## Claims

1. NdBR wet masterbatch comprising

   - neodymium-catalysed polybutadienes having a high proportion of cis-1,4 units of > 95% and a low proportion of 1,2-vinyl content of < 1%, with narrow polydispersity of less than 3, with a Mooney viscosity (ML $_{1+4}$ 100°C) between 30 and 90 MU, with a high linearity index (ratio of solution viscosity to Mooney viscosity) of 3 to 10 mPas/MU and with a Mooney relaxation after 30 seconds of 2 to 12%, the latter being prepared by means of solution polymerization,
   - at least one carbon black, the carbon black having an iodine absorption number (ION) between 85 and 210 mg/g, measured to ASTM D1510-1304, and an oil absorption number (OAN) between 75 and 150 ml/100g, measured to ASTM D2414,

   and

   - an oil.

2. NdBR masterbatch according to Claim 1, characterized in that the oil has a glass transition temperature ($T_g$) between -80°C and -40°C and a level of extractables extracted with DMSO by the IP 346 method of less than 3% by weight.

3. NdBR masterbatch according to Claim 1, characterized in that the oil is a hydrogenated naphthenic oil wherein the sum total of polycyclic aromatics is less than 10 ppm and the amount of alpha-benzopyrenes is less than 1 ppm, measured by the Grimmer test.

4. NdBR masterbatch according to Claim 2 or 3, characterized in that the carbon black has an iodine absorption number between 95 and 210 mg/g, preferably between 100 and 160 mg/g, measured to ASTM D1510-1304, and an oil absorption number between 80 and 140 ml/100 g, preferably between 85 and 120 ml/g, measured to ASTM D2414.

5. NdBR masterbatch according to Claim 4, characterized in that at least 30 to 100 phr of carbon black is used, based on the total polybutadiene content.

6. NdBR masterbatch according to Claim 5, characterized in that the masterbatch comprises 0.1 phr to 30 phr of oil, based on the total polybutadiene.

7. NdBR masterbatch according to Claim 6, characterized in that more carbon black than oil is used.

8. NdBR masterbatch according to Claim 7, characterized in that the difference between phr of carbon black and phr of oil is ≤ 70.

9. NdBR masterbatch according to Claim 8, characterized in that the masterbatch factor (MF), determined by the formula

MF = Mooney viscosity of the neodymium-catalysed polybutadiene – (phr of carbon black – phr of oil) is ≤ 130.

10. NdBR masterbatch according to Claim 1, characterized in that the neodymium-catalysed polybutadiene has

- a Mooney viscosity (ML $_{1+4}$ 100°C) of 40 to 85 MU, preferably 44 to 65 MU,
- a linearity index (ratio of solution viscosity to Mooney viscosity) of 4 to 8 mPas/MU,
- a Mooney relaxation after 30 seconds of 4 to 8%,
- a polydispersity of < 2.2.

11. NdBR masterbatch comprising

- 100 phr of neodymium-catalysed polybutadienes,
- 50 to 70 carbon black,
- 3 to 10 phr of oil,
- 0.2 to 2% by weight of stabilizers,
- and optionally other assistants.

12. Process for producing the NdBR masterbatch according to any of the preceding claims, characterized in that it involves a solution mixing operation.

13. Process according to Claim 12, characterized in that the process comprises the following steps:

a) mixing a neodymium-catalysed polybutadiene prepared by a solution polymerization with a carbon black having an iodine absorption number (ION) between 80-210 mg/g, measured to ASTM D1510-1304, and an oil absorption number (OAN) between 40 and 150 ml/100 g, measured to ASTM D2414, the mixing being preceded by suspension of the carbon black in a liquid, preferably in water, hexane or water/hexane mixture,

b) adding an oil after this or before this or during this,

c) adding a stabilizer and

d) optionally adding other assistants,

e) then removing the liquid.

14. Process according to Claim 13, characterized in that the components can be mixed in any sequence in steps a)-c) and, if present, d).

15. Process according to Claim 14, characterized in that step a) is performed until homogeneity.

16. Process according to Claim 15, characterized in that, for step a), the neodymium-catalysed polybutadiene prepared is used dissolved in the polymerization solvent.

17. Process according to Claim 16, characterized in that a 10-30% carbon black-liquid suspension is used for step a).

18. Process according to Claim 17, characterized in that the solvent and liquid are removed by means of a stripping process or by means of evaporative concentration.

19. Use of the NdBR masterbatch according to any of the preceding claims for production of rubber compounds for use in tyres, conveyor belts, shoe soles.

20. Tyres comprising NdBR masterbatch according to any of the preceding claims.

21. Conveyor belts comprising NdBR masterbatch according to any of the preceding claims.

22. Shoe soles comprising NdBR masterbatch according to any of the preceding claims.

## CLAIMS

1. An invention not claimed in any divisional application.