Plastic and Silicone Assemblies Made Easier and Smarter

LORD® In-Mold Bonding (IMB™) Adhesive Technology is a ground-breaking innovation in plastic and silicone component assembly. IMB Adhesives are non-tacky polymer-based materials that, when applied to a rigid substrate, provide a structural bond to a thermoplastic or silicone which is formed under heat and pressure. This technology enables assemblies between plastics, silicones, and metals to be made during the molding process. In many different applications, we have seen this enable greater design flexibility, increased manufacturing efficiencies, material savings and air/moisture/fluid sealing between different materials.

LORD IMB™ Adhesives utilize patented chemistries and know-how in combination with over 90 years of experience in developing, commercializing, and supporting world leading in-mold bonding adhesives.

APPLICATIONS

• Bond and seal over-molded assemblies:
  - Equipment housing
  - Pumps, tubes and fixtures
  - Diaphragms, seals and gaskets
  - Handles and grips
  - Wearables, cell phones and cases
  - Ignition coils, injectors, pumps and solenoids
  - Electrical connectors

ADVANTAGES

• Design Flexibility: Structural bonding of non-compatible materials during the molding process enables curved, thin, lighter, new differentiated designs.

• Manufacturing Efficiencies: Eliminate secondary process cost associated with application of PSA Tapes and Structural Adhesives. Remove labor associated with assembling mechanical locking features like clips and screws. Increase throughput versus available self-adhering silicones and reduce energy costs.

• Sealing Assemblies: Maintain resistance to liquid or gas ingress/egress in a plastic or silicone to rigid substrate assembly at temperature and pressure over time.

• Versatile and Easy-to-Use: Ability to bond a wide variety of materials with one-component systems that apply easily by spray, brush, or dip methods without pot life issues associated with two-component systems.
## COMPATIBLE MATERIALS

### Molded Materials
- Liquid Silicone Rubber
- PC
- PC/ABS
- Nylon
- PBT
- TPSIV
- TPU
- PPSU
- PEEK / PAEK
- TPE

Many areas of active development are underway to expand to new materials combinations.

### LORD IMB ADHESIVES

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>DESCRIPTION</th>
<th>APPEARANCE</th>
<th>TYPICAL VISCOSITY, CPS @ 25°C (77°F)</th>
<th>DENSITY RANGE, KG/M³ (LB/GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMB 1010</td>
<td>Designed for bonding thermoplastic polymers to metals and other rigid substrates (TPU, Nylon, PC, PC/ABS).</td>
<td>Clear to yellow liquid</td>
<td>100-200</td>
<td>910-950 (7.6-7.9)</td>
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<tr>
<td>IMB 1020</td>
<td>Designed to bond a wide range of thermoplastic polymers to stainless steel, other metals and rigid substrates (TPU, TPSIV).</td>
<td>Clear liquid</td>
<td>100-300</td>
<td>870-910 (7.3-7.6)</td>
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<td>IMB 1040</td>
<td>Designed for bonding thermoplastic polymers to metals and other rigid substrates (TPU, Nylon, PC, PC/ABS, PBT). Provides enhanced humidity and high temperature performance.</td>
<td>Clear to yellow liquid</td>
<td>2000-7000</td>
<td>970-1020 (8.1-8.4)</td>
</tr>
<tr>
<td>IMB 2000</td>
<td>Aqueous adhesive system designed for bonding thermoplastic materials to metals and other rigid substrates (SEBS, Nylon).</td>
<td>White liquid</td>
<td>20-400</td>
<td>946-979 (7.9-8.2)</td>
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<tr>
<td>IMB 2010</td>
<td>Aqueous adhesive designed for bonding thermostatic elastomers such as polyurethanes, polyesters and TPSIV. It will also bond some engineering thermoplastics such as nylon and PC.</td>
<td>White liquid</td>
<td>200-600</td>
<td>1019-1066 (8.5-8.9)</td>
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<tr>
<td>IMB 3010</td>
<td>Designed for bonding addition-cured silicone rubber to a variety of thermoplastic and metal substrates, including PC, polyesters, stainless steel and aluminum, during the injection and/or compression molding process.</td>
<td>Milky liquid</td>
<td>70-100</td>
<td>851-869 (7.1-7.25)</td>
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<tr>
<td>IMB 3020</td>
<td>Designed for bonding addition-cured silicone rubber to a variety of metal and compatible plastic substrates during the injection or compression molding process.</td>
<td>Milky liquid</td>
<td>70-100</td>
<td>870-885 (7.26-7.38)</td>
</tr>
<tr>
<td>IMB 3030</td>
<td>Designed for bonding addition-cured silicone rubber to a variety of metal and compatible plastic substrates during the injection or compression molding process.</td>
<td>Milky liquid</td>
<td>70-100</td>
<td>870-885 (7.26-7.38)</td>
</tr>
</tbody>
</table>

For more information about LORD IMB Adhesives, please contact Customer.Support@LORD.com or +1 800 ASK LORD