



**HOT/WARM FORGING,  
COLD FORGING & EXTRUSION LUBRICANT**

***High Quality Lubricants for Automotive & Industrial***





## FORGING LUBRICANTS

### Tailor-made solutions for each application

Prima's forging lubricants bring value throughout forging operations. Through the **LUBE FORGE®** product portfolio, Prima offers an extensive line of lubricants for hot, warm and precision forging processes. These products are designed to perform under extreme temperatures and pressure. In addition, Prima offers synthetic non graphite products specifically formulated to replace graphite products, while providing lubrication and protection to tooling on even the toughest forgings. **LUBE FORGE®** die lubricants and release agents are outstanding performers under the most extreme conditions of temperature and abrasion. Extended die life, Enhanced part quality, increased productivity and efficiency.

### Graphite Containing, Water miscible

Product Name	Solid Content	Recommend Dilution ratio	Features and Benefits
Lube Forge 126A	21%	10 - 20 times	Effective for wide range of sizes and forms with good lubricity; Die lubrication for Hot and warm forging
Lube forge 130	32%	20 - 30 times	low cost, middle performance and high solid lubricant
Lube forge 132	25%	10 - 30 times	Good adhesion design for high loading forging operation, big part and Hammer machine
Lube Forge 136A	24%	15 - 30 times	New generation of high performance with wide range of application. Suitable choice where extreme die temperature and wetting performance
Lube Forge 134	29%	10 -30 times	New generation of high performance, excellent wetting and smooth adhesive lubricant film on the high temperatures die faces up to 420 °C suitable for Hydraulic Press Machine, high tool temperature
Lube Forge 135	29%	10 -25 times	Water base of fine particle garphite plus special additive, suitable for die and precision forging and deep gravity part, reduce molding load, optimum metal flow
Lube Forge 138A	24%	10-25 times	Contains the finest size graphite. Provides the best forging performance, productivity and die life. Has widest range of application to help reduce not good part or reject and increasing the die life
Lube Forge 140	21%	10-25 times	Graphite in Oil/Water Emusion. Oil gives carrying properties on hot dies, helping to give total die coverage on difficult to spray configurations.
Lube Forge 141	29%	3-10 times	Die lubricant for CVJ Warm Forging, mains the industry benchmark of performance. Has widest range of application of warm forging
Lube Forge 142W	23%	3-10 times	Billet coating for warm ferrous forging, excellent anti-oxidantion without phoaphorus material

### Graphite free, Water miscible

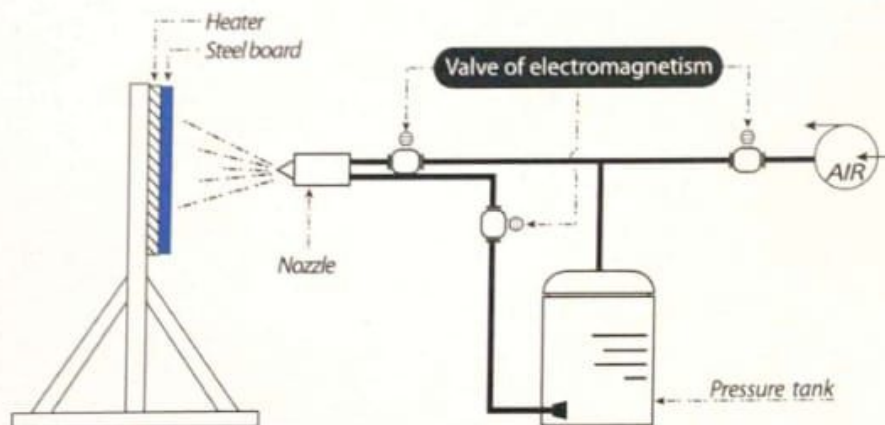
Product Name	Solid Content	Recommend Dilution ratio	Features and Benefits
Lube Forge 203	24%	10 - 20 times	graphite free lubricants with good heat resistance and less build-up. Enhance product quality and die life, good for recycle use.
Lube forge 204	24%	20 - 30 times	graphite free lubricants, Sythetic basis plus special additive to increase extreme metalflow application
Lube forge 205	25%	10 - 30 times	Suitable for wide range of forging application with heat resistance and less build-up, Good for recycle use.
Lube Forge 206	24%	15 - 30 times	graphite free lubricant with good film formation on wide die temperature range and less build-up. Enhance product quality and die life. Good for recycle use

### Graphite containing, mineral oil containing

Product Name	Solid Content	Recommend Dilution ratio	Features and Benefits
Lube Forge 301	20%	-	Suitable for die forging and hot extrusion of steel and non-ferrous alloys. Special collid graphite allow extrusion process with long flow path
Lube Forge 302G	10%	-	Suitable for die forging and hot extrusion of steel and bass, especially for the production of all types of hollow parts.
Lube Forge 305PX	25%	-	Suitable for die forging Hammers and hot extrusion of steel, hollow extrusion of brass alloys. High viscous base oil and graphite free plus apECIAL additive for the use in the upper tool temperature range.



## 1. Adhesion assay (adhesion evaluation to steel board)

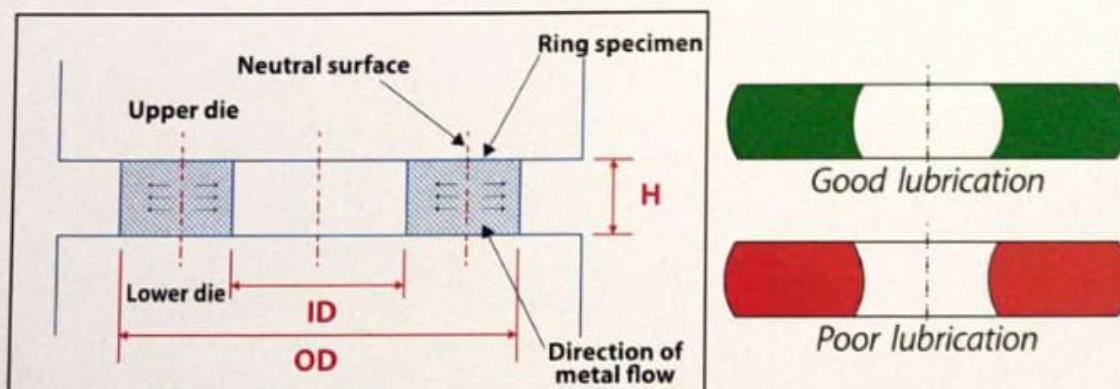


### Testing condition

ITEM	Example of usage
Steel board material	SKD-61 (250x80x15mm)
Temperature of steel board	150, 200, 250, 300, 350 °C
Distance of nozzle	200mm
Exhalation pressure	1kgf/cm <sup>2</sup>
Amount of exhalation	20cc
Dilution ratio	10 times
Spreading time	1sec

## 2. Friction Test

The ring compression test is friction test, These dies are held tooling setup installed in a 150t hydraulic press. The tooling has capability for heating the die up to 500 °C, and billets be heated up to 1,000 °C. The change in the inner diameter and the high dimensions during the test were computed and superimposed on the friction calibration chart to determine the friction level.



OD : outer diameter, ID : Internal diameter, H : height

