

Why is it important to de-air the silicone mixture and what can I do if I do not have vacuum equipment?

De-airing is recommended for all silicone mold making rubbers when not using automatic dispensing equipment. The small air bubbles that result from hand mixing become trapped in the mixture and, if not removed by de-airing, can interfere with exact surface reproduction.

Because the mixture of base and catalyst will expand during de-airing, it is important to use a container that is between 3 to 5 times the volume of the material itself. The higher viscosity silicone mold making rubbers will expand the most.

The mixture can be quickly and easily de-aired in a vacuum chamber. This important step usually takes just a few minutes. Allow the mixture to completely expand and then collapse.

Condensation [tin] cure mold making rubbers should not be de-aired for more than 5 minutes. Any more de-airing will negatively affect the cure profile. The higher viscosity addition cure silicone rubbers can be de-aired up to 20 minutes with no harm to the mixture.

If no vacuum de-airing equipment is available, air entrapment can be minimized by mixing a small quantity of base and curing agent, then using a brush, painting the original with a 1mm layer. Leave at room temperature until the surface is bubble free and the layer has begun to cure. Mix a further quantity of base and curing agent and proceed as usual to produce a final mold.

Dow Corning molding products Q&A

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