Low Density Molding Compound

USER GUIDE
Interplastic bonding putties are formulated for hand mixing or machine application. Consistent and uniform blending of the initiator is necessary for optimum performance. When using bonding putties, be sure to clamp or push down firmly to rid the putty of air voids for better strength and adhesion. Do not over tighten the clamps and flex the mold because that can build internal stresses that may cause defects and/or failure.

The strength, performance and durability of a putty bond is determined by the type of bond, the properties of the putty, the performance of the materials being bonded and how that bond is assembled.

**Best Practices for Handling Incoming Putty:**
1. Check the incoming certificate of analysis to ensure the product and lot number match the received containers.
2. Check the quality control data to your required specifications.
3. Rotate and use your putty stock, first in, first out. Storing material above 90°F or below 65°F may affect the shelf life as well as the viscosity and gel time stabilities of the putty.

*NOTE: Please refer to the Safety Data Sheets for safe storage and personal protective equipment. Read and understand the application equipments user manuals before operating.*

**Container Set-up:**
1. Acclimate the containers to be used by placing them near the assembly area or in the same room a few days before using. This will bring the putty to ambient operating temperatures.
2. Ensure the containers label identifies the correct putty and is the same as the container that is being replaced.
3. Check the container for leaks, cracks or dents that may prevent the plunger ram of the pump from lowering all the way to the bottom of the drum.
4. When the lid is removed, inspect the lid for gelled particles, stalactites and separation at the surface of the putty. If there are issues, report them. It may be necessary to set the drum aside and use a different drum until the issues can be addressed.

Before building parts with Low Density Molding Compound (LDMC), ensure the core materials are sized and cut to fit the parts recesses. Be certain the core materials contour to the corners of the build. The starting point for the following suggestions are with a two part recessed and bulging mold system where gel coat and a skin coat have been applied and allowed to cure before using the LDMC.

**PS-100-PMLN** LDMC - Its primary use is in the manufacturing of cored, flat, laminated fiberglass parts with gel coated surfaces on both sides. LDMC is engineered to offer better bonding with superior structural improvement to parts as well as lowering the overall weight compared to standard fiberglass composites that were made with an open molding, RTM, cold molded or infusion process.
Attributes of Interplastics **PS-100-PMLN** include:

- Superior adhesion: the compound bonds to the laminate and the core material
- Free flowing: the compound’s viscosity allows it to be poured and flows easily to displace voids in the part when compressed
- Structural strength: formulated with high performing resins with high elongation properties
- Weight reduction: lighter than conventional two-sided molded parts with comparable rigidity

Compared to RTM/infusion methods, the benefits of using LDMC are:

- Less manufacturing equipment is required (pumps, hoses, bags)
- Reduced weight in the finished part
- Less finishing work at the edges
- Less laminator training required

**Using Low Density Molding Compound to build small parts.** *For Reference Only.*

**Step 1:** Squish molds are normally a two-piece set (male and female). Pictured here on the left is a bow hatch cover. These molds are prepped and masked for typical gel coat application.

**Step 2:** The molds are sprayed to the desired gel coat thickness and the tape lines are pulled. The gel coat is allowed to cure.
Using Low Density Molding Compound to build small parts. (continued)

**Step 3:** After the gel coat has cured, a skin coat with a standard laminating resin is applied. Pictured on the left, one layer of 1.5 oz of continuous mat has been applied. The skin coat is allowed to cure.

*Note: We suggest 20 barcol reading with a Barber Coleman 934 impressor gauge before proceeding.

**Step 4:** The LDMC is initiated with 1.5% by weight Methyl Ethyl Ketone Peroxide (MEKP) (9% active oxygen). For optimal results, ensure the MEKP is fully dispersed throughout the putty by using a paddle attachment with a pneumatic drill. A peroxide with a fading color allows the operator to visually see how well the peroxide is dispersed.

**Step 5:** The desired amount of initiated LDMC is poured into the laminated female mold, only allow it to flow half the distance from the center of the side wall to the inside edge of the flange.” This ensures the pre-fitted core (high density structural foam, scribed balsa, honey comb, etc.) will sit in the middle of the LDMC mass.
Using Low Density Molding Compound to build small parts. (continued)

Step 6: Using a brush, spread the LDMC over the entire part ensuring the LDMC is applied in the corners and recesses of the gel coated part. To help eliminate air next to the gel coat use a brushing motion that will not incorporate bubbles into the LDMC mass.

Step 7: After bedding the core material into the first pour of LDMC, a second amount is poured on top of the core material. The desired volume should be poured so it is just short of the inside edge of the molds flange. This will allow for some flow and displacement of air when the male mold is placed on top and compressed. The key is to use enough LDMC to fully fill every void and push out any entrapped air without having too much excess squeezed out of the part. Ensure all air is displaced with LDMC before continuing. Masking the edges will aid in clean up and mold protection.

Step 8: The male mold is flipped and placed into the female mold. The male mold is wiggled slightly to help in the removal of entrapped and excess air. The part is then clamped or compressed by other means where the extra LDMC and air is expelled.
Using Low Density Molding Compound to build small parts. (continued)

**Observations:**

- Know the volume of LDMC mixture required to construct a part. Measure the displacement voids and subtract the area of the core panel, if a core is being used. Add slightly more LDMC mixture to the part than is required.
- LDMC is for the construction of noncomplex, low geometry parts. Under compression, the LDMC mixture will flow to the areas of least resistance, which should be the flanges.
- Keep LDMC casting to under 3/4”. There may be higher exotherm reactions and greater shrink characteristics with larger masses which might distort the part.
- A slight amount of LDMC mixture overflowing from the flanges during compression is required to ensure a void free part.
- Low pressures are required to fully compress the parts until they are clamped.
- When adding initiator, use methods and equipment that minimize the incorporation of air bubbles into the mixture.
- LDMC mixture is self-leveling. To avoid unnecessary draining and uneven parts, apply only to horizontally aligned parts.

---

**Step 9:** After the part is fully cured, the parts are unclamped and pulled (demolded).

**Step 10:** The parts are trimmed and ready for assembly.
<table>
<thead>
<tr>
<th>Resin</th>
<th>Application</th>
<th>Gel Time* (min:sec)</th>
<th>Viscosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA-160-PMMN</td>
<td>Non-Reinforced Bonding/Adhesive Putty - Mid Density</td>
<td>25:00 - 35:00</td>
<td>525,000 - 650,000 RV T-E @ 5 rpm</td>
</tr>
<tr>
<td>PA-805-PLML</td>
<td>Non-Reinforced Bonding/Adhesive Putty - Light Weight</td>
<td>50:00 - 65:00</td>
<td>375,000 - 600,000 RV T-E @ 5 rpm</td>
</tr>
<tr>
<td>PA-150-PHHN</td>
<td>Reinforced Bonding/Adhesive Putty</td>
<td>20:00 - 30:00</td>
<td>1,000,000 - 1,400,000 RV T-F @ 5 rpm</td>
</tr>
<tr>
<td>PB-200-PULN</td>
<td>Light Weight Bedding Putty</td>
<td>20:00 - 30:00</td>
<td>60,000 - 80,000 RV T-B @ 5 rpm</td>
</tr>
<tr>
<td>PF-410-PLMF</td>
<td>Fairing Putty</td>
<td>2:30 - 5:15</td>
<td>400,000 - 500,000 RV T-E @ 5 rpm</td>
</tr>
<tr>
<td>PR-600-PMMN</td>
<td>Reinforced Fillet Putty</td>
<td>20:00 - 30:00</td>
<td>275,000 - 400,000 RV T-E @ 5 rpm</td>
</tr>
<tr>
<td>PR-650-PMMN</td>
<td>Light Weight Fillet Putty</td>
<td>20:00 - 30:00</td>
<td>275,000 - 400,000 RV T-E @ 5 rpm</td>
</tr>
<tr>
<td>PC-900-PULN</td>
<td>Ceramic Transom Putty</td>
<td>20:00 - 30:00</td>
<td>8,000 - 10,000 RVT #5 @ 20 rpm</td>
</tr>
<tr>
<td>PS-100-PMLN</td>
<td>Low Density Molding Compound</td>
<td>28:00 - 42:00</td>
<td>1,000 - 4,000 RVF #4 @10 rpm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COR-Grip® Corrosion Putty Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA-170-PMHN</td>
</tr>
<tr>
<td>PA-180-VHMN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COR-Grip® Fire Resistance Putty Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA-196-PHLN</td>
</tr>
</tbody>
</table>
Low Density Molding Compound
User Guide

All specifications and properties listed above are appropriate. Specifications and properties of material delivered may vary slightly from those given. Interplastic Corporation makes no representations of fact regarding the material except those specified above. No person has any authority to bind Interplastic Corporation to any representation except those specified above. Final determination of the suitability of the material for the use contemplated is the sole responsibility of the Buyer. Interplastic Corporations sales representatives are available to assist in developing procedures to fit individual requirements.