# United States Patent [19]

**Mitrofanova et al.**

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[54] **ANTIFRICTION PASTE AND SOLID ANTIFRICTION COATING PREPARED FROM SAME**


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[52] **U.S. Cl.** ..... **252/12;** 252/26; 252/28; 252/30

[58] **Field of Search** ..... 252/26, 12, 28, 30



[56] **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|---|---|---|---|
| 2,581,301 | 1/1952 | Saywell | 252/12 |
| 2,700,623 | 1/1955 | Hall | 252/12 |
| 3,756,982 | 9/1973 | Korshak et al. | 252/12 |
| 3,776,845 | 12/1973 | Watanabe et al. | 252/12 |
| 3,808,130 | 4/1974 | Schiefer et al. | 252/12 |
| 3,838,048 | 9/1974 | Hedge et al. | 252/12 |
| 3,839,208 | 10/1974 | Hermann et al. | 252/12 |
| 3,909,424 | 9/1975 | Clark | 252/12 |
| 3,932,286 | 1/1976 | Pylaev et al. | 252/12 |
| 4,055,503 | 10/1977 | Anselment et al. | 252/12 |
| 4,115,283 | 9/1978 | Needham | 252/12 |

FOREIGN PATENT DOCUMENTS

290036 12/1970 U.S.S.R. ..... 252/12

OTHER PUBLICATIONS

U.S.S.R. Inventors Certificate No. 228,231, Mar. 15, 1966.



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[57] **ABSTRACT**

An antifriction paste containing epoxy resin, molybdenum disulphide, graphite, aluminum, copper, alumosilicate and polyethylenepolyamine, the components being used in the following proportions (in parts by weight):

epoxy resin: 40–80
molybdenum disulphide: 15–30
graphite: 10–15
aluminum: 5–10
copper: 5–10
alumosilicate: 8–15
polyethylenepolyamine: 5–10.

The antifriction paste may also contain a solvent for the epoxy resin in an amount from 5 to 30 parts by weight. This paste is suitable for both small-and large-size friction assemblies. On the basis of this paste a solid lubricating coating with high antifriction performance is produced. Thus, a coefficient of sliding friction $f_{fr.}$ at a sliding speed $V=0.06$ m/s at a load $P=10$ kgf/cm$^2$ is 0.2; linear wear rate $I_h$ under the same conditions is $1.0.10^{-9}$, and service life is as high as 500 km.


**10 Claims, No Drawings**