
CEMENTING

Mirrored acrylic is a reflective film applied to a substrate. When the substrate is affixed to another surface, both of these materials will in time conform to the irregularities of the supporting surface. A non-smooth, non-planar surface will cause localized bending of the mirrored sheet and distortion in the reflected image.

For best results, mirrored sheets should be mounted to a smooth, rigid, sturdy flat backing such as 5/8" or 3/4" plywood. The surface should be coated with a high quality paint or sealant to cover pockets and seal out moisture. The entire surface should then be covered with a mastic or another type of pressure sensitive adhesive.

Solvent cementing of a mirror sheet with a hard-coated surface is not readily accomplishable due to the chemical resistance of the coating.

Another option is to drill oversized holes in the mirrored acrylic and hold it to the wall using screw fasteners. Do not overtighten the screw fasteners. Overtightening will cause dimpling and distortion.

Visual distortion is a function of viewing distance and material thickness. A thicker piece of material will be less flexible and therefore maintain better optical integrity. Correct installation and sufficient material thickness can reduce visual distortion but may not completely eliminate it.

Ceiling and overhead installations are not recommended unless the mirrored acrylic is mounted in edge-engaging frames such as T-bar suspended ceiling frames or mechanical mounting.

Some adhesives may contain solvents such as toluene, ketones and hexane that can attack the backcoat. Adhesives with solvents of 5% or more are not recommended. Since numerous adhesives, cements, and mastics are available, they should be tested on expendable pieces prior to application. All tests should be applied at least 72 hours in advance to determine compatibility to the backcoat, the reflective coating and the acrylic itself. The following companies manufacture adhesives that are suggested for use with Plaskolite mirror:

Gunther Mirror Mastics

South Bend, IN
Phone# 800-227-6181
Products:
Premier
Pro-Mastic

Palmer Products Corporation

Louisville, KY
Phone# 800-431-6151
Products:
Mirro-Mastic

3M

St. Paul MN
Phone# 800-362-3550
Products:
Fastbond #4323
9500 PC Double Coated Polyester Tape
VHB Tape

Again we stress, before using any adhesives, cements, or mastics, please test expendable samples for at least 72 hours to determine suitability.

MIRROR BENDING

Line or strip bending is best accomplished by applying an intense narrow band of heat approximately 3mm away from the mirror substrate. 1.15mm nichrome (nickle-chrome) resistance wire is a commonly used heating element.

- Place the mirror face toward the heating element. Do not attempt to heat the paint side. Doing so will prolong heating times and cause blushing, a dulling of the mirrors reflective finish.
- Adjust your power source so that the wire becomes a medium to bright red color.
- Peel all masking several inches away from the bend area. Masking left in place, either poly or paper, will increase heating time and yield poor results.
- Acrylic will become bendable at 143 degrees C to 163 degrees C. Bending should be done at the coldest possible temperature requiring gentle force to make the bend. 3mm mirror should become pliable enough to bend within 20 to 25 seconds.
- Timing is critical. Under heating will cause warpage along the bend line and undue stress which may lead to cracking. Overheating will cause blushing.
- Cooling should be done as quickly as possible by air circulation.