

## ZHRO RAILWAY GREASE



### Areas of Application

The grease is a special lubricant to be used for the friction units with rolling elements bearings of locomotives, diesel trains, and multiple-unit trains

### Specification

The grease is a homogeneous mass having a color ranging from light yellow to brown; a dropping temperature of 190 °C; a penetration of 190–250 m·10<sup>-4</sup> at a temperature of 25 °C; a viscosity of 1650 Pa·s at a temperature of -30 °C and an average gradient of strain rate of 10 s<sup>-1</sup>; a strength limit of 480 Pa at 50 °C; a welding load of 2600 N at a temperature of (20 ± 5) °C; a flashpoint in closed crucible of 183 °C; and an ignition temperature over 250 °C

### IPR Protection

IPR3

### Advantages

Due to improved mechanical stability, low-temperature, tribological, protective and environmental properties and operability in the temperature range from -50 °C to +120 °C, the grease leaves behind Both domestic and best foreign counterparts based on petroleum oils thickened with lithium soaps of fat acids of expensive castor oil

### Stage of Development.

#### Suggestions for Commercialization

IRL5, TRL6

A prototype is manufactured and tested at customer's site; support in the design works and production organization is provided upon request

### Contact Information

Grygorii S. Pop, Institute of Bioorganic Chemistry and Petrochemistry of the NAS of Ukraine; +38 044 559 60 59, e-mail: gpop@bpci.kiev.ua