

## Medium and high temperature lubricant greases for heavy-duty slipping friction, and rolling units

### Development overview (project idea)

Scope of application	Transport, steel making industry, mechanical engineering
Abstract	Improving the wear resistance of parts due to the use of lubricant greases
Brief description	Medium-temperature lubricant greases that are designed for heavy-duty low-speed and high-speed slipping friction and rolling units operating at temperatures up to 250 ° C, high-temperature lubricants – for heavy-duty low-speed sliding friction units operating at temperatures up to 400 ... 450°C and in short-duration mode up to 800°C
Development stage	An experimental sample has been created and tested in real conditions at industrial enterprises of the region
Term of commercialization	24 months
Possible sources of investment	Costs of economic entities of the relevant industry

### Developer information

Donbass State Mechanical Engineering Academy  
+38 (0626) 416809  
[dgma@dgma.donetsk.ua](mailto:dgma@dgma.donetsk.ua)  
dgma.donetsk.ua

Avdeenko Anatoliy Petrovich, Kandidat of Chemical Sciences, Professor.  
Konovalova Svitlana Oleksiivna Kandidat of Chemical Sciences, Associate Professor.  
The researchers' field of research is N-substituted 1,4-quinoneimines, process fluids, lubricants

### Expected result from implementation.

Economic result – anti-wear properties of medium-temperature lubricants in comparison with the "Litol-24" lubricant are 9-13 times higher, which increases the service life of friction pairs by the corresponding number of times. Compared with foreign analogues, high-temperature lubricants are operational at higher temperatures, the duration of the lubricating action for a single application and at the same time anti-wear properties are 2-2.5 times higher

Environmental result – lubricants withstand the action of aggressive environments and are not washed off with water, which reduces environmental pollution