

## Rhenogran® P91-40/NBR

Predispersed rubber chemicals and additives

### Function

Pre-dispersed aramid chopped fiber pulp for reinforcing natural, synthetic and thermoplastic rubber compounds

### Product description

Composition:	40% aramid fiber pulp (type Twaron) 60% elastomer binder (NBR) and additives
Appearance:	yellowish flakes
Density, 20 °C:	approx. 1.25 g/cm <sup>3</sup>
Physiological properties:	see safety data sheet

### Use

**Mode of action:** Rhenogran P91-40/NBR is made of aramid fiber pulp, pre-dispersed in a polymeric binder. Rhenogran P91-40/NBR is used as a high-grade reinforcing material for sulfur and peroxide cured rubber compounds and in thermoplastic rubbers, preferably based on NBR. Depending on the amount added, using Rhenogran P91-40/NBR enhances important technical rubber properties, e.g. the dimensional stability and green strength of the uncured compound. Various physical properties of the vulcanised rubber compound are improved significantly, sometimes many times over, such as elasticity modulus, modulus at low strain, compression resistance, flexural strength, hardness, abrasion, tear resistance, penetration resistance, shrinkage, and creep resistance. The vulcanizing rate is usually not affected.

To get maximum benefit from the aramid pulp, it is important to ensure that the highly fibrillated pulp is evenly distributed and dispersed in the rubber compound. This is usually impossible to achieve with pure aramid pulp. The pulp forms clusters and does not disperse completely.

**Processing:** Owing to the composition of its binder and the process in which it is prepared, Rhenogran P91-40/NBR is easy to incorporate into compounds and disperses well, thereby making it possible to benefit from the improvements to be obtained by using aramid chopped fiber pulp in industrial practice. Rhenogran P91-40/NBR is usually added to the compound in the internal mixer along with the fillers. The orientation of the fibers has to be taken into account.

**Dosage:** Usually 2-20 phr  
Even in the predispersed form, complete isolation of the fibers is impossible to achieve because of the extremely high branching and entanglement of the fiber pulps used. Complete dispersion of the pulp without residues and its effectiveness in the compound are largely dependent on the mixing method, the mixing time, the mixers used, the compound type and other processing steps.

Application: Molded and extruded articles, hose, seals, conveyor belting, rollers, printing sheets, etc. based on NBR. Rhenogran P91-40/NBR may also be used in other elastomers.

### **Packaging**

12,5 kg carton with PE bag inside on 375 kg skid.

### **Storage stability**

In original closed containers under cool and dry conditions 730 days from date of production.

### **Handling**

For instructions on handling Rhenogran P91-40/NBR, please refer to the current safety data sheet.

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