

## Kaiflex Protect System Application guide

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This special application guide for Kaiflex Protect is an extension of the application guide of Kaiflex tubes and sheets.

### General recommendations

1. All plant requiring insulation must be shut down for a sufficient time prior to installation taking place. After installation of the insulation a period of 36 hours must elapse before restarting the plant, this gives sufficient time for curing of the adhesive.
2. All surfaces must be clean, dust free, dry and free of grease. Unclean areas must be cleaned with the Kaiflex cleaner.
3. Use of the special Kaiflex adhesive must be at an ambient temperature above 0 °C . Using the adhesive at an ambient temperature below 0 °C is definitely not recommended. For self adhesive materials such as (tube, sheet, Connect and Protect tapes and Butyl tapes) the ambient temperature must be +10 °C or above and the relative humidity of the air may not exceed 80 %. The maximum application temperature should be less than +40 °C.
4. It is important to choose the right Kaiflex Protect tube sizes in conjunction with the pipe diameter. Make sure all butt and longitudinal joints are closed correctly and fitted under slight compression. Never pull joints towards each other when fitting.
5. Kaiflex Protect tubes and sheets are ideal for insulating any small or large pipe sizes, chillers, ducting and flat surfaces. Kaiflex Protect sheet material can only be used for pipe diameters larger than 323 mm due to high bending stress on the sheet. For all smaller pipe diameters use Kaiflex Protect Connect system or Kaiflex Protect tubes.
6. Installation of the insulation system may not be undertaken in wet conditions or at high relative humidity.
7. For installation of the Kaiflex Protect systems we recommend usage of high quality tools, especially knives and brushes. Only Kaiflex 414 Adhesive will give the required performance for this system.
8. Ensure that all joints are properly sealed using the SA seal, or by using the matching Kaiflex 414 Special glue. Do not use tape as the only means of sealing the joint.

### Indoor installation

All joints even for indoor installations must be additionally sealed with a  $\geq 19$  mm width self adhesive or Butyl tape.

**Important:** Apply the self adhesive or Butyl tape over the centre of the joints. The ideal sealing surface is 25 mm (50 mm wide tape) on each side. The minimum sealing surface is 9 mm on each side.

Ensure that all Self Adhesive and Butyl tapes are joined tightly by using the plastic spatula.

Avoid penetration of water and/or moisture. Any part of the installation passing through an area of high relative humidity should be treated in the same manner as an outdoor installation. The number of joints should be minimized as much as possible.

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### Recommendations for outdoor installation

General recommendations: To seal the joints use the hereafter described Self Adhesive tapes and /or Butyl tapes.

All insulation joints from an outdoor installation must be sealed with a 50 mm wide Kaiflex Protect Self Adhesive or Butyl tape. Apply the Self Adhesive or Butyl tape centrally over the joints. The ideal sealing surface is 50 mm on each side (100 mm wide tape). The minimum sealing surface is 25 mm on each side. (50 mm wide tape).

**Important notice:** The overlap of Kaiflex Protect self adhesive tubes and Protect Connect System must be additionally sealed by a 50 mm wide Protect Self Adhesive or Butyl tape.

Make sure that all Self Adhesive and Butyl tapes are joined tightly by using the plastic spatula.

### Special recommendations for outdoor installation

For sealing smaller parts e.g. bends, T-pieces, reductions (DN8 - DN50, insulation thickness up to 25 mm), which are cut in segments out of Protect tubes, the joints can be sealed with the Protect Mastic (minimum width 10 mm and minimum thickness 3 mm).

Where self adhesive or Butyl tapes do not sufficiently adhere to the Protect surface or wrinkles appear Protect Mastic must be used additionally. The same procedure applies for wall and ceiling penetrations, fixed pipe supports or pre-insulated pipe hangers, or at any spot where sealing appears problematic.

The ideal application temperature of the Protect Mastic is at an ambient temperature between +5 °C and +40 °C. To apply the Mastic use a spatula or a wet finger.

When installing Protect please make sure that the longitudinal joints are preferably positioned in the lower area, either at 4 o'clock or 8 o'clock, ideally turned away from the direct sunlight. This goes for tubes, sheets and Connect.

Avoid the penetration of water and / or moisture at any time. The number of joints should be minimized as much as possible.