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High Strength, Brush-On Latex

RL-451-80

Product Data Sheet

RL 451-80 is a one-part, brush-on, *high solids, no odor, industrial* liquid latex that is applied in layers to build a highly tough, tear resistant and durable mold rubber. Molds are best used to cast plaster and concrete. It also works well as a texture pad for decorating concrete or clay models. Latex needs to semi dry between coats as multi layer molds or parts are being created.

Available Sizes: Pint & Quart, Gallon & 5 Gallon, 55 Gallon Drum

TYPICAL PROPERTIES OF CURED RUBBER

Durometer:	40 Shore A
Tensile Strength:	5750 psi
Elongation at Break:	750 %
Tear Resistance:	475
Coverage:	¾ lb, 1 ft ² x 1/16" Thick

Accessories

- **RL-Thinner** Add to adjust latex thickness—Better than adding just distilled water!!
- **RL-400 T** Thickener, ground black organic rubber use for plugging undercuts in molds
- **Burlap** Cloth use for reinforcement
- **MR-100-50** Casting release used for concrete and plaster to improve surface finish
- **CO-1** Castor Oil release used for concrete and plaster

Model Preparation:

Model's surface should be clean and free of oil and dirt. Oil clay, wood, stone, and glazed ceramics normally don't need to be sealed. Plaster, concrete, water-based clay, copper containing items should be sealed with shellac or compatible sealer. For all other surfaces, run a small test to ensure compatibility—if latex sticks or turns dark, apply sealer. Next, secure model to a base board—plywood or something similar.

Processing & Curing Instructions: *Mold Making*

Fasten the part to be molded to a firm base so as to avoid handling piece during brushing—No release is necessary in most cases unless part is highly porous then sealer is applied. When brushing on latex, care should be taken to brush out all bubbles to assure a smooth, detailed first coat so void-free positives can be made. Brush from the top of model to bottom then continue on out from base, a distance of about 1.5" - 2", to create a supporting flange. Continue to build-up flange with each successive layer of latex. When dry, flange provides an aid in the handling of mold during casting process.

After the first coat has become dry to the touch, subsequent coats may be added allowing each coat to dry before applying next coat. Depending on environmental conditions the drying time will change from hours to portion of a day—4 to 16 hours. Drying time depends on temperature and humidity and can be improved by the use of heat and moving air over the surface, with 1 to 2 coats per day. When dry, latex will change color from creamy white to a light tan. Mold consists of 8 to 20 coats depending on desired thickness and latex system used. Thickness ranges between 1/8 and ¼ inch thick. Each additional coating should be brushed in alternating directions (top to bottom, right to left, diagonally) with a checkerboard coat in between so a laminated structure is created. Applying this technique reduces the dimensional shrinkage of the finished mold.

For deep undercut areas, use **RL 400T** (thickening/plugging filler). Add to latex system until desired paste is created—a thick peanut butter like consistency—and apply to outside latex mold. Once area is filled and allowed to dry, usually within the hour, brush a final coat of straight latex to seal up area.

To maximize the strength properties of the mold, allow it to fully cure in a warm area for 1-2 weeks before placing into production. Otherwise, accelerated cure can be achieved if mold is warmed in an oven at 100 to 150F. Once mold is fully cured, a mother mold support is made out of fiberglass or plaster to support the latex mold.

Using Mold:

Avoid contact with copper containing metals, oils or solvents. When casting with concrete and plaster, using a casting release MR-100-50 or CO-1 (Castor Oil)—is recommended. Wetting the mold's surface prior to casting will assist in eliminating air bubbles from the mold's surface. Clean latex with soap and water. Keep cured latex rubber out of direct sunlight.

Storage/Shelf Life:

Store liquid material in cool, dry area out of direct sunlight, in tightly sealed containers, above 60F. Use within 6 months. **Do not allow liquid material to freeze which will damage latex causing irreversible coagulation.**

THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION THAT WE BELIEVE TO BE RELIABLE. EACH USER OF THE MATERIAL SHOULD THOROUGHLY TEST ANY APPLICATION, AND INDEPENDENTLY CONCLUDE SATISFACTORY PERFORMANCE BEFORE COMMERCIALIZING. SUGGESTIONS OF USAGE SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ON ANY PARTICULAR PATENT.