

Title (en)
AMORPHOUS OR MICROCRYSTALLINE ALLOYS BASED ON ALUMINIUM

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Application
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Abstract (en)
[origin: US4595429A] The present invention relates to substantially amorphous or microcrystalline aluminium-base alloys. Such alloys are of the following chemical composition: $\text{Al}_a\text{M}_b\text{M}'_c\text{X}_d\text{Y}_e$ in which: $50 \leq a \leq 95$ atom % M representing one or more metals of the group Mn, Ni, Cu, Zr, Ti, V, Cr, Fe and Co with: $0 \leq b \leq 40$ atom % M' representing Mo and/or W with: $0 \leq c \leq 15$ atom % X representing one or more elements of the group Ca, Li, Mg, Ge, Si and Zn, with: $0 \leq d \leq 20$ atom % Y representing the inevitable production impurities such as O, N, C, H, He, Ga, etc . . . , the proportion of which does not exceed 3 atom %. The alloys according to the invention can be produced by means of known methods in the form of wires, strips, bands, sheets or powders in the amorphous or microcrystallized state, the grain size of which is less than 1000 nm, preferably 100 nm. They may be used either directly or as means for reinforcing other materials, or as surface coatings which are resistant to corrosion or wear.

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Citation (examination)

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