

Title (en)

METHOD OF TREATING THE SURFACE OF AN ARTICLE COMPRISING SILICON WHICH IS CROSS-LINKED BY POLYADDITION

Title (de)

VERFAHREN ZUR BEHANDLUNG DER OBERFLÄCHE EINES GEGENSTANDS MIT DURCH POLYADDITION VERNETZTEM SILIZIUM

Title (fr)

PROCEDE DE TRAITEMENT DE SURFACE D UN ARTICLE COMPORTANT DU SILICONE RETICULE PAR POLYADDITION

Publication

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Application

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Priority

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Abstract (en)

[origin: FR2840826A1] A method of surface treating an article comprising crosslinked silicone by plasma jet using a homogeneous atmospheric plasma generated by a plasma projection equipment comprising a rotating head comprising one or more plasma nozzles eccentric with respect to the axis of rotation and each capable of generating a plasma jet with an axis parallel to the axis of rotation. The crosslinked silicone is a polyorganosiloxane (POS) crosslinked by polyaddition of -SiH groups onto -Si-alkenyl (preferably vinyl) groups in a silicone preparation comprising: (1) one or more POS with -Si-alkenyl (vinyl) groups; (2) one or more POS with -SiH groups; (3) one or more metallic (preferably platinum) catalysts; (4) optionally one or more POS resins bearing -Si-alkenyl groups; (5) optionally a crosslinking inhibitor; (6) optionally one or more adhesion promoters; (7) optionally one or more mineral fillers; and (8) optionally one or more functional additives to give specific properties. It is disclosed that the equipment used to carry out the treatment is described in US-B-6265690 and is commercially available under the name Plasma Treat (RTM). Independent claims are included for (1) a means of producing an crosslinked silicone article treated by the claimed method by forming a silicone element from the liquid silicone preparation above, crosslinking, surface treating at least part of the surface of the crosslinked element and repeating the first two steps, (2) a method of assembling the crosslinked silicone articles by applying a liquid glue to one or more surfaces, (3) a crosslinked silicone elastomer coating obtainable by the claimed method which has an adhesion force measured by a peel test of 2.7 N/cm, more preferably 2.8 N/cm and most preferably 3-10 N/cm.

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