Recovered Carbon Black
“EnviroCB™”

Good for the Environment

» Waste tyres are taken care of in a controlled, closed process (18 Mtons generated every year).

» The gas generated in the process is used as energy source in the main process.

» The three remaining output streams: oil, steel and carbon black are sold externally whereof both the steel and the carbon black are used in new products – circular economy. The oil can be used as fuel in industrial engines.

» Each kilo recovered carbon black used as replacement for virgin means savings of up to 1,5 - 2 kg crude oil.

» Scandinavian Enviro System is taking one of the largest global waste streams higher up the recycling hierarchy.

Good for your Company

» **Purchasing:** a more stable price picture, less linked to the oil price.

» **Corporate Social Responsibility:** increased use of recovered materials and decreased carbon footprint.

» **Marketing:** “Greener” material source.

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>UNIT</th>
<th>TYPICAL VALUE (SWEDISH TYRE MIX FEEDSTOCK)</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BET Surface Area</td>
<td>m²/g</td>
<td>65-75</td>
<td>ASTM D6556</td>
</tr>
<tr>
<td>STSA, Statistical Thickness Surface Area</td>
<td>m²/g</td>
<td>55-60</td>
<td>ASTM D6556</td>
</tr>
<tr>
<td>Oil Absorption Number</td>
<td>cm³/100g</td>
<td>90-105</td>
<td>ASTM D2414</td>
</tr>
<tr>
<td>Pellets Hardness (average)</td>
<td>g</td>
<td>&lt; 55</td>
<td>ASTM D5230</td>
</tr>
<tr>
<td>Pour Density</td>
<td>kg/m³</td>
<td>430-490</td>
<td>ASTM D1513</td>
</tr>
<tr>
<td>Sieve Residue, 325 mesh</td>
<td>%</td>
<td>&lt; 0,05</td>
<td>ASTM D1514</td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td>6-8</td>
<td>ASTM D1512</td>
</tr>
<tr>
<td>Moisture Content</td>
<td>%</td>
<td>&lt; 0,7</td>
<td>ASTM D1509</td>
</tr>
<tr>
<td>Ash Content *</td>
<td>%</td>
<td>18-22%</td>
<td>ASTM D1506</td>
</tr>
<tr>
<td>Sulfur Content **</td>
<td>%</td>
<td>2,0- 3,0</td>
<td>ASTM D1619</td>
</tr>
</tbody>
</table>

* The ash is mainly made up of SiO2 and ZnS
** The sulfur is mainly in the form of ZnS which is not active in the vulcanization process
Applications verified

» Grommets – 100% replacement, Volvo Cars
» Gasket – 100% replacement, Alvenius
» Calandered material – 50% replacement
» Truck bellow – 100 % replacement
» Rail shock absorbers – 100% replacement
» Industrial tyres - Asian customer

Recommendations

Recommendations for using recovered carbon black “EnviroCB™”:

» Works well to combine with virgin CB
» Works well in EPDM, SBR, NR, NBR.
» Works well with both sulphur and peroxid vulcanization.

For further assistance on formulations, please contact us.

Production methods

» Injection moulding
» Calandering
» Compression moulding

In Äsensbruk, Sweden, you can find the world’s first full scale CFC plant for recovering high quality carbon black.

Contact

For more questions and samples please contact:

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fredrik.olofosson@envirosystems.se

Free samples can be provided in small and medium sized containers. Big bag samples for sale.