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LUBRICANT

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2 Claims. (Cl. 252—25)

The invention relates to the kind of lubricants that contain finely-divided solids dispersed in them and consists in the discovery I have made that refined zinc sulphide, finely ground and well dispersed in a suitable oily base, and to the extent of about 10%, greatly enhances the lubricating qualities of the latter. Zinc sulphide can be reduced to extremely fine powder and for the purposes of this invention should be as fine as practical in order that it may retain its dispersed condition in the base. The latter may be composed of refined cylinder stock, mineral oils, animal oils or mixtures thereof such as are customarily used as lubricants and usually contain some sulphur to intensify the film strength. The zinc sulphide is thoroughly and intimately mixed into such a medium in any suitable mixing apparatus.

As an example of the invention, the following formula is given:

	Per cent
Refined cylinder stock	80
Lead naphthenate	10
Zinc sulphide	10

Use of the above compound in practical tests showed an average wear of the bearing surfaces of about 3.25 units whereas the same compound without the zinc sulphide component resulted in a wear of 6.50 units, indicating an improvement in favor of the compound and resulting from the presence of the zinc sulphide of 50%. Greater proportions than about 12% not only fail to yield advantage but are harmful, while less than 2½% do not show appreciable gain. Consistently good results are obtained from the use of about 10% which is preferred.

It will of course be understood that the oily base is compounded with reference to the general characteristics required of the product and that so long as the benefit of the zinc sulphide is retained by keeping the content of that ingredient within the limits stated and preferably about 10%, the other components are subject to variation in kind or quantity to adapt the lubricant to the nature of the work for which it is intended, either as oil or grease.

It is found that in the use of this compound the abrasive effect incident to the solid particles in the oil film is limited to the development of a certain desirable degree of polish of the bearing surfaces and does not persist or continue to any appreciable extent when that desirable surface condition has been attained, being therefore a practical lubricant. It is also white in color, which color persists even after long, continued use, not turning black with wear which makes it especially desirable from the point of view of cleanliness.

I claim:

1. A lubricant of the class consisting of oils and greases containing finely-divided zinc sulphide, dispersed therein to an extent of not over 12% by weight, and characterized by its freedom from ingredients which would cause progressive abrasive action on the wearing surfaces to which it is applied.

2. A lubricant of the class consisting of oils and greases, characterized by its freedom from ingredients which would cause progressive abrasive action on the wearing surfaces to which it is applied, and comprising an oily base having approximately 10% by weight of finely-divided zinc sulphide dispersed therein.

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