

Acrylic Resin/Polyvinyl Chloride Alloy

General Discussion of Joining Techniques

Kleerdex: Kydex (product form: sheet)

Kydex can be joined to itself and to other materials by hot gas welding, hot blade welding, solvent cementing and mechanical fastening. For high strength joints, hot gas and hot blade welding are preferred. Solvent cementing is limited by the outstanding chemical resistance of Kydex.

Reference: *Physical Properties Kydex 100 Acrylic PVC Alloy Sheet*, supplier technical report (KC-89-03) - Kleerdex Company, 1989.

Welding

Kleerdex: Kydex (product form: sheet)

High strength joints in Kydex can be obtained through hot gas welding. Kydex or ordinary PVC rod stock fed through a hand-held welding gun is heated and then beaded in its soft state into the joint between two Kydex sheets. The Kydex edges to be joined should be bevelled to accommodate the bead which produces the weld. Considerable skill is required in hot-gas welding to obtain consistently high strength joints.

Kydex can be welded to itself and to cast or extruded Plexiglas by hot blade welding. Good joint strength can be achieved using a nichrome heating blade equipped with a thermocouple and a temperature indicator. Blade temperature should be at least 620°F (327°C) with dwell time from 3 to 10 seconds.

Reference: *Physical Properties Kydex 100 Acrylic PVC Alloy Sheet*, supplier technical report (KC-89-03) - Kleerdex Company, 1989.

Mechanical Fastening

Kleerdex: Kydex (product form: sheet)

Kydex can be mechanically fastened with nails, bolts, rivets and screws, to assemblies or hardware. Thin gauges can be fastened by stapling.

Reference: *Physical Properties Kydex 100 Acrylic PVC Alloy Sheet*, supplier technical report (KC-89-03) - Kleerdex Company, 1989.

Solvent Bonding

Kleerdex: Kydex (product form: sheet)

Few solvents will solvate Kydex. The most effective solvent for cementing Kydex to itself is tetrahydrofuran (THF). It can be applied by dipping, brush or injection of a capillary film into the joint. THF may be more convenient to use if thickened by dissolving 10 to 15 percent by weight of clean Kydex chips into the solvent. Cyclohexanone can also be used in the same manner with equal effectiveness.

Reference: *Physical Properties Kydex 100 Acrylic PVC Alloy Sheet*, supplier technical report (KC-89-03) - Kleerdex Company, 1989.