RUBBOND RR90

TECHNICAL DATA SHEET

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Product
RUBBOND RR90

Classification
Reinforcing Phenolic Resin
Reinforcing Phenol Formaldehyde Resin

Composition
Cashewnut shell liquid (CSNL) modified phenol – formaldehyde (PF) resins with low free phenol & without hexa methylene tetramer.

Physical properties
Form : Red Brown Pastille
Sp. Gr. @ 25°C : 1.1 ± 0.05

Chemical Properties

<table>
<thead>
<tr>
<th>Product</th>
<th>RUBBOND RR90</th>
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<tbody>
<tr>
<td>Modifier</td>
<td>CNSL</td>
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<tr>
<td>Softening Point (°C, Metler 2°C/Min)</td>
<td>80 - 105</td>
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<tr>
<td>Moisture Content (KF, %)</td>
<td>0.5 Max</td>
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<tr>
<td>Ash Content (% at 950°C)</td>
<td>0.5 Max</td>
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<tr>
<td>Free Phenol (%)</td>
<td>&lt; 2</td>
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Applications
RUBBOND RR90 resin can be used as reinforcing agents for rubber compounds containing natural rubber (NR), styrene-butadiene rubber (SBR), butadiene rubber (BR), nitrile-butadiene rubber (NBR), ethylene propylene diene monomer (EPDM) rubber and chloroprene (CR) rubbers for the manufacture of treads and sidewalls of tires, window sealing strips of cars, rubber rollers, floor coverings, brake linings, oil-resistant seals, heels and soles of shoes, hard hose materials, and typewriter / paper platen rollers.

As a reinforcing material, the use of RUBBOND RR90 resin in rubber compounds can improve the hardness, tear resistance, abrasion resistance, tensile strength, reduced Mooney viscosity and prolonged scorch time properties. CNSL, tall oil and alkylphenol modified resins are expected to have better compatibility with rubber compounds so that accelerated filler dispersions with improved processability of rubbers could be achieved.

Use in Rubber Compounds
RUBBOND RR90 resin should be used along with another methylene donor, such as hexamethylenetetramine (HMT) or hexamethoxymethylmelamine (HMMM), in the rubber compounding applications. In order to achieve an optimum reinforcement in rubber compounds, these reinforcing resins should be added at a level of about 5 - 15 weight %.

In the rubber compound mixing process, to avoid pre-vulcanization and also, to achieve good scorching property, RUBBOND RR resins (as methylene acceptors) should be added during the first stage of mixing. The methylene donors, such as HMT or HMMM, should be added together with sulfur and accelerators at the final mixing stage.

Rubbond RR-90 resin is recommended as a processing aid and reinforcing resin for NBR compounds and adhesives. With the addition of hexamethylenetetramine, Rubbond RR resins impart maximum reinforcement and heat resistance properties in synthetic elastomers, especially NBR compounds and adhesives.

Packing
25 Kg (Net weight) in paper bags

Shelef Life
1 Year from the date of manufacture under the normal storage conditions

Storage
Store in a cool and dry storage area in original sealed container

Health and Safety Information
Before handling this material Refer to the Safety Data Sheet (SDS) prior to use.

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