

Title (en)
DIFFRACTIVE SAFETY ELEMENT

Title (de)
DIFFRAKTIVES SICHERHEITSELEMENT

Title (fr)
ELEMENT DE SECURITE A DIFFRACTION

Publication
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Application
EP 02745339 A 20020531

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Abstract (en)
[origin: WO02100653A1] The invention relates to a safety element (2), consisting of an identifiable reflective, optically variable surface design (3) made of a mosaic of optically active surface elements (13) which can be visually recognised from predetermined directions of observation and which is embedded in a layered composite made of plastic. At least two of the mosaic surfaces (11; 12) of the surface design (3) are arranged next to each other in the mosaic of the surface design (3) and comprise microscopically fine light diffractive relief structures (4). The spatial frequencies of the relief structures in the mosaic surfaces (11; 12) have values consisting of predetermined spatial frequency ranges whereby the relief structures of the mosaic surfaces (11, 12) diffract visible monochromatic light parallel to the normal (32) when beams of light are incident with respect to the plane of the layered composite at an inclined angle in relation to the normal. The relief structures of the mosaic surfaces (11; 12) are different in spatial frequency only, the difference in the spatial frequencies of the relief structures in the neighbouring mosaic surfaces (11; 12) being 40 lines/mm max.

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