**X_BUTYL®**
REGULAR BUTYL RUBBER FOR INNER TUBES

Regular Butyl Rubber (IIR) is a copolymer of isobutene with small amounts of isoprene. The isoprene creates double bonds, allowing vulcanization with sulfur and other curing agents.

When the compounds based on regular X_Butyl® are correctly formulated and processed, the end-products possess:

- very low permeability to gases and liquids
- high hysteresis for energy absorption
- good low-temperature flexibility

Regular X_Butyl® is still used extensively for inner tubes in countries where the road infrastructure is not highly developed and in low-speed tire applications such as construction, farm equipment, buses, motorcycles, bicycles, and recreational vehicles.

### PRODUCT PROPERTIES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mooney Viscosity [ML(1+8) @ 125 °C, MU]</th>
<th>Unsaturation [mol%]</th>
<th>Ash [wt%]</th>
<th>Volatiles [wt%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_Butyl® RB 100</td>
<td>33</td>
<td>0.9</td>
<td>&lt;0.3</td>
<td>&lt;0.3</td>
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<tr>
<td>X_Butyl® RB 402</td>
<td>33</td>
<td>2.25</td>
<td>&lt;0.3</td>
<td>&lt;0.3</td>
</tr>
<tr>
<td>X_Butyl® RB 301</td>
<td>51</td>
<td>1.85</td>
<td>&lt;0.3</td>
<td>&lt;0.3</td>
</tr>
</tbody>
</table>

### TYPICAL FORMULATION

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>phr</th>
<th>Mechanical Properties</th>
<th>Unit</th>
<th>Typical Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_Butyl™ RB 301</td>
<td>100</td>
<td>Hardness</td>
<td>(ShA)</td>
<td>55</td>
</tr>
<tr>
<td>Stearic Acid</td>
<td>1</td>
<td>Tensile Strength</td>
<td>(MPa)</td>
<td>11.5</td>
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<tr>
<td>Process Aid</td>
<td>2</td>
<td>Modulus 100%</td>
<td>(MPa)</td>
<td>1.8</td>
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<tr>
<td>Carbon Black N550</td>
<td>45</td>
<td>Modulus 200%</td>
<td>(MPa)</td>
<td>3.5</td>
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<tr>
<td>Zinc Oxide</td>
<td>5</td>
<td>Elongation at break</td>
<td>(%)</td>
<td>535</td>
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<tr>
<td>Oil</td>
<td>20</td>
<td>Tear Strength</td>
<td>(kN/m)</td>
<td>22</td>
</tr>
<tr>
<td>Accelerators</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphur</td>
<td>1.5</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*These items are provided as general information only. They are approximate values and are not considered part of the product specifications. Please contact your regional representative for additional information.
WE ARE HAPPY TO SUPPORT YOUR BUSINESS

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