

Title (en)

MULTI-LAYERED STEEL CORD FOR TYRE REINFORCEMENT

Title (de)

MEHRLAGIGER STAHLKORD FÜR REIFENARMIERUNG

Title (fr)

CABLE D'ACIER MULTICOUCHES POUR ARMATURE DE SOMMET DE PNEUMATIQUE

Publication

EP 1349983 A1 20031008 (FR)

Application

EP 01991875 A 20011221

Priority

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Abstract (en)

[origin: WO02053827A1] A multi-layered steel cord with an outer unsaturated layer, which can be used as a tyre crown reinforcement, comprising a core with a diameter d_0 surrounded by an intermediary layer (C1) of four or five wires ($N = 4$ or 5) with a diameter d_1 , all wound into a helix with a pitch p_1 . Layer C1 is surrounded by an outer layer (C2) of P wires with a diameter d_2 , all wound into a helix with a pitch p_2 , and with P having a value 1 to 3 less than the maximum number P_{\max} of wires that can be wound into a layer around layer C1. The inventive steel cord has the following characteristics (d_0 , d_1 , d_2 , p_1 and p_2 in mm): - (i) $0.1 \leq d_0 < 0.5$; - (ii) $0.25 \leq d_1 < 0.4$; - (iii) $0.25 \leq d_2 < 0.4$; - (iv) for $N = 4$: $0.4 < (d_0/d_1) < 0.8$; for $N = 5$: $0.7 < (d_0/d_1) < 1.1$; - (v) $4.8 \pi (d_0 + d_1) < p_1 < p_2 < 5.6 \pi (d_0 + 2d_1 + d_2)$; - (vi) the wires of layers C1 and C2 are wound in the same direction of twist. In addition, the invention relates to semi-finished articles and products made of plastic and/or rubber reinforced by such a multi-layered steel cord, notably radial tyres and belt bracing plies therefor.

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