L.

Oxer

Richard Oxer
Export Area Manager
Unecol Adhesive Ideas, S.L.

UNECOLGROUP

unecol adhesive ideas s.l.

Parque Ind. Joan Carles I, Avenida de la Fata, 44 | 46140 Almussafes | (Valencia) SPAIN | T (+34) 902 99 54 64 F (+34) 902 99 52 20 |



CERTIFICATE OF REGISTRATION

GMSQR Certifications Pvt. Ltd. has assessed the Quality Management System of

ROYAL PVC COMPANY LIMITED

Main Office: Shahre Now, Haji Yaqoub Square, Haroon Market 2nd Floor, Kabul, Afghanistan.

Factory Add: Bagrami- Arzan Qimat Road District#12th Near to Hussainkhil High School, Naw Abad, Kabul, Afghanistan.

*(Hereinafter called the organization) and hereby declares that
Organization is in conformance with*

ISO 9001:2015

Quality Management System

This registration is in respect to the following scope

**Manufacturing of PVC Pipe, PVC Fittings, HDPE Pipe,
PPRC Pipe, PPRC Fittings & Hand Pump**

*This Registration is granted subject to the system rules governing the
Registration referred to above, and the Organization hereby covenants with
the Assessment body duty to observe and comply with the said rules.*



Snehaprabha .H
Certification Manager



This Certificate is issued in accordance with standard procedure for certification registration and valid only until the date of the expiry or earlier if so advised in writing to the certified organization by GMSQR Certifications Pvt. Ltd.. It is issued subject to the continued availability of access at any time and without notice to the above named organization's premises for the purpose of the assessment and surveillance related to the standard specified above and GMSQR Certifications Pvt. Ltd. term and conditions. This certificate is the property of GMSQR Certifications Pvt. Ltd. and whenever required can be recalled.

*The validity of the certificate is dependent upon ongoing surveillance
The use of the AIAO-BAR accreditation symbol is in respect to the activities
covered by the Accreditation Certificate No: AIAO-BAR-011413-1*

GMSQR Certifications Pvt. Ltd.

Accreditation by American International Accreditation Organization, Inc.
and Bureau of accredited Registrars (AIAO-BAR)
155 North Santa Cruz Avenue Unit E-144 Los Gatos, CA 95030
www.aiao-bar.org , www.gmsqr.com

Initial Registration Date : 12.10.2019
1st Surveillance on or before : 12.09.2020
2nd Surveillance on or before : 12.09.2021

Issued Date : 12.10.2019
Valid until : 12.10.2020
Cert. No. : Q20190063

CERTIFICATE OF REGISTRATION

GMSQR Certifications Pvt. Ltd. has assessed the Environmental Management System of

ROYAL PVC COMPANY LIMITED

Main Office: Shahre Now, Haji Yaqoub Square, Haroon Market 2nd Floor, Kabul, Afghanistan.

Factory Add: Bagrami- Arzan Qimat Road District#12th Near to Hussainkhil High School, Naw Abad, Kabul, Afghanistan.

*(Hereinafter called the organization) and hereby declares that
Organization is in conformance with*

ISO 14001:2015

Environmental Management System

This registration is in respect to the following scope

**Manufacturing of PVC Pipe, PVC Fittings, HDPE Pipe,
PPRC Pipe, PPRC Fittings & Hand Pump**

*This Registration is granted subject to the system rules governing the
Registration referred to above, and the Organization hereby covenants with
the Assessment body duty to observe and comply with the said rules.*



Snehaprabha .H
Certification Manager



This Certificate is issued in accordance with standard procedure for certification registration and valid only until the date of the expiry or earlier if so advised in writing to the certified organization by GMSQR Certifications Pvt. Ltd.. It is issued subject to the continued availability of access at any time and without notice to the above named organization's premises for the purpose of the assessment and surveillance related to the standard specified above and GMSQR Certifications Pvt. Ltd. term and conditions. This certificate is the property of GMSQR Certifications Pvt. Ltd. and whenever required can be recalled.

*The validity of the certificate is dependent upon ongoing surveillance
The use of the AIAO-BAR accreditation symbol is in respect to the activities
covered by the Accreditation Certificate No: AIAO-BAR-011413-1*

GMSQR Certifications Pvt. Ltd.

Accreditation by American International Accreditation Organization, Inc.
and Bureau of accredited Registrars (AIAO-BAR)
155 North Santa Cruz Avenue Unit E-144 Los Gatos, CA 95030
www.aiao-bar.org , www.gmsqr.com



Initial Registration Date : 12.10.2019
1st Surveillance on or before : 12.09.2020
2nd Surveillance on or before : 12.09.2021

Issued Date : 12.10.2019
Valid until : 12.10.2020
Cert. No. : E20190006



ROYAL PVC Co.LTD

رایل پی وی سی کمپنی لمیٹید

TECHNICAL MANUAL

APPLICATIONS OF PVC PIPE

Royal PVC Pipes can be used for diverse applications, some of them are listed as under:

- Water supply schemes – for pressure mains and potable water distribution networks.
- Cold water services.
- Fire – Ring Mains
- Sewage mains – pumped or gravity flow
- Drainage installations – domestic and industrial
- Factory supply lines.
- Slurry lines.
- Corrosive fluid pipe lines – Dye house, Chrome and Zinc plating plant, etc.
- Chemical plant installations.
- Non– explosive dry materials handling – sand, cement, rock salt, plastic, compounds.
- Pulverized fuel – ash lines.
- Brine lines – Tanning plant, ice rings.
- Livestock whey feed pipes.
- Paper mill installation – alum and pulp carrying.
- Coal washing plant.
- Power station chlorination plant.
- Fume extraction ducts.
- Chilled water lines for refrigeration and air – conditioning plant/cooling towers.
- Salt water pipes for small boat engines cooling and ballast tanks.
- Water aeration plant.
- Horticulture and Greenhouse irrigation system.
- Land drainage.
- Tube wells.
- Industrial and laboratory piping system for Chemical waste drainage.
- Electrical conduits and cable ducting.
- Sanitary plumbing (soil, waste and vent)

RESISTANCE OF ROYAL PVC PIPE

PVC Pipes are highly resistant to salt water acids and alkalis. It is not recommended for use with organic ester, ketenes, chlorinated solvents aromatic hydrocarbon and low molecular weight alcohols.

Resistance of PVC Pipes to common Chemicals under the Conditions

Mineral Acids	Hydrochloric Acid-30%	+
	Sulphuric Acid 50%	+
	Sulphuric Acid 98%	+
Alkalis	Ammonium Hydroxide	+
	Calcium Hydroxide	+
	Sodium Hydroxide	+
Salts	Calcium Chloride	+
	Potassium Chloride	+
	Sodium Bicarbonate	+
	Sodium Chloride	+
	Sodium Phosphate	+
	Sodium Sulphate	+
Oxidizing Agents/ Disinfectants	Sodium Hydrochloride (Bleach Solution)	+
	Chlorine Water	+
	Calcium Hypochlorite – Soln. 18%	+
Organic Acids	Acetic Acid – 10%	+
	Citric Acid 25	+
	Hydroxyl Acetic Acid	+
Oils & Derived Products	Diesel Fuel	+
	Gasoline	+
	Lubricating & Thread Cutting Oils	+
	Motor Oil	+
Solvents	Acetone	-
	Methyl Ketone	-
	Toluene	-
	Trichloroethylene	-
	Turpentine	+
	Xylene	-
	Soaps & Detergents	+
Gasses	Ammonia	+
	Carbon Dioxide	+
	Natural Gas	+
	Oxygen	+

+ DENOTES RESISTANT

-NOT RESISTANT

EFFECTS OF TEMPERATURES

High Temperature

Royal Pipes Should not be used for hot water system, because the material softens at higher temperature. Their use for pressure duties is therefore, precluded if operating temperature exceeds 60° C.

Low Temperature

Royal PVC very rarely suffer burst due to frost owing to the elasticity and good insulating properties of PVC. However, Royal PVC Pipe can not be guaranteed against weathering if water is allowed to freeze and thaw in them repeatedly. For this reason it is feared that Royal Pipe becomes brittle in these should be protected against mechanical damage. Care should also be exercised when handling PVC Pipe at low temperature.

THERMAL EXPANSION AND CONTRACTION

Thermal expansion of Royal Pipes is higher than the metal and concrete pipes.

With a temperature rise of 10°C, a free laid 100 meter long PVC Pipe would extend 80 mm.

for buried pipes however, elongation will not occur as the frictional force between PVC Pipe and surrounding soil are greater than the internal forces caused by the temperature changes. For above ground installation when Royal Pipe is used in bridge structures, appropriate counter measures will do away with such difficulties. These include the use of proper supports and when necessary, that of expansion joint.



PHYSICAL PROPERTIES OF ROYAL PVC PIPE & FITTINGS

S. No	Property	Value	Unit
1.	Specific Gravity	1.42 - 1/46	
2.	Shore Hardness	70 - 90	
3.	Rockwell	110 - 120	
4.	Weather resistance	Color Fading but no decrease in strength	
MECHANICAL:			
5.	Tensile strength at 23°C	450 – 600	Kgf/Cm2
6.	Modulus of elasticity at 20°C	30,000	Kgf/Cm2
7.	Elongation at break	>80%	ft lb/ in of Notch
8.	Impact Strength at 0°C	0.5 – 1	ft lb/ in of Notch
9.	At 20°C	1 – 2	Kgf/Cm2
10.	Compressive Strength	600 – 700	Kgf/Cm2
11.	Bending Strength	1000	
THERMAL:			
12.	Specific Heat at 20 OC	0.24	Cal/gm/C
13.	Vicat Softening Point	85	°C
14.	Heat Distortion Temperature		
15.	Thermal Conductivity	0.12 – 0.14	Cal m/mhc
16.	Coefficient of Linear Expansion	7 – 8x10	m/m/C
ELECTRICAL:			
17.	Dielectric Constant (800 Cycle)	3.0	
18.	Dielectric Strength	425	Volts/mil
19.	Inflammability	Will not support Combustion	
20.	Water Absorption (24 Hours at Ambient Temperature)	0.07	%

Quality

To ensure quality of pipes following tests are regularly conducted in our laboratory as per British and American Standards.

- | | |
|---------------------------------|----------------------|
| ■ Heat Reversion. | ■ Flattening (ASTM) |
| ■ Burst Pressure. | ■ Fracture Toughness |
| ■ Impact Strength. | ■ Opacity |
| ■ Acetone Resistance. | ■ Methylene Chloride |
| ■ Resistance to Sulphuric Acid. | ■ Density |





Marking

Royal Pipes are marked by ink jet stamping at one-meter length as shown below:

PVC Royal Pressure Pipe as per standards (BSS, ASTM, DIN, etc).

Transportation and Storage

The loading of Royal Pipe is to be done in such a manner that they are not damaged in transportation. Pipes should be supported along the length leaving the Socket/Z Joint open as shown in the Figure. During loading and unloading impact type Stresses should be avoided on the Pipes.



Storage

In storage it is important that no unacceptable damage or deformation is occurred. Protect Pipes from Sun light. Where sheds are not available then use tarpaulin



INSTALLATION & SOLVENT CEMENT JOINTING:

When installing polyvinyl chloride (PVC) piping systems, you have a few different options to join the piping and fittings. Depending on the pipe size, the pipe and fittings can be threaded or flanged together, each offering a strong, durable union.

Solvent cement is not glue. Instead it is a fast, easy installation process that uses solvents and resin to chemically fuse the pipe and fitting together at a molecular level, essentially creating one continuous piece of plastic.

In fact, solvent cement is the only joining method recommended for system features like expansion loops because it allows the pipe to bend and move without breaking or weakening the joint seal.

To ensure the solvent cement is applied properly throughout your process system, we've put together the following dos and don'ts to remember throughout the seven step joining process.

If the provided solvent cement installation do's and don'ts are followed, see how reliable the joints become by watching the burst test video below.

1.CUTTING PVC

Do: Use tools designed for use with plastic pipe and fittings.

Preferred plastic cutting tools include a ratchet cutter, wheel-type plastic tubing cutter, a power saw, or a fine-toothed saw.

Do: Ensure the PVC is cut squarely by using a miter box.

Cutting the pipe as squarely as possible provides the maximum bonding surface area. The more surface area that becomes chemically bonded, the more strength the joint will exhibit

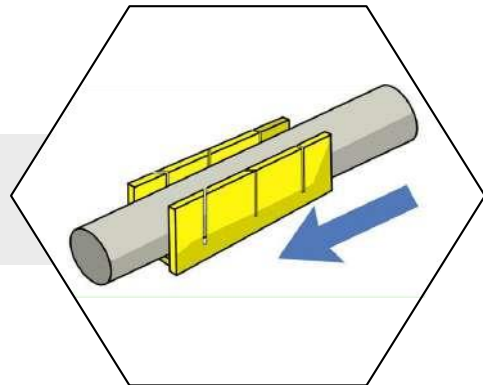


DON'T: USE A DULL OR BROKEN CUTTING TOOL BLADE



2.CHAMFERING AND DEBURRING PVC

DO: REMOVE BURRS AND FILINGS



Burrs and filings can prevent proper contact between the pipe and fitting and may put undue stress on the pipe and fitting assembly. Use a chamfering tool or file to remove burrs and filings from the outside and inside of the pipe.



Do: Place a slight bevel at the end of the pipe.

A slight bevel eases entry of the pipe into the socket and minimizes the chance of wiping solvent cement from the fitting. For pipe sizes 2 in. and larger, a 10 to 15° chamfer of 3/32 in. is recommended.

3. Preparing the Fitting for Solvent Cement**Do: With a clean, dry rag, wipe any loose soil and moisture from the fitting socket and the pipe end.**

Loose soil and/or moisture can slow cure times and reduce the joint strength. Make sure the fit is good by checking that the pipe enters the fitting socket easily 1/3 to 2/3 of the depth.

Note: If the pipe bottoms in the fitting with little interference, try a new fitting.





4. Primer Application

Use primer conforming to ASTM F656 and a proper applicator.

Primer is needed to prepare the bonding area for the addition of cement and subsequent assembly. Use a proper applicator, such as a dauber, swab or paintbrush, approximately half the size of the pipe diameter.

Apply the primer to the inside of the fitting socket and to the outside of the pipe end. Apply a second primer coating inside the fitting socket. Redid the applicator as often as necessary to ensure the entire surface of both pieces is tacky. Don't: Use a rag to apply the primer.





5. Solvent Cement Application

Do: Use only solvent cement conforming to ASTM D 2564

Apply solvent cement when the pipe surface is tacky (not wet) from primer. The joining surfaces must be penetrated and softened.

Cement should be applied with a natural bristle brush or swab half the size of the pipe diameter. For pipe sizes smaller than 2 in., a dauber may be used.

Apply a heavy, even coat of cement to the outside of the pipe end, and a medium coat to the inside of the fitting socket. For pipe sizes greater than 2 in., apply a second coat of cement on the pipe end.

Note:

Don't: Allow puddling of solvent cement in the fittings and pipe.

Don't: Use solvent cement near sources of heat, open flames, or when smoking.

Don't: Use solvent cement that exceeds its shelf life or has become discolored or gelled.

6. Assembly

After cement application, immediately insert the pipe into the fitting socket while rotating a 1/8 to 1/2 turn until the fitting-stop is reached. At this time, the fitting should be properly aligned for installation.

The pipe must meet the bottom of the fitting socket. Once in place, the assembly should be held in place for 10 to 30 seconds to ensure initial bonding and to avoid push out.

Do: Check that a bead of cement is evident around the pipe and fitting juncture.

If this bead is not continuous around the socket shoulder, it may indicate that insufficient cement was applied. In this case, the fitting should be discarded and the joint reassembled. Wipe off any excess solvent cement with a rag.

Do: Use equipment for the joining of a large diameter pipe.

For a 6 in. or larger diameter pipe, a pipe puller (come-a-long) is recommended to assemble the joint and hold it in place for the initial set time without applying excess force that may damage the pipe or fitting.

This equipment should be set up prior to the start of priming so assembly can happen quickly while primer and cement are still fluid.

7. Set and Cure Times

Solvent cement set and cure times are a function of pipe size, temperature, relative humidity, and tightness of fit.

Drying time is faster for drier environments, smaller pipe sizes, high temperatures and tighter fits. The assembly must be allowed to set, without any stress on the joint, per the time shown in the following tables. Following the initial set period, the assembly can be

Do: Follow the recommended set times.

After a joint is assembled using solvent cement, it should not be disturbed for a period of time to allow for proper "setting." Recommended set times are as follows:



Do: Follow the recommended cure times.

After a joint is assembled using solvent cement, the cement must be allowed to properly "cure" before the piping system is pressurized. Recommended minimum cure times are shown below. These recommendations should only serve as a guide since atmospheric conditions during installation will affect the curing process.

Note: High humidity and/or colder weather will require longer cure times. Typically add 50% to the recommended cure time if surroundings are humid or damp

Ambient Temperature	0" - 1¼"	1½" - 2"	2½" - 8"	10" - 12"	15"+
60°F to 100°F	2 min.	5 min.	30 min.	2 hr.	4 hr.
40°F to 60°F	5 min.	10 min.	2 hr.	8 hr.	16 hr.
0°F to 40°F	10 min.	15 min.	12 hr.	12 hr.	24 hr.

Ambient Temperature	0" - 1¼"		1½" - 2"		2½" - 8"		10" - 12"	15"+
60°F to 100°F	15 min.	6 hr.	30 min.	12 hr.	1½ hr.	24 hr.	48 hr.	72 hr.
40°F to 60°F	20 min.	12 hr.	45 min.	24 hr.	4 hr.	48 hr.	96 hr.	6 days
0°F to 40°F	30 min.	48 hr.	60 min.	96 hr.	72 hr.	8 days	8 days	14 days

Technical Research & Development Department

Royal PVC Co.Ltd Has Research & Development Department, staffed by well qualified engineers, which not only do work in Research & Development of product, they also provides a free technical advisory service pre-sales & after sales to consultants, architectures, civil engineers, contractors, & valued customers. Including advice on the properties of Royal PVC Pipes, the suitability of the material for specific application, the design of pipe lines & the installation of PVC Pipes.

The Technical services also provide the demonstrations & training of operators, unfamiliar with the handling & jointing of Royal PVC Pipes & fittings. The many advantages & economies possible are best achieved only where Royal Pipes are used correctly. For any type of help, i.e. selection of pressure class of PVC Pipes, handling, Installation, jointing, to find inert chemicals for Royal PVC Pipes, or other technicalities, information & for catalogue, please contact our Technical Dept. without any hesitation.

Manager Technical & Research Department

Mobile # (0093) 0777095685



SERVICES:

- THE HIGHEST LEVEL OF QUALITY
- THE LARGEST BREADTH OF PRODUCT
- THE WIDEST CAPACITY
- EXPRESS DELIVERY



SECTION 1 01	Royal PVC Pressure Pipe
SECTION 2 02	Royal PVC Electrical Conduit Pipe
SECTION 3 03	Royal PVC Sewerage, Waste & Ventilation Pipe
SECTION 4 04	Royal PVC Fittings
SECTION 5 05	Royal HDPE Pipe
SECTION 6 06	Royal PPR-C Pipe and Fittings





+93 (0) 786 500 436 +93 (0) 777 09 56 85
+93 (0) 786 292 901 +93 (0) 785 64 62 32
+93 (0) 788 288 244 +93 (0) 700 28 82 44



info@royalpvc.af
royal_pvcaf@yahoo.com



www.royalpvc.af



Main Office Address: 2nd floor, Haroon market, between Haji Yaqoob & Ansari Square, Share-e Naw, Kabul, Afghanistan

Factroy Address: Near to Hussain khil High School, Distric # 12, Naw Abad, Bagrami, Kabul, Afghanistan

COMPANY PROFILE & THCHNICAL MANUAL

- Royal PVC Pressure Pipe
- Royal PVC Electrical Conduit
- Royal PVC Sewerage Pipe
- Royal PVC Fittings
- Royal HDPE Pipe
- Royal PPRC Pipe & Fittings