



WIRE DRAWING  
COLD FORMING  
SHEET METAL FORMING  
ROLLING

# METAL FORMING LUBRICANTS



**PETROFER**  
industrial oils and chemicals

## INTRODUCTION

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Forming technology ranges from forming oils, emulsions, dispersions and synthetic products to pastes, stamping and embossing oils that can be evaporated without thermal residues. The extensive product range includes high quality forming lubricants for wire drawing, solid forming, fine cutting, punching, piercing, perforating, deep drawing and rolling.

Our customer partnership approach in forming technology has helped our clients with:

- high economic efficiency
- increased system service life of water dilutable products
- high quality products with process optimised, tribological wear properties

All products are specially tailored to the application and the special criteria of the forming process. In this way PETROFER guarantees highest productivity in metal forming operations.

“*customised,  
economical,  
sustainable*”

## OUR PRODUCT RANGE

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### WIRE DRAWING

DRAWLUB C are high performance copper wire drawing fluids for a wide range of applications from rod sizes to super fine wire. ISOLUBE 4600 are semi-synthetic as well as conventional aluminium wire drawing neat lubricants, for a variety of machine technologies and applications. DRAWLUB ST are water dilutable lubricants for intermediate and fine wire drawing operations on ferrous metals. DRAWLUB ST products are suitable for bare wire as well as for galvanised, coated ferrous metals. ISOFORM 900 are chlorine free, wire and profile drawing neat oils, predominantly designed for ferrous metals, high strength steel alloys up to spring steel. DRAWLUB TD are chlorine containing, multi-functional wire drawing neat oils, predominantly designed for stainless steel wires as well as for nickel alloy and titanium wire.

### COLD FORMING

Other ISOFORM 900 series products are for cold forming in the most demanding applications. The ISOFORM 9000 range are pigment containing, so called Sol-Gel lubricants, preferably applied in cold and semi-hot forging processes.

### SHEET METAL FORMING (FINE BLANKING AND DEEP DRAWING)

DRAWLUB S are fine blanking and sheet metal forming neat lubricants, free from chlorine. DRAWLUB S optimises the value-added chain in manufacturing lines for car driveline technology and chassis components. DRAWLUB R are ester based metal working neat lubricants with a very low tendency to oil evaporation, being versatile, environmentally friendly, suitable for micro-lubrication. DRAWLUB TD are chlorine containing, multi-functional metal forming neat lubricants, suitable for forming operations on stainless steel, nickel alloy and titanium components. DRAWLUB 3000 are versatile metal forming specialities for demanding applications.

### SHEET METAL FORMING (BLANKING AND STAMPING)

ISOLUBE V 70 product lines are a wide range of self-evaporating and thermally vaporisable blanking, stamping, and deep drawing fluids, used in manufacturing lines for heat exchangers, radiator and automotive thermal management technology. Excellent odour, VOC free, balanced lubricating properties, compatible with refrigerants (CFC, R134a). ISOLUBE 3400 are economical, low viscosity metal forming neat lubricants, versatile, easy to clean, suitable for micro-lubrication.

### ROLLING

ISO-MILL product lines are customised rolling fluids, especially for wire rod production, on continuous casting and rolling mills. Suitable for a wide range of metals produced in tube production on cold pilgrim mills, and cold profile roll forming mills. ISOLUBE CR and ISOADD are tank-side additives to optimise lubrication properties and surface finish onsite.



## YOUR BENEFITS

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### REDUCTION OF TOTAL COST OF OWNERSHIP

- high economic efficiency: reduced capital commitment thanks to versatile application possibilities for materials and processes
- optimised consumption, longer tool and bath life
- increased system service life of water dilutable products thanks to use of modern combinations of active ingredients
- reduced consumption due to high evaporation resistance at low viscosity
- potential elimination of subsequent component cleaning and separate rinsing steps due to the excellent washing and rinsing performance
- easy to use products

### HIGHER PROCESS EFFICIENCY AND RELIABILITY

- high quality products with process optimised, tribological wear properties: oil is only used where required, providing energy and material savings
- formulation uses advanced technical raw materials providing exceptional tool life
- increased workplace and plant safety

### IMPROVEMENT OF THE ENVIRONMENTAL BALANCE

- sustainable, environmentally friendly and innovative products that exceed legal requirements
- boron and formaldehyde free products
- VOC free products according to the 31st BImSchV
- lower environmental impact through consumption optimised products
- REACH compliant formulations

## APPLICATION EXPERTISE

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### INDUSTRIAL SECTORS USING OUR PRODUCTS

- aerospace, defence and marine
- agricultural and construction equipment with supply chain
- automotive and components supply chain
- consumer, electronics, white and brown goods
- machine tool OEM's
- medical equipment
- power generation
- pressings, extrusion, hydroforming and fasteners
- public transportation

### APPLICATION EXAMPLES

DRAWLUB C series is used worldwide as wire drawing products especially for copper and copper alloys. ISOLUBE 3400 series are special low viscosity products for blanking, stamping and deep drawing of typical components such as radiator matrix, air conditioning cores, electric motor laminations and furniture fittings. They could be used for light duty and medium duty punching and metal forming operations such as hinges, locks, mobile phone components.

### HIGHLIGHT PROJECT

ISOFORM semi-synthetic cold forging oils from PETROFER are used globally on ferrous metals and non-ferrous metals. The high flash point and the significant proportion of high temperature stable components, provide a low mist and smoke free environment compared to neat oil, which results in significantly less sensor faults with laser controlled tools. The product also shows significantly fewer residues on component surfaces, compared to conventional forming lubricants. Typically after processing the component temperature is  $> 400\text{ }^{\circ}\text{C}$ , by using ISOFORM products significant cost reductions for cleaning processes are achieved, and the topographic surface measurement of the component is improved.



Copper wire drawing



Blanked and formed aluminium automotive fasteners

PETROFER is a system supplier and offers perfectly coordinated chemistry along the entire production process route.

1

HEAT TREATMENT

2

DIE-CASTING AND FORGING

3

FIRE RESISTANT HYDRAULIC FLUIDS

4

METALWORKING FLUIDS

5

METAL FORMING LUBRICANTS

6

INDUSTRIAL LUBRICANTS

7

INDUSTRIAL CLEANERS

8

RUST PREVENTATIVES

9

PAPER CHEMICALS

10

SUPPORT

For further information please visit or contact through our website  
[www.petrofer.com](http://www.petrofer.com)



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