SYNTHESIS AND CHARACTERIZATION OF NANOGREASE FOR AUTOMOTIVE WHEEL BEARING APPLICATION

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**Abstract**

With increasing number of vehicles, the technical problems of various automotive systems have also been increased. It results in shorter life span of the automotive system and also discomfort ride of a vehicle which has direct impact on maintenance cost of the vehicle. Grease is an important element in automotive wheel bearing lubrication. Considering emerging need of high load carrying capacity and viscosity, a new kind of bearing lubricants is required.Nanogrease has potential to fulfil the emerging needs of lubrications. Now a day, there is scope and also challenge to develop new grease for specific application**.** In this paper, samples of nanogrease is synthesized & characterized for thermal, tribological, rheological properties. The results of characterization are compared with conventional greases and suitable nanogrease has been suggested for automotive wheel bearing application.

***Keywords*:** Nanogrease, CaCO3 nanoparticles, Fe2O3 nanoparticles, Nano-tribology