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## **PRODUCT SPECIFICATION – CORZAN™ PVC-C SYSTEM**

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### **CORZAN™ PVC-C PIPES**

Metric sizes in strict accordance with the dimensional and testing requirements of DIN 8079/8080, and ISO DIS 15493. Pressure rating PN 16 at 20°C up to size 110 mm. PN 10 at 20°C for 160 mm.

### **CORZAN™ PVC-C FITTINGS**

Metric sizes in accordance with the dimensional and testing requirements of DIN 8063, and ISO DIS 15493. Pressure rating for all sizes PN 16 at 20°C.

### **MATCHED SYSTEM**

The PVC-C products shall be from a single manufacturer to ensure complete integrity, quality, and compatibility between pipes, fittings, and valves. Manufacturers warranties may be compromised if a system is installed with materials from various manufacturers. Where this is not possible, then any alternative products should be confirmed as being at least equivalent to that which is normally supplied.

### **QUALITY SYSTEM**

Pipes, fittings and valves shall be manufactured in an environment which operates a Quality Assurance System assessed to ISO 9002.

### **ENVIRONMENTAL SYSTEM**

The manufacturer of pipes, fittings, and valves shall be able to demonstrate compliance with applicable environmental legislation and products shall be manufactured in an environment where documented performance reviews are undertaken and an Environmental Management System is successfully assessed to ISO 14001.

The manufacturer shall offer solvent cements and cleaners, specially formulated to minimise any adverse effects on the environment during installation of the PVC-C system.

### **THIRD PARTY APPROVALS**

The manufacturer shall have the following approvals:

**WRAS Water Regulations Advisory Scheme**  
0112062 for Corzan pipes and fittings.

**American Bureau of Shipping.**

**NHS in Scotland, Management Executive.**

### **COLOUR/MATERIAL/FOOD CONTACT APPROVAL**

Pipes, fittings and valves shall be manufactured from light grey Corzan™ PVC-C material conforming to the EC safety criteria for vinyl chloride monomer (VCM). All materials shall conform to the toxicological requirements of the British Plastics Federation/British Industrial Biological Research Association Code of Practice for Food Usage 45/5, and EC requirements for plastic materials in contact with food stuffs.

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Materials shall have a flammability rating of VO – 5VB - 5VA when tested in accordance with UL 94, a flame spread value of 15 or less in accordance with ASTM E84 and limiting oxygen index value of 60 or greater in accordance with ASTM D2863.

#### **APPROVAL FOR USE IN CONTACT WITH DRINKING WATER**

Within private property boundaries, all PVC-C pipes, fittings, and solvent cement shall be listed in the Water Fittings and Materials Directory to show compliance with the requirements of the United Kingdom Water Regulations Advisory Service.

In any situation which could result in the PVC-C pipes fittings and solvent cement coming into contact with water which is intended for human consumption, these shall be in accordance with the requirements of BS 6920 Part 1.

Copies of certification of compliance with these approvals must be available for inspection.

#### **DESIGN LIFE**

Pipes, fittings and valves shall be designed to operate continuously for 25 years at their maximum rated pressure at a working temperature of 20°C.

Process Control Testing must be carried out during manufacture, and documented on each and every production batch.

Fittings and pipes will be subjected to a pressure test of 4.3 x maximum recommended working pressure for 1 hour at 23°C during 1<sup>st</sup> and 2<sup>nd</sup> hours of production, then every 6 hours for fittings and 8 hours for pipes.

Pipes are in addition to be impact tested after conditioning at 23°C for 1 hour. Fittings are in addition to be subject to stress relief testing at 150°C.

Pipes and fittings shall undergo dimensional, marking, and visual inspection at the frequency outlined above.

#### **CHEMICAL SUITABILITY**

The manufacturer shall publish detailed chemical resistance data to enable the suitability of the PVC-C material, seals, and gaskets to be determined by designers and specifiers. The manufacturer shall also employ a qualified and experienced Chemist to provide a free-of-charge advisory service for assessing the suitability of its PVC-C material, seals, and gaskets.

#### **DESIGN & INSTALLATION SPECIFICATION**

The installation must be carried out by competent persons.

The contractor shall be required to provide technical documentation relating to the Corzan™ PVC-C pipework manufacturers recommended Design and Installation procedures.

The manufacturer shall publish Design and Installation recommendations, and shall also provide a free-of-charge training service for designers and installers, with appropriate written confirmation of attendance.

#### **CORZAN™ PVC-C BALL VALVES**

True union design, end load resistant with full pressure and shock resistance anti blow out device which conforms to design and endurance testing requirements of DIN 3441 Part 1. The following testing will have been successfully completed:

Drop Tight and Bubble Tight test (to DIN 3230 Part 3 Leak Rate One – Water and Air)  
Hydrostatic Shell Test 1.5 x Maximum Working Pressure

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Seat Test 1.1 x Maximum Working Pressure (Water) 6 Bar Maximum (Air)

### **PRESSURE RATING**

16 mm to 63 mm – PN 16 at 20°C.  
75 mm to 110 mm – PN 10 at 20°C.

### **SEATS AND SEALS**

Seats: PTFE material fitted with O ring compensators. Seals: Standard size O ring type for ease of replacement. Available in EPDM and FPM materials.

### **END CONNECTIONS**

May be plain socket ends, plain spigot ends, or flanged.

### **ACTUATION**

Options: Electric or Pneumatic.

## **CORZAN™ PVC-C DIAPHRAGM VALVES**

Equipped with a maintenance free hand wheel actuator with spindle extension to indicate the position of the valve open or closed. The body retaining bolts are fixed from the underside, to provide a crevice free outer surface to prevent accumulation of debris or risk of corrosion of exposed bolts from chemical spillage.

Valves will have been hydrostatically pressure tested to the requirements of BS 5392 Part 1 1976, BS 5156, ISO 7508, and DIN 3230 Part 3 Leak Rate One.

### **PRESSURE RATING**

20 mm to 110 mm – PN 10 at 20°C.

### **DIAPHRAGM TYPE**

Choice of EPDM, FPM, or PTFE will be available.

### **END CONNECTION**

These may be plain spigot, plain or threaded unionised, or flanged.

### **ACTUATION**

Options: Pneumatic.

## **CORZAN™ PVC-C BALL CHECK VALVES**

These shall be single union with plain socket only.

### **PRESSURE RATING**

20 mm to 63 mm – 16 bar at 20°C

### **SEALS**

EPDM or FPM

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**CORZAN™ PVC-C BUTTERFLY VALVES**

Reinforced Polypropylene body, fully lined, with PVC-C disc.  
Full flanged design, with oval holes/ inserts to suit various standard flange drillings.  
Lever operated, with 10 x 10° position stops, and locking device.

**PRESSURE RATING**

50 mm to 160 mm – PN 10 at 20°C

**PRIMARY LINER**

Available in EPDM, FPM, or NBR

**ACTUATION**

Electric, Pneumatic, or Gearbox

For further information contact:  
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