The Buna™ SE product group comprises the general purpose emulsion styrene-butadiene rubbers (E-SBR). E-SBR is the most widely used rubber in the world, representing about 40% of the synthetic rubber market due to its excellent balance of properties and cost performance.

A typical E-SBR has 23.5% styrene with a random distribution of the monomers along the polymer chain. By increasing the styrene content, the processing and tensile strength can be improved, but the low temperature resistance and wear deteriorates. E-SBR has a broad molecular weight distribution and a high degree of branching, so it processes easier than solution SBR.

Buna™ SE is produced by a cold free radical polymerization mechanism, using an aqueous medium with rosin and/or fatty acids. The monomers react and form a latex, which is then coagulated to generate the solid rubber. The products are available in clear or oil extended grades, with staining or non staining antioxidant.

Buna™ SE presents good mechanical properties, abrasion and tear resistance with more than half of the world production of E-SBR used in general purpose tires. The Buna™ SE product portfolio contains types which fulfill the requirements for the tire industry in regard of environment friendly oils. Different stabilisation systems allows the customer to use the products in color sensitive applications.

### Applications

**E-SBRs can be used in:**
- tire
- retread
- footwear soles
- hoses, tubes, and cables
- conveyor belts
- other molded, calendered and extruded rubber goods

### PRODUCT PORTFOLIO

<table>
<thead>
<tr>
<th>Name</th>
<th>Plant</th>
<th>Mooney (MML (1+4) @ 100 °C, MU)</th>
<th>Styrene (%)</th>
<th>Oil (phr)</th>
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</thead>
<tbody>
<tr>
<td>Buna™ SE 1500</td>
<td>Caxias</td>
<td>52</td>
<td>23.5</td>
<td>-</td>
</tr>
<tr>
<td>Buna™ SE 1502 H</td>
<td>Triunfo</td>
<td>53</td>
<td>23.5</td>
<td>-</td>
</tr>
<tr>
<td>Buna™ SE 1502 L</td>
<td>Triunfo</td>
<td>49</td>
<td>23.5</td>
<td>-</td>
</tr>
<tr>
<td>Buna™ SE 1712 TE</td>
<td>Caxias</td>
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<td>23.5</td>
<td>TRAE (37.5)</td>
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<tr>
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<td>55</td>
<td>40.0</td>
<td>TRAE (37.5)</td>
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<tr>
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<td>Caxias</td>
<td>50</td>
<td>23.5</td>
<td>TDAE (37.5)</td>
</tr>
<tr>
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<td>TDAE (37.5)</td>
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<tr>
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<td>CAX</td>
<td>49</td>
<td>23.5</td>
<td>RAE (37.5)</td>
</tr>
</tbody>
</table>
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