

POLYPROPYLENE INSULATED DIRECT-CURRENT CABLE AND PREPARATION METHOD THEREFOR

ABSTRACT

The present invention relates to the field of cable insulation material preparation, and in particular to a polypropylene insulated direct-current cable and a preparation method therefor. A polypropylene insulated material for a direct-current cable according to the present invention includes the following components in parts by weight: 100 parts of PP, 5-15 parts of EPDM, and 1-5 parts of nano-MgO. The present invention solves the problem of poor dispersibility of EPDM particles on the PP matrix by improving the preparation process (increasing extrusion pressure and injection temperature, and cooling by stepwise temperature reduction). By adding an EPDM elastomer with a nanofiller, the toughness and twist resistance of the polypropylene insulated material are improved, and the interfacial polarization phenomenon between the EPDM elastomer and the polypropylene is alleviated, thereby ensuring that while mechanical properties are improved, electrical properties are also enhanced.