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(54) Title (EN): RADIATION CROSSLINKING EPDM COMPOSITION AND CABLE PRODUCED THEREBY

(54) Title (FR): COMPOSITION D'EPDM À RÉTICULATION PAR RAYONNEMENT ET CÂBLE AINSI PRODUIT

(54) Title (KO): 조사가교 EPDM 조성물 및 이것에 의해 제조된 케이블

(57) Abstract:

(EN): The present invention relates to a radiation crosslinking EPDM composition and a cable produced thereby. The radiation crosslinking EPDM composition is characterized by being formulated by adding 30-80 phr of EPDM, to which a crosslinking agent has not been added, 10-50 phr of a PO resin, 5-40 phr of a silicone rubber, 20-30 phr of a flame retardant, 5-10 phr of a crosslinking promoter, 1-5 phr of a crosslinking aid, 5-15 phr of an antioxidant, and 0.25 to 5 phr of a lubricant with respect to 100 wt% of the composition. The cable produced by the composition is characterized by being produced through: a step for performing primary kneading of the composition by means of a kneader; a step for performing secondary kneading of the primary kneaded composition by means of a roll mill; a step for extruding the twice-kneaded composition by means of an extruder, and then cutting to produce a pellet-shaped raw material; a step for extruding a cable of a selected length by means of the extruder by using the produced pellet-shaped raw material; and a step for crosslinking the cable using an electron beam accelerator.

(FR): La présente invention concerne une composition d'EPDM à réticulation par rayonnement et un câble ainsi produit. La composition d'EPDM à réticulation par rayonnement est caractérisée en ce qu'elle est formulée par l'ajout de 30 à 80 phr d'EPDM, auquel un agent de réticulation n'a pas été ajouté, de 10 à 50 phr d'une résine PO, de 5 à 40 phr d'un caoutchouc de silicone, 20 à 30 phr d'un agent ignifuge, 5 à 10 phr d'un promoteur de réticulation, 1 à 5 phr d'un auxiliaire de réticulation, 5 à 15 phr d'un antioxydant, et 0,25 à 5 phr d'un lubrifiant par rapport à 100 % en poids de la composition. Le câble produit par la composition est caractérisé en ce qu'il est produit par : une étape consistant à effectuer un malaxage primaire de la composition au moyen d'un pétrin ; une étape consistant à effectuer un malaxage secondaire de la composition malaxée primaire au moyen d'un laminoir ; une étape consistant à extruder la composition malaxée deux fois au moyen d'une extrudeuse, puis la découpe pour produire une matière première en forme de pastille ; une étape d'extrusion d'un câble d'une longueur sélectionnée au moyen de l'extrudeuse

à l'aide de la matière première en forme de pastille produite ; et une étape de réticulation du câble à l'aide d'un accélérateur de faisceau d'électrons.

(KO): 본 발명은 조사가교 EPDM 조성물 및 이것에 의해 제조된 케이블에 관한 것으로서, 조사가교 EPDM 조성물은 100중량% 중, 가교제가 첨가되지 않은 EPDM 30~80phr, PO 수지 10~50phr, 실리콘 고무 5~40phr, 난연제 20~30phr, 가교촉진제 5~10phr, 가교 조제 1~5phr, 산화방지제 5~15phr, 활제 0.25~5phr로 첨가되어 조성된 것을 특징으로 하고, 이 조성물에 의해 제조된 케이블은 상기 조성물을 반죽기에 의해 1차 혼련하는 단계; 상기 1차 혼련된 조성물을 롤 밀에 의해 2차 혼련하는 단계; 상기 2차레에 의해 혼련된 조성물을 압출기로서 압출시킨 후, 커팅하여 펠릿 형태의 원료를 제조하는 단계; 상기 제조된 펠릿 형태의 원료를 이용하여 압출기로서 설정 길이의 케이블로 압출하는 단계; 상기 케이블을 전자선 가속기로 가교하는 단계에 의해 제조된 것을 특징으로 한다.

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