

Title (en)
WEAR-INDICATING FILAMENT

Title (de)
VERSCHLEISSANZEIGEFASER

Title (fr)
FILAMENT INDICATEUR D'USURE

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Application
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Abstract (en)
[origin: WO2004002267A1] The invention relates to a wear-indicating filament for use in a brush, comprising a central axis, a core extending along the central axis, said core being covered by a layer having a pre-determined resistance to wear, said layer wearing away over a pre-determined period of use dependent on its resistance to wear and exposing at least a part of the core after said period. The layer comprises a material which absorbs relatively little water and the core comprises, seen in a cross-section, at least two segments in an asymmetrical arrangement along the central axis of the filament, which segments have a mutually different absorption of water and show a difference in expansion when the layer has worn away and the core is exposed to water. When the at least two segments of the cross-section of the filament become exposed to water, the segments show a difference in absorption of water and a difference in expansion resulting from this absorption. The difference in expansion causes the filament to bend, which will be noticed by the user visually and during use of the brush on the teeth. This provides a clear indication that the brush should be replaced, because the bent filaments give a warning to the user in a visual manner and in a tactile manner.

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