

# ALIEN PROPERTY CUSTODIAN

## LIGHT METAL ALLOYS HAVING A PREPONDERATING PERCENTAGE OF ALUMINIUM

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Light metal alloys having a preponderating percentage of aluminium are known in most different compositions. Alloys of this kind having a high percentage of silicon have proved to be of advantage for certain kinds of bearings. Alloys with a high percentage of iron also show excellent sliding properties, if the aluminium-iron crystals, present in the structure of the casting in the form of coarse leaves, are crushed by a following heat treatment. The small iron-aluminium-crystals present after the heat treatment cause the excellent sliding properties. In their original condition of casting such aluminium alloys having a high percentage of iron are not adapted to be used for the manufacture of bearings.

The object of the present invention is to provide an aluminium alloy which is particularly adapted to be used for bearing purposes. Besides 2-20% of cadmium the alloy still contains 0,3-1% of iron.

By the addition of a small quantity of iron, the aluminium-iron-crystals produced, obtain the form of fine, thin needles. The alloy, therefore, may, without further treatment, be used as bearing metal.

The contents or percentage of cadmium, furthermore, has the effect that bearings produced

of the alloy show particularly good sliding properties and, moreover, emergency running properties also which are peculiar to lead-bronze-bearings.

5 Instead of cadmium tin or lead also may be used in the contents stated as far as alloying of same is possible. Of course, these metals also may be present together.

10 As further alloying constituents, besides cadmium, tin or lead respectively, magnesium, silicon, zinc, manganese or copper also may be present in the contents stated.

A composition of

	Per cent
15 Cadmium -----	2 -20
Magnesium -----	10 - 0,5
Silicon -----	10 - 0,5
Iron -----	0,3- 1
Rest, aluminium.	

20 has proved to be of particular advantage.

### Example

25 5% of cadmium, 4% of magnesium and 1% of silicon are molten together with 90 parts of aluminium, whereupon 0,3-1% of iron are added to the melt.

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