Asia Billion is a high quality custom plastic molding cover and injection mould tooling manufacture in China. During the pasted many years development, we purchase many precision and advanced equipment for our production making, such as 5 axis CNC machine, imported high precision CNC machine, Sodic precision Mirror EDM, CMM and Japanese brand high speed injection machine. these equipment can help us to have more confidence and efficiency for our global customers. This project is for our UK customer, the part are used for some electronic equipment outer housing, the material is Sabic PC/ABS.

**Plastic enclosure mould details as below :**

<table>
<thead>
<tr>
<th>Type:</th>
<th>plastic moulding covers</th>
<th>Core surface finish:</th>
<th>Normal polish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Material:</td>
<td>PC/ABS</td>
<td>Cavity surface finish:</td>
<td>high polishing</td>
</tr>
<tr>
<td>No of Cavities:</td>
<td>1 cavity</td>
<td>Injection System</td>
<td>Cold runner</td>
</tr>
<tr>
<td>Core Material:</td>
<td>P20H</td>
<td>Type of gating:</td>
<td>Sub gate</td>
</tr>
<tr>
<td>Cavity Material:</td>
<td>P20H</td>
<td>Ejection system:</td>
<td>Ejection pin</td>
</tr>
<tr>
<td>Slider material:</td>
<td>N/A</td>
<td>Lead time for FOT:</td>
<td>5 weeks</td>
</tr>
<tr>
<td>Mold base steel:</td>
<td>1045</td>
<td>Shot life:</td>
<td>300 000</td>
</tr>
<tr>
<td>Total Mold Price:</td>
<td>GBP 5850</td>
<td>Manufactures:</td>
<td>Asia Billion</td>
</tr>
</tbody>
</table>

**Product Characters:**

1) Very low cost tooling invest around GBP 5800 with 400 x 500 mm size injection mould
2) No welding lines are allowed for the outside surface
3) Critical flatness control
4) Self-trapping screw at the back side
5) High polishing surface finishing with around Ra 0.05

**Asia Billion Product advantages:**

1, Lower cost for the injection mould tooling comparing others between 5% to 30%
2. Fast lead time for the mould fabrication starting from 2 weeks and more
3. High plastic molding unit precision can reach up to 0.02 mm tolerance
4. Excellent customer service and strong project engineering support.

Asia Billion plastic injection mould tooling Workshop Overview:
Asia Billion plastic molding workshop overview

Plastic molding tooling Quality Control:
Analysis of the Causes of Cracking of Injection Molding Cover

The reason why the plastic cover cracks is mainly due to the stress or stress concentration of the plastic parts. The main factors are injection molds, injection molding processes, plastic parts and raw materials. The molds are generally open, this will not say, if you can't solve it through the following methods, then you should consider whether you want to change the mold.

First, the injection molding process
1. If the holding time is too long, the plastic parts are subjected to excessive pressure, and there will be large residual stress, which may cause cracks in the plastic parts. For this, the holding time can be appropriately shortened.
2. If the injection pressure is too large, the residual stress will also increase. This kind of stress will easily cause cracks in the plastic parts. For this, the injection pressure should be appropriately reduced.
3. If injection molding must use a large injection pressure, in order to reduce the residual stress in the plastic part, the temperature of the melt and the mold can be reduced, the temperature of the barrel and the mold can be increased, the cooling time of the plastic part can be prolonged, and the oriented molecules can be made. The chain can have time to recover.

Second, plastic parts
1. If there is a sharp change in the contour of the plastic part, it is also the place where the stress is concentrated, and the crack is most likely to occur. For this reason, when designing the plastic part, the outer and inner angles on the shape should be transitioned with a large arc as much as possible.
2. For plastic parts with embedded plastics, the coefficient of thermal expansion of metal and plastic varies greatly. For example, the thermal expansion coefficient of thermoplastics is 6-11 times that of steel and 3-6 times that of aluminum. Therefore, the inserts are in plastic. It will hinder the overall shrinkage of the plastic, and the resulting stress will cause cracks in the plastic part. To reduce or avoid cracks caused by the insert, you can start from the following aspects:
   First of all, in the selection of materials, try to use metals with thermal expansion coefficient close to the resin, such as zinc, aluminum, copper and other non-ferrous metals.
   Secondly, the inserts are placed in the plastic parts made of high molecular weight resin as much as possible, and the resin has strong crack resistance.
Furthermore, the thickness of the plastic around the insert should be thicker and the minimum wall thickness will vary from plastic to plastic.

**Third, raw materials**
1. The release agent is difficult to be dissolved with the melt. If the dosage is too large, cracks may occur. For this, the release agent should be used as little as possible.
2. Too much recycled material, do not add too many nozzles.
3. Do not use low viscosity raw materials, low molecular weight.
4. The water content of the resin can not be too much, the resin should be dried.
5. Multi-purpose crystalline resin.
6. If the raw materials are replaced, the parts of the injection molding machine must be thoroughly cleaned to avoid cracks in the plastic parts after mixing the raw materials with different properties.

As a high quality custom plastic molding covers and enclosures manufacture, we have the capacity to support you from ideal part design, prototype validation, mold making and injection molding mass production. We also have the capacity for second operation such as painting, chroming, screwing, welding and assembly. If you have any project, please let us know freely.

Contact us freely at:
Asia Billion Innovational Technology Ltd
E-mail: sales@ab-industry.com