

Quick Installation Guide

XGuard[®] by Vinidex

Impact-resistant PVC Conduit



Strong and ductile

Designed to withstand multiple heavy impact strikes.



Lightweight

Easier to install and handle than traditional straight wall HD conduits.



Material efficient

Uses less material than traditional HD straightwalled conduits.



Compliant

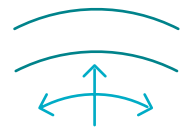
Meets Australian standards and exceeds impact testing requirements.



Lower embodied energy*

Requires less embodied energy to manufacture.

*Against the alternative straight wall HD and VHD conduit.



Flexible

Suitable for long radial bends.

Use this guide for the installation of Vinidex XGuard PVC Conduit

For additional support or questions about the installation of XGuard, please contact Vinidex.



Safety Precautions

1. High voltage environment

Confirm isolation, permits, and compliance with applicable standards prior to installation

2. Dial Before You Dig

Always locate underground services prior to trenching or installation works

3. Inspect before installation

Do not install damaged, cracked, or deformed conduit or fittings.

4. Use correct lifting and handling techniques

Although lightweight, use safe manual handling practices or mechanical aids to prevent injury

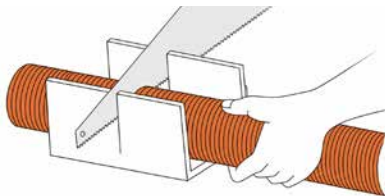
5. Ensure safe working conditions

Install in dry conditions where possible, with adequate access, stability, and ventilation – particularly in confined spaces

Procedure

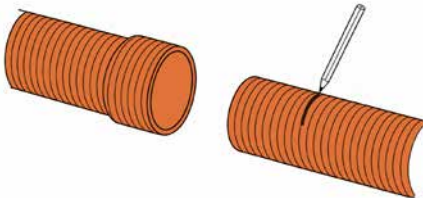
1 Prepare the pipe

Before jointing, check that the pipe has been cut square and all the burrs are removed from the inside and outside edge. Remove the sharp edge from the outside and inside of the pipe with a deburring tool. Do not create a large chamfer that will trap a pool of solvent cement. Remove all dirt, swarf, and moisture from spigot and socket.



2 Witness mark the pipe

It is essential to be able to determine when the spigot is fully home in the socket. Mark the spigot with a pencil line ('witness mark') at a distance equal to the internal depth of the socket. Other marking methods may be used provided that they do not damage or score the pipe.



3 'Dry fit' the joint

'Dry fit' the spigot into the socket, check the pipe for proper alignment. Any adjustments for the correct fit can be made now, not later. Ovality in the pipe and socket will automatically be re-rounded in the final solvent cementing process, but heavy-walled pipe may give a false indication of the point of interference.



4 Prepare with priming fluid

Using protective polyethylene gloves, dry, degrease and prime the spigot and socket with a lint-free, natural fibre cloth dampened with Vinidex priming fluid.

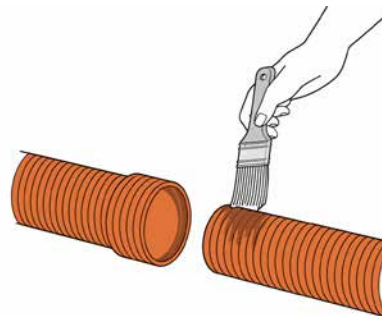
Priming is critical and should always be carried out just prior to solvent cementing – it etches the gloss from the PVC and softens the PVC surface to ensure the solvent cement's effective bond.



5 Apply solvent cement

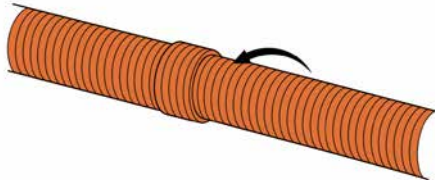
For XGuard installation, Blue Type N solvent cement should be used. Apply solvent cement to the brush, wipe off excess, then promptly apply an even coat to the entire internal surface of the socket (to avoid drying out too quickly). Next, apply solvent to the top of the ribs on the spigot up to the witness mark. Ensure even coverage but avoid excess solvent pooling in the valley of the spigot or the root of the socket.

Only prime and solvent cement one joint at a time.



6 Insert the spigot

Make joint immediately before the solvent dries out, in a single movement. Do not stop halfway, since the bond will start to set immediately and it will be almost impossible to insert further. It will aid distribution of the solvent cement to twist the spigot into the socket so that it rotates about a 1/4 turn whilst (not after) inserting, but where this cannot be done, particular attention should be paid to uniform solvent application.



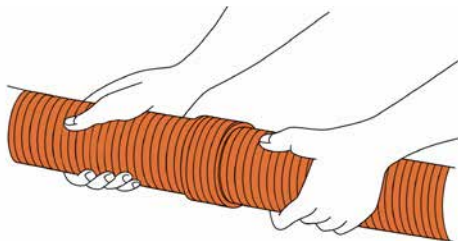
7 Push the spigot home

The spigot must be fully homed to the full depth of the socket. The final 10% of spigot penetration is vital to the interference fit.

Hold the joint against movement and rejection of the spigot for a minimum of 30 seconds. Disturbing the joint during this phase will seriously impair the strength of the joint.

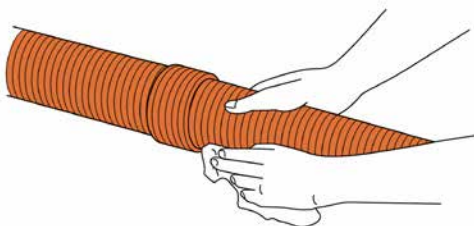
For temperature above 35°C solvent dries out rapidly so application and jointing will need to be completed quickly and efficiently to avoid poor joints.

Note that the spigot can be pushed home by hand. Do not apply excessive force as this may damage the socket.



8 Wipe off excess solvent cement

For a neat professional joint, with a clean rag wipe off excess solvent cement immediately from the outside of the joint.



9 Do not disturb the joint

Once the joint is made, do not disturb it for five minutes or rough handle it for at least one hour.

10 Cure the joint

The process of curing, is a function of temperature, humidity and time. Joints cure faster when the humidity is low and the temperature is high. The higher the temperature, the faster the joints will cure.

As a guide, at a temperature of 16°C and above, 24 hours should be allowed, at 0°C, 48 hours is necessary.

Special Considerations

- It is always important to use the correct solvent cement. For XGuard installation, Blue Type N solvent cement should always be used.
- Decanting is not advisable, and excess should never be returned to the container. For large diameter pipes, it may be necessary to decant to an open larger vessel for a large brush to be used. In this case decant for one joint at a time.
- Container sizes 125ml to 1L come with a brush attached under the lid. For 4L containers, select a brush large enough to apply the solvent cement to the joint in a maximum of 30 seconds – approximately one third the pipe diameter is a good guide. Refer to the table below for recommended brush sizes.

Diameter size of pipe (mm)	Recommended size of brush
100, 125	38
150	50

- Workmanship and correct procedures are essential for solvent joints if durability are to be assured. Solvent jointing should only be carried out in dry conditions above 5°C, by appropriately trained personnel.
- Solvent cement jointing is a welding not a gluing process. The combination of priming fluid and solvent cements work by softening the surfaces, so when they are brought together the two PVC surfaces bond together.
- It is important that the spigot provides an interference fit in the socket. Do not attempt to make a joint that does not achieve an interference fit when dry.
- The actual area of contact between the spigot and the socket may only be a few millimetres. The spigot end must be square to make a good joint. Before proceeding, make sure that the spigots and sockets are not cracked or damaged.

Vinidex recommends that XGuard pipes are installed in accordance with AS 2032 Installation of PVC pipe systems.



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on XGuard by Vinidex

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