

Title (en)
CARBON FIBER BUNDLE THAT DEVELOPS EXCELLENT MECHANICAL PERFORMANCE

Title (de)
KOHLENSTOFFFASERBÜNDEL MIT HERVORRAGENDER MECHANISCHER LEISTUNG

Title (fr)
FAISCEAU DE FIBRES DE CARBONE QUI DÉVELOPPE UNE EXCELLENTE PERFORMANCE MÉCANIQUE

Publication
EP 2441866 A1 20120418 (EN)

Application
EP 10786212 A 20100610

Priority
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Abstract (en)
Provided is a carbon fiber bundle for obtaining a fiber-reinforced resin having high mechanical characteristics. A carbon fiber bundle formed of single carbon fibers, each of which has no uneven surface structure of 0.6 μm or more in length extending in the longitudinal direction of the single fiber; which has an uneven structure having a difference in height (R_p -v) of 5 to 25 nm between the highest portion and the lowest portion of the surface of the single fiber and having an average roughness R_a of 2 to 6 nm; and which has a ratio of the major axis to the minor axis (major axis / minor axis) of a cross-section of the single fiber of 1.00 to 1.01, wherein a mass of the single fiber per unit length falls within the range of 0.030 to 0.042 mg/m; a strand strength is 5900 MPa or more; a strand elastic modulus measured by the ASTM method is 250 to 380 GPa; and a knot tenacity is 900 N/mm² or more.

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