

Title (en)

DIFFUSION BARRIER LAYER WITH A HIGH BARRIER EFFECT

Title (de)

DIFFUSIONSSPERRSCHICHT

Title (fr)

COUCHE BARRIERE DE DIFFUSION AVEC EFFET BARRIERE IMPORTANT

Publication

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Application

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Abstract (en)

[origin: US6686302B1] The invention relates to an organic diffusion barrier layer (58) applied to a substrate (44). Said barrier layer has an apolar skeletal structure and a high barrier effect with respect to volatile gases, vapors and liquids. The diffusion barrier layer (58) consists of a hydrocarbon polymer that is produced by means of plasma polymerization. It respectively contains 0.01-6 at % of at least one element from the group consisting of oxygen, nitrogen, fluorine, bromine, boron and silicon, whereby the total amount of said elements does not exceed 12 at %. The barrier effect of the diffusion barrier layer (58) is produced by means of at least one pulsed or continuous DC magnetron sputtering source plasma (26) or by means of inductively excited, pulsed or continuous microwave discharge (20).

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