

INSTRUCTION MANUAL FOR Pevicol PVC Glue

THE GLUE

Pevicol PVC Glue is made with NMP, a solvent that can be mixed with water in any proportion. This means that the adhesive should always be used in accordance with the technical specifications and the limitations set for the product.

It is always recommended to check that the working conditions are safe and that the required hygiene standards are followed.

WORKPLACE HYGIENE

The solvent NMP has a degreasing effect on the skin, so it is recommended to use gloves made of nitrile rubber or butyl rubber.

Since the adhesive is 100% water-mixable, you should always have a bucket of water available for washing, as the adhesive will be completely neutralized and thus protects the skin if it has been in contact with the adhesive.

PREPARATION OF THE WORKING PROCESS

The pipe sections are cut to the desired length with perpendicular cuts and deburred.

Pipe ends and fittings should be thoroughly cleaned with dry, clean paper.

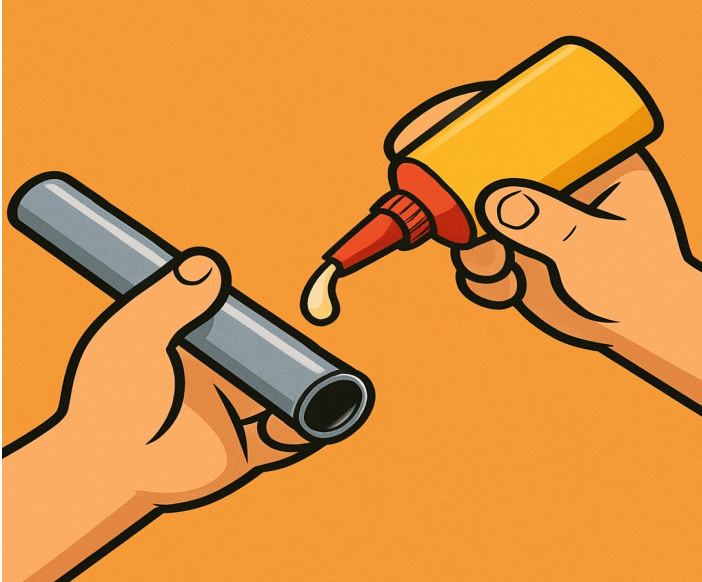
There is no need to use cleaning or solvent products.

Sandpaper is generally not necessary unless the fittings are too tight on the pipe. The tolerance between the pipe and fittings should be such that there is space for the glue.

GLUE APPLICATION WITH Pevicol

The glue bottle is equipped with an applicator nozzle. When the tip is cut off, it can be used to apply the glue.

The tip is cut according to the desired nozzle opening, and the glue is applied as follows:



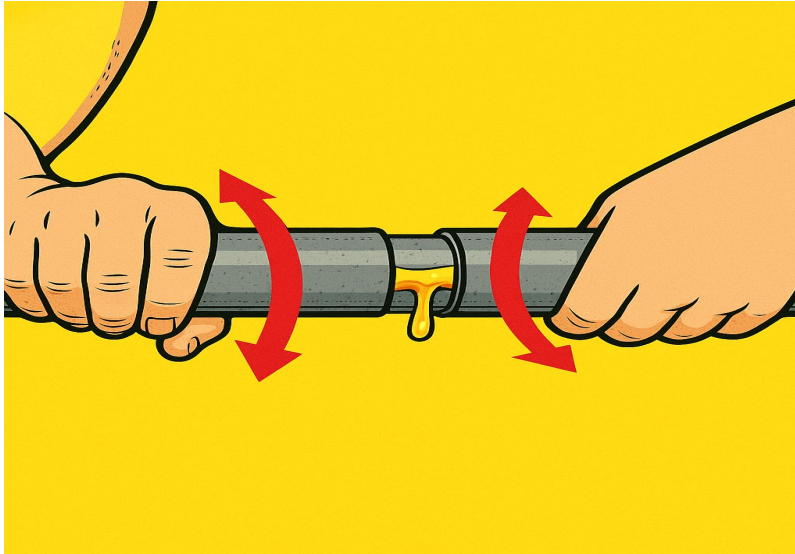
1. Apply a ring of glue on the pipe, about 5 mm from the edge.
2. Apply a ring of glue inside the fittings, also about 5 mm from the edge.

NOTE:

The amount of glue depends on the pipe diameter and tolerances, so the required number of glue rings on the pipe and in the fittings should be determined for each specific task.

However, the glue joint must always be completely filled!

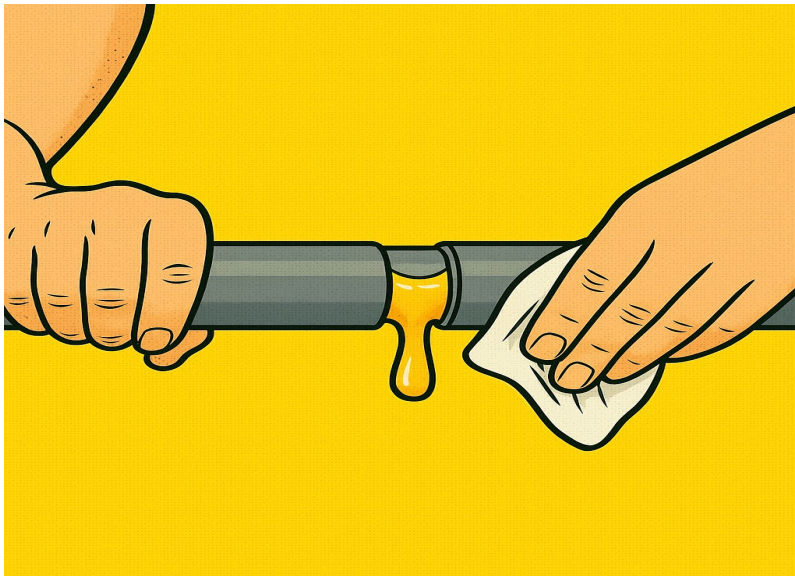
3. Assemble the ends using a pushing or twisting motion until they reach the stop or the specified distance.
4. Continue twisting until you feel increasing resistance.



NOTE:

Do not attempt to adjust once the adhesive has started to set, as this can damage the glued part.

5. If there is excess glue, wipe it off with a piece of dry absorbent paper. Any excess glue inside a piping system should be neutralized by thoroughly flushing with water.



NOTE: For larger gluing tasks or vertical joints, it can be difficult to determine whether there is excess glue inside the joints. It is therefore strongly recommended to always flush the piping system thoroughly with water to neutralize any excess glue.

If inserts are included in the installation, they must always be glued to the pipe before the fittings are mounted. This is to prevent a freshly glued joint from being strained when the next joint is installed.

6. Remember to adjust the alignment of fittings and components that need to be precisely positioned using the final twisting motions. Attempting to adjust after the glue has set will damage the glue bond.
7. Pipe assemblies with diameters up to approx. 65 mm are usually nicely round and have good tolerances, which ensures a proper bond.

Pipes and fittings with larger diameters must always be checked to ensure that the components are round and that tolerances are small enough to guarantee strong glue strength in the finished assembly.

NOTE: THE GLUE MUST NOT BE USED FOR BONDING COMPONENTS WITH TOLERANCES GREATER THAN THOSE SPECIFIED IN THE PVC STANDARDS.

PIPES AND FITTINGS:

(The pipe and fitting manufacturers specify the tolerances applicable for each pipe and fitting diameter.)

The larger the diameters being glued, the greater the excess of glue tends to be, and it is recommended to carefully remove/neutralize excess glue by thoroughly flushing with water. Excess glue on the outside should be removed by wiping with absorbent paper. Excess glue inside a piping system should be neutralized by thoroughly flushing with water.

If excess glue is not removed/neutralized, the solvent NMP contained in the glue can weaken the piping system, as the solvent will remain active until fully cured. Excess glue left at the edge of a joint will turn white due to moisture absorption from the surroundings, as the PVC content in the glue precipitates. The glue is then cured.

8. Curing times when gluing with Unitec PVC glue depend on several factors:

- A.** Amount of glue
- B.** Humidity
- C.** Temperature
- D.** Joint size

The amount of glue should always be kept as low as possible—just enough to fill the joint gap. Humidity has a significant impact on the glue's curing time. It is recommended to use the glue at 50–70% relative humidity. Higher humidity does not damage the curing of the glue, but actually accelerates the curing process. The glue's open time (working time from application to assembly) is significantly shortened as humidity increases.

NOTE:

Relative humidity (RH) below 40% extends the curing time by 2–3 hours, which makes thorough flushing with water particularly important in these conditions. Excessive curing times can cause soft PVC hoses and especially thin PVC fittings to be dissolved by NMP, leading to deformation and resulting in poor bonding. If a brush or other application tool is used, it must be dry. Pevicol must always be stored in tightly sealed packaging, and the air must always be pressed out of the bottle.

The glue can be used from 0°C to +80°C, but performs best between +10°C and +40°C. Curing time is shortened at higher temperatures.

Standard tolerances between pipes, fittings, and components must be maintained. If the tolerances are too large, the bond is weakened and curing time can be significantly prolonged.

If the components are not cylindrical, they must be adjusted to ensure there is space for the glue in the joint.

CURING TIMES

For gluing water-carrying pipe systems made of PVC, the following general curing progression applies:

1 hour after gluing: 2 bar

2 hours after gluing: 3 bar

3 hours after gluing: 4 bar

After that, the pressure can be increased by 1 bar per hour until the pipe's maximum working pressure is reached.

The curing progression described under "Gluing with Unitec PVC" should be considered as a guideline for pipe diameters up to a maximum of 65 mm. For larger diameters, a curing time of at least 24 hours is recommended before pressure testing the system. If the glued joints must comply with specific standards, the curing time must meet the requirements of those standards.

9. Final Measures

After gluing is complete, press out all excess air from the bottle and place the cap. This is to prevent the glue from curing inside the bottle!



Please refer to the technical data below for further information.

Pevicol TECHNICAL DATA

PRODUCT DESCRIPTION:

Pevicol is a patented special glue for bonding PVC where a long open time and good gap-filling properties are desired.

Pevicol may only be used for bonding PVC plastic.

Pevicol is supplied ready for use and must not be diluted.

WORKING CONDITIONS (GENERAL)

Working temperature: 0° to +80°C

Air humidity: 30–80% RH (see point 8 B)

PHYSICAL DATA

Boiling point: 202°C

Freezing point: -24°C

Solubility in water: 100%

Solid content: 18–20%

Solvent: NMP (N-Methyl-2-Pyrrolidone)

Thixotropic: Yes

Flash point: 95°C

Self-ignition: 346°C

Relative evaporation rate: 0.05

Saturation concentration at 20°C: 525 ppm

REACTIVITY

Do not mix Pevicol with other chemicals. When reacting with oxidizing agents, toxic fumes may be released.

CHEMICAL RESISTANCE

Pevicol is generally suitable for bonding in chemically exposed systems corresponding to the intended use of PVC. In case of doubt, test bonding should always be performed.

Pevicol must not be mixed with or come into contact with water before bonding, as the glue will then be neutralized.

Pevicol is supplied pre-mixed and ready for use and must not be mixed with other glues or solvents.

IN CASE OF FIRE

In case of fire, Pevicol emits toxic smoke; inhalation must be avoided. Extinguish with water, carbon dioxide, foam, or powder.

CERTIFICATES: BS 6920; DIN 16970; ASTM D 2564-80 sec. 6.3.3; NS 2944 sec. 6.4

APPLICATION TECHNIQUE:

Refer to the application and installation instructions on the preceding pages.