

Original 03/02

#13 Polyvinyl Alcohol (PVA) Release Film

General Information:

#13 PVA is a water/alcohol solution of water-soluble, film-forming materials. It is particularly recommended as a parting agent for separation between polyester or epoxy resins and various mold surfaces.

It is not recommended for use with resins containing water or giving off water during cure (i.e., phenolics) or with automotive finishes, as damage may occur.

#13 PVA will not shrink and pull away from corners or curved surfaces. After resin had dried, the film parts easily from the mold and is readily dissolved from the molded parts with water.

An occasional coating of #1016 Partall® Paste #2 required on most mold surfaces before application of #13 PVA.

Preparation of mold surface:

Porous molds (i.e., plaster or wood) must first be sealed with lacquer or similar coating. A good surface on plaster may be obtained with automobile type primer-sealers and lacquers. Plaster molds must first be thoroughly dried.

Mold surfaces should be free of other parting agents, especially those containing silicone.

Cleaning with fine steel wool or sandpaper will not affect the high gloss obtained with #13 PVA. Deep scratches or pits will fill with solution, however, and increase drying time.

Application of #13 PVA:

Apply #1016 Partall® Paste #2 according to instructions prior to use of parting film.

#13 PVA is ready to use as received and should not be diluted. It is best applied to the mold by spraying although it can be brushed on.

Best results are achieved with as fine a spray as possible. To achieve this result, use a small orifice in the gun, close the needle about halfway, and adjust the air pressure to 90 – 100 psi at the gun. Normal spraying distance is from 12 to 18 inches.

Apply a thin mist coat first and follow with two heavier flow coats, allowing each coat to dry completely before proceeding. A spray density that just allows the liquid to flow together and form a continuous film is ideal. Dry film thickness must be at least 2-4 mils on new or reconditioned molds and at least 1-2 mils on seasoned molds (two mils is approximately the thickness of an industrial-type trash bag.) One gallon will cover about 400 square feet.

Drying time is from 15 to 45 minutes (depending on coat thickness, humidity, proximity to sunlight, etc.) with normal application. The film should be very smooth and glossy when dry. A dull film may result from insufficient spray and may contain pinholes.

Removing part from mold:

The best procedure for separating the part from the mold depends on the size and shape of the part. In most cases the part can be lifted from the mold after loosening around the edges. A jet of air between the part and the mold at the edge is sometimes useful.

On large curved parts it may be necessary to first tap over the surface with a rubber mallet.

A very strong blast of air (or a few squirts with a CO₂ extinguisher) will free very rigid parts that cannot be flexed.

#13 PVA will stay with the part and can be easily washed off with water. The spray gun can be cleaned with water also.