

aqua Gold™ uPVC

High pressure plumbing system

...The easy and economical solution



Supreme “lead free” aqua gold high pressure uPVC solvent weld plumbing system, is the most suitable, easy and economical solution for transportation and distribution of potable water. It is technically superior, cost effective and offers many advantages over conventional G.I. piping system. This system is very easy to install and functionally most suitable for plumbing application like terrace looping, down-take and up-take lines, concealed pipe work in any building or construction. Apart from more than 40-50% cheaper to G.I. piping system, it has many more years of service life. This hygienic system is endowed with many good features and hence now approved by MCGM. Aqua Gold is a value added long term plumbing solution for building industry.

Supreme believes in supplying only superior quality products, aimed at satisfying domestic and international customers. Supreme’s view about high quality and advanced product range is supported by its state-of-the-art equipment installed at the plant and technical know how available from the strategic alliance with world leaders in plastic piping technology. The company is proud recipient of top exporter’s awards for its outstanding export performance, consecutively for many years.

aqua Gold™ uPVC High pressure plumbing system

Features and benefits :

The advantages and benefits of aqua gold high pressure uPVC solvent weld plumbing system are significant and they produce considerable cost savings while increasing the reliability of the piping system. This hygienic system is endowed with the following features.

Stronger, Resilient and Longer Lasting - This system is highly resilient, tough and durable with high tensile and impact strength. Moreover it is free from weaknesses caused by rusting, weathering and chemical action, and hence lasts for a life time.

Mechanical properties - The PVC pipes are relatively more flexible. They have adequate tensile strength and even burst strength to withstand the operating pressures encountered in most service conditions, within the acceptable range of temperature for the system. External shocks or impacts that could cause failure in more rigid materials, can be absorbed by the system, with little or no damage.

Excellent chemical and corrosion resistance - This system is free from corrosion and has excellent resistance to great number of chemicals like strong mineral acids.

Light weight - Being light in weight (1/6th the weight of metal piping), these pipes are easy to handle, transport and install.

Simple and leak proof joints - Jointing can be done speedily with the special solvent cement supplied by the company which ensures 100 % leak proof joints.

Most suitable for carrying drinking water - Being non metallic, this system is free from corrosion, chemical action, and negative biological effects, hence absolutely safe for carrying potable water.

Optimum flow rates - Mirror-smooth inside surface ensures high flow rates and low frictional losses. This system is free from rusting, pitting and offers good resistance to scale formation.

Piping system integrity - Supreme aqua gold offers pipes with a large range of fittings. This implies a complete system solution made of the same material.

Maintenance free - Being free from rusting, pitting or scaling, and galvanic or electrolytic corrosion, Supreme aqua gold system is free from maintenance.

Overall Economy - Due to light weight and simple joining technique, it saves cost not only on material but also on transportation and installation.

Fields of application :

- Plumbing application in buildings
- Water distribution mains
- Industrial process lines
- Dye houses, chrome, zinc plating and tanning plants
- Swimming pools
- Salt water lines
- Aggressive/corrosive fluid transportation
- Sugar, paper and distillery industry
- Coal washing and ash handling
- Pipes for hand pumps

Dimensions and water pressure rating at 23°C for unthreaded pipes as per ASTM D-1785 (PVC compound grade equivalent to PVC 1120/2120)

| Nominal Bore | | Outside Diameter (D) | Schedule 40 | | | Schedule 80 | | |
|--------------|------|----------------------|--------------------|---------------------|-----|--------------------|---------------------|-----|
| | | | Wall Thickness (t) | Working Pressure | | Wall Thickness (t) | Working Pressure | |
| mm | inch | mm | mm | kgf/cm ² | psi | mm | kgf/cm ² | psi |
| 21.34 | ½ | 21.34 + 0.10 | 2.77 + 0.51 | 41.4 | 600 | 3.73 + 0.51 | 58.6 | 850 |
| 26.67 | ¾ | 26.67 + 0.10 | 2.87 + 0.51 | 33.1 | 480 | 3.91 + 0.51 | 47.6 | 690 |
| 33.40 | 1 | 33.40 + 0.13 | 3.38 + 0.51 | 31.0 | 450 | 4.55 + 0.53 | 43.4 | 630 |
| 42.16 | 1¼ | 42.16 + 0.13 | 3.56 + 0.51 | 25.5 | 370 | 4.85 + 0.58 | 35.9 | 520 |
| 48.26 | 1½ | 48.26 + 0.15 | 3.68 + 0.51 | 22.8 | 330 | 5.08 + 0.61 | 32.4 | 470 |
| 60.32 | 2 | 60.32 + 0.15 | 3.91 + 0.51 | 19.3 | 280 | 5.54 + 0.66 | 27.6 | 400 |
| 73.02 | 2½ | 73.02 + 0.18 | 5.61 + 0.61 | 20.7 | 300 | 7.01 + 0.84 | 29.0 | 420 |
| 88.90 | 3 | 88.90 + 0.20 | 5.49 + 0.66 | 17.9 | 260 | 7.62 + 0.91 | 25.5 | 370 |
| 114.30 | 4 | 114.30 + 0.23 | 6.02 + 0.71 | 15.2 | 220 | 8.56 + 1.02 | 22.1 | 320 |
| 141.30 | 5 | 141.30 + 0.25 | 6.55 + 0.79 | 13.1 | 190 | 9.52 + 1.14 | 20.0 | 290 |
| 168.28 | 6 | 168.28 + 0.28 | 7.11 + 0.86 | 12.4 | 180 | 10.97 + 1.32 | 19.3 | 280 |
| 219.08 | 8 | 219.08 + 0.38 | 8.18 + 0.99 | 11.0 | 160 | 12.70 + 1.52 | 17.2 | 250 |



Coupler



Reducer



Male Threaded Adapter (Plastic)



Ball Valve (Solvent Weld)



Bend 90° (SW) (F)



Flange Adapter

Fittings: Entire range of fitting ½" to 8" (21.34 to 219.08mm) is available in SCH 80 pressure class and Tee, Coupler, Elbow in ½" (21.34mm) and 1" (33.40mm) size are also offered in SCH 40 pressure class.



Elbow 90°



Reducing Elbow 90°



Elbow 45°



Equal Tee



Reducing Tee



Cross Tee



Reducing Bush



Union



**End Cap
(Plain)**



**End Cap
(Threaded)**



**Female Threaded
Tee (Plastic)**



**Female Threaded
Elbow (Plastic)**



**Female Threaded
Adapter (Plastic)**



**Female Threaded
Elbow (Brass Insert)**



**Female Threaded
Tee (Brass Insert)**



**Female Threaded
Adapter (Brass Insert)**



**Male Threaded
Adapter (Brass Insert)**



**Circuit Testing
Plug**



**Ball Valve
(Plastic Ball)**



**Ball Valve
(Solvent Weld)**



**Pipe Clip
(Plastic)**



Threaded Plug



Tank Connector



**Tank Connector
(Long)**



**Bend 90°
(Threaded) (F)**



Bypass Bend (F)



Offset Bend



**Male Transition
Nipple (F)**



**Female Transition
Nipple (F)**



**Pipe Nipple
(Threaded)**



**Oatey Advance
Clear**



**Oatey Medium
Clear**



Cookson EZ 205



Cookson EZ 204



Rain-R-Shine



Primer

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Material properties :

Mechanical Properties

| | |
|---------------------------|---|
| Ultimate tensile strength | : 450 - 500 Kgf / cm ² |
| Modulus of elasticity | : 3.03 x 10 ⁴ Kgf / cm ² |
| Modulus of rigidity | : 1-1.2 x 10 ⁴ Kgf / cm ² |
| Flexural strength | : 900 - 913 Kgf / cm ² |
| Maximum bending stress | : 21 Kgf / cm ² |

Thermal Properties

| | |
|---------------------------------|-------------------------------------|
| Softening point (Vicat) | : 72-80 °C |
| Coefficient of linear expansion | : 5.4 x 10 ⁻⁵ mm / mm °C |
| Expansion on 6 m length | : 3.2 mm / 10 °C (approx) |

Flow Characteristics

| | |
|-------------------------|------------------------|
| Hazen Williams Constant | : 150 remains constant |
|-------------------------|------------------------|



Joining instructions :

Cutting the pipe : Cut the pipe square using hand saw with suitable guide or by pipe cutter.

Joint preparation : Chamfer or deburr pipe or both, approximately at 10 - 15°. Remove burrs from inside and outside diameters with a knife, file or abrasive paper.

Test dry fit of the joint : Insert the pipe into the fitting and check that the interference occurs about 1/3rd to 2/3rd of the socket depth. Too tight or too loose fitment may lead to leak, hence should be avoided.

Cleaning : Remove any dirt, moisture, or grease from pipe end and fitting sockets with a clean dry rag.

Application of solvent cement : Apply cement lightly but uniformly to inside of socket and outside of pipe end with a natural bristle nylon brush or suitable applicator. Apply a second coat of cement to the pipe end. Apply cement quickly to prevent it from drying and be sure to completely cover all jointing surface area of the pipe and fitting. Do not apply excessive cement in bell socket

Assembly of joint : Immediately after applying the last coat of cement to the pipe and while cement is still fluid or wet (within 20 second), forcefully bottom the male end of the pipe in the socket, giving pipe or fitting ¼th turn (but not after pipe is bottomed) to distribute the cement evenly. Remove excess cement from the pipe at the end of the fitting socket. The joint must not be disturbed immediately after cementing, so that joint can properly cure. Allow cement to cure before pressurizing the system. Recommended curing time is 12 hours.

Quality of Solvent Cement :

Quality of solvent cement plays an important role and influence the joint strength. Hence it is recommended to use specially formulated heavy duty solvent cement, supplied by Supreme Industries for trouble free performance of the system. Different types of solvent cements are made available viz. EZ 204 / PVC medium Clear, EZ 205 / PVC regular advance, and PVC Rain-n-shine for uPVC pipes.

EZ 204 / PVC medium Clear is medium bodied, medium set solvent cement recommended for pipe sizes upto 8" SCH 40 and SCH 80 pipes. EZ 205 / PVC regular advance is a regular bodied fast set and recommended upto 4" SCH 40 pipes. Rain-n-shine is specially formulated cement for pool and spa industry. It is a medium bodied, very fast set and recommended for pipes upto 6" diameter SCH 40 and SCH 80.

- ★ Primer - use of primer prior to solvent cement is essential in case of 3" and above size pipes.
- ★ When the system is to be concealed, it should be pressure tested before concealment.
- ★ This system is not recommended for geyser outlets and hot water supply.
- ★ For more details you can also refer to aqua gold installation guide.

Note : Only company supplied and specified solvent cement should be used for satisfactory performance of the joints. Company will not take any warranty or guarantee for the performance unless company supplied solvent cement is used .

- Any specification can change without prior notice.
- All information contained in this literature is given in good faith and believed to be accurate and reliable. But because of many factors which may be outside our knowledge and control and affect the use of the product, no warranty is given or is to be implied with respect to such information, nor do we offer any warranty of immunity against patent infringement. No responsibility can be accepted for any error, omissions or incorrect assumptions.

| Consumption of solvent cement | | | | | | | | | | |
|-------------------------------|-----|-----|-----|-----|----|----|-------|-------|------|-----|
| Pipe size (inch) | ½ | ¾ | 1 | 1¼ | 1½ | 2 | 3 | 4 | 6 | 8 |
| No. of fittings per liter | 274 | 169 | 148 | 106 | 74 | 42 | 32-40 | 21-30 | 5-10 | 3-5 |



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