

(12) International Application Status Report

Received at International Bureau: 13 September 2018 (13.09.2018)

Information valid as of: 13 February 2019 (13.02.2019)

Report generated on: 23 September 2019 (23.09.2019)

(10) Publication number:

WO2019/050253

(43) Publication date:

14 March 2019 (14.03.2019)

(26) Publication language:

Korean (KO)

(21) Application Number:

PCT/KR2018/010292

(22) Filing Date:

04 September 2018 (04.09.2018)

(25) Filing language:

Korean (KO)

(31) Priority number(s):

10-2017-0114596 (KR)

(31) Priority date(s):

07 September 2017 (07.09.2017)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

C08L 23/16 (2006.01); **C08L 83/00** (2006.01); **C08J 3/24** (2006.01); **C08J 3/28** (2006.01); **C08K 9/06** (2006.01); **C08K 3/22** (2006.01); **C08K 5/00** (2006.01); **B29B 9/12** (2006.01); **B29B 9/10** (2006.01); **H01B 13/14** (2006.01)

(71) Applicant(s):

KYUNGSHIN CABLE [KR/KR]; 567, Yeongok-gil, Ipjang-myeon, Seobuk-gu Cheonan-si Chungcheongnam-do 31026 (KR) (*for all designated states*)

(72) Inventor(s):

PARK, Seong Geun; #401-201, Yonggok Dongil HighVill HighCity, 34, Yonggok 5-gil, Dongnam-gu Cheonan-si Chungcheongnam-do 31183 (KR)

PARK, Cheol Hyun; 27, Seobu 18-gil, Seobuk-gu Cheonan-si Chungcheongnam-do 31135 (KR)

(74) Agent(s):

MAJOR PATENT AND LAW FIRM; (3M Tower, Yeoksam-dong) the third floor, 10, Teheran-ro 20-gil Gangnam-gu Seoul 06235 (KR)

(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.

International search report:

Received at International Bureau: 10 December 2018 (10.12.2018) [KR]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

European Patent Office (EPO) : AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM