

Title (en)

A composition containing silica sol, its preparation method, and galvanized self-lubricating metal material using the composition

Title (de)

Zusammensetzung mit Kieselsäurenol, Verfahren zu ihrer Herstellung und die Zusammensetzung verwendendes verzinktes selbstschmierendes Metallmaterial

Title (fr)

Composition contenant un sol siliceux, son procédé de préparation et matériau métallique autolubrifiant galvanisé utilisant la composition

Publication

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Application

EP 09002302 A 20090218

Priority

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- CN 200810126608 A 20080617

Abstract (en)

The present invention provides a composition containing trivalent chromium compound, silica sol, organic carboxylic acid, and water, and having pH of 4-7. The present invention further provides a galvanized self-lubricating metal material comprising a galvanized metal substrate and a self-lubricating coat on the galvanized metal substrate, wherein the self-lubricating coat is produced by curing a self-lubricating composition which is the composition according to the present invention. As the self-lubricating coat is formed by curing the composition containing silica sol in the present invention, the galvanized self-lubricating metal material in the present invention not only has very high lubricating performance and corrosion resistance, but also dramatically lowers requirement for galvanized metal substrate, and allows use of hot dipped galvanized plate with high surface roughness fluctuation and low cost as substrate. Therefore, the inventive product has improved market competitiveness and economic benefits, and represents development trend of self-lubricating plate.

IPC 8 full level

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Citation (applicant)

- JP 2005023372 A 20050127 - DIPSOL CHEM CO LTD
- WO 02061174 A1 20020808 - HENKEL CORP [US], et al
- WO 2006132426 A2 20061214 - MURATA CO LTD [JP], et al
- CHEN YIHONG: "Study on Preparation and Properties of Polyurethane Acrylate", JOURNAL OF XIAMEN UNIVERSITY(NATURAL SCIENCE, vol. 45, no. 3, pages 370 - 374
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Citation (search report)

- [X] JP 2005023372 A 20050127 - DIPSOL CHEM CO LTD
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- [X] WO 2006132426 A2 20061214 - MURATA CO LTD [JP], et al
- [A] GB 2335930 A 19991006 - NIPPON PAINT CO LTD [JP]
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EP3246429A1; CN115851362A; WO2012143934A3; WO2023121213A1

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