RESPONSIVENESS ~ FROM DESIGN TO DELIVERY™

Custom Rubber Corp

Rubber Molding

Custom Rubber Corp. is a leader in rubber molding parts and products that meet the specifics of our customers' needs. We provide exactly what our name suggests; Custom Rubber products. We have over a 95% customer retention rate and base our entire business on our **Mission: Responsiveness ~ From Design To Delivery**. Custom Rubber Corp. provides personalized and personal service and assistance every step along the way making the design and purchase of rubber molding parts easy.

How Do We Mold Rubber?

Custom Rubber Corp. is constantly making investments in new equipment so that we can provide our customers with the most modern and efficient manufacturing and secondary operations available for rubber molding products. Molding-related capabilities include: **rubber injection molding, rubber compression molding and rubber transfer molding.**

Rubber Injection Molding

Rubber Injection Molding is the most efficient way to mold rubber in most cases. Injection and injection-transfer molding start with more efficient material preparation. The material is mixed, typically in 500-pound batches, and then stripped immediately after being mixed, into continuous strips measuring approximately 1.25" wide and 0.375" thick. This strip is fed into a screw on the injection molding machines, which charges a barrel as needed with a pre-defined amount of material. When the mold is closed, the material in the barrel is injected into the mold cavities and cured. There are many advantages to Rubber Injection Molding:

1. Complete elimination of pre-forms, a labor-intensive step that can introduce variability in pre-form weight and shape resulting in variability of the finished product.
2. Complete elimination of operator placement of pre-forms. In many cases, the operator has to strategically place the pre-forms in either the cavity (compression molding) or the pot (transfer molding) to ensure quality output.
3. The injection screw pre-heats the material before forcing it into the cavities. This decreases the viscosity of the material, allowing it to flow more easily into the cavities. The other advantage is the potential for decreased cure time for two reasons:
    - More rapid cavity filling due to lower viscosity.
    - The material is well on its way to being cured as a result of the heat added during the screw charging and shear created during injection.

Rubber Compression Molding

The first modern rubber product ever produced was compression molded in the home oven of Harvey Firestone in the 1890s. In many ways, not much has changed since. Compression molding rubber involves taking rubber compound or mixed raw material and making "pre-forms" that are in the shape of the end product. These shapes are then loaded, typically by hand, into an open mold. The mold is closed, the rubber cured, and then demolded—typically by hand. Compression molding rubber can be cost-effective if one or more of the following is true:

1. Compression molding tooling already exists.
2. The quantity required is very low.
3. The part cross-section is very large and it requires a long cure time.

Rubber Transfer Molding

Similar to compression molding, transfer molding requires secondary raw material preparation into "pre-forms" that are loaded into a "pot." When the mold is closed, a "plunger" compresses the rubber in the pot and forces it through holes to fill the part cavity. The advantages of transfer molding over compression molding can include:

1. Fewer and simpler pre-forms because one pre-form can fill hundreds of cavities.
2. Tighter dimensional tolerance control because the mold is not held open by excess material spilling out of the cavity parting line; all the excess hold the plunger open from the pot.
3. Colored rubber parts benefit because pre-forms can be cut by hand from raw material sheets, significantly reducing the chance of contamination that can come from mechanical prep for compression molding or the injection screw and barrel in injection molding.
4. The primary disadvantage is increased waste; the flash pad or rubber left in the pot after transfer is typically cured and has to be recycled or thrown out. Custom Rubber Corp. has well over 100 years of institutional knowledge about transfer molding

Additional Services and Capabilities

In addition, Custom Rubber Corp. offers an array of services that complement our core ability to respond to customers' inquiries and requests for rubber molding parts. Custom Rubber Corp. can go the extra mile with custom rubber molding products, including:

- Cryogenic Deflashing: Tumbler and Shot Blaster
- Slitting and/or Punching
- Applying PSA or Adhesive
- Secondary Bonding Rubber to Metal and/or Plastic
- Trimming
- Conveyor-Belt Inspection
- Specialty Testing
- Special Packaging
- Customized Labeling per Customer Specifications

To learn more about our rubber molding capabilities, contact Custom Rubber Corp today!