



**MetalFlow**<sup>®</sup>

# Forming Lubricants

# Our technology, your solution

METALFLOW products for metal forming processes are the result of decades of experience in the field of design, development, and manufacturing of technical solutions for the metal industry.

The METALFORM product family is comprised of medium and high-pressure additives specific for each operation that decrease the friction coefficient and ensure a complete lubrication level to guarantee permanent plastic deformation.

Technical solutions with technological character that incorporate the latest advances in forming lubricant formulations for process optimization, helping our clients with their waste management and allowing them to comply with the most demanding environmental standards.




Specific formulas for extrusion, trimming, stamping, punching, and all types of forming operations.

## Highlights:

- High power lubricant.
- Meet different environmental and safety standards.
- Less product consumption.
- Cycle times reduction.
- Optimal finish and a high rust-protection level of the piece.



## Deep drawing and stamping

 <b>VANISHING LUBRICANTS</b>	Description	Aluminum Alloys	Copper Alloys	Steel	Viscosity cST 40°C (mm <sup>2</sup> /s)
<b>METALFORM V 104</b>	Vanishing lubricant for stamping operations.	●	●	●	1,4
<b>METALFORM V 128</b>	Non-flammable vanishing solutions*. Recommended for food and beverage packaging production.	●	●	●	1,5
<b>METALFORM V 490</b>	Vanishing lubricant for hard steel cutting.			●	1,4
<b>METALFORM V 115</b>	Vanishing products for all types of deep drawing and stamping operations.	●		●	1,9
 <b>OIL BASED</b>					
<b>METALFORM P 15005</b>	Bleached pure and highly refined oil. Recommended for extremely severe steel deep drawing processes.	●	●	●	150
<b>METALFORM P 08001</b>	Bleached pure and highly refined oil. Specially designed for the production of aluminum caps for perfumery, cosmetics and related products.	●		●	80
 <b>WATER BASED</b>					
<b>METALFORM S 36</b>	Soluble product with cooling and lubricating properties recommended for severe deep drawing processes.			●	20

\*According to classification: GHS1.51

## Extrusion and rolling

	Description	Aluminum Alloys	Copper Alloys	Steel
<b>METALFORM D 11</b>	Graphite dispersion in water recommended for steel roll bonding and tube forming operations.			●
<b>METALFORM D 54</b>	Boron nitride dispersion in water developed for aluminum forming and extrusion operations.	●		
<b>METALFORM D 61</b>	Powder-based lubricant for aluminum extrusion operations.	●		
<b>METALFORM D 80</b>	Titanium dioxide dispersion. Developed for rolling operations (roll bonding).	●		

## HVAC

	Description	Flash point °C	Viscosity cST 40°C (mm <sup>2</sup> /s)
<b>METALFORM V 232</b>	Non-flammable* and 100% vanishing lubricant for deep drawing of 0-4mm height collars. Compatible with any metal, it guarantees total evacuation of the water present between fins.	> 62	1,467
<b>METALFORM V 245</b>	Non-flammable vanishing lubricant* for deep drawing of 4-10mm height collars. Compatible with any metal, it provides good lubrication in demanding processes and facilitates the evacuation of water between fins.	> 62	1,874
<b>METALFORM V 258</b>	Non-flammable vanishing lubricant*. Especially for deep drawing of collars over 10mm height. Compatible with any metal, it provides excellent lubrication in demanding processes and high protection against oxidation.	> 62	2,808
<b>METALFORM V 401</b>	Mineral lubricant for tube bending. Compatible with any metal and most coolants. Recommended for medium severity operations.	> 180	21
<b>METALFORM V 402</b>	Synthetic lubricant for tube bending. Compatible with any metal and most coolants. Recommended for high severity operations.	> 240	21
<b>METALFORM V 403</b>	100 % vanishing lubricant for tube bending. Compatible with any metal and most coolants. Recommended for medium severity operations. It does not leave any residue on the tube.	> 70	1,8

\*According to classification: GHS1.51.

## Punching and blanking



	Description	Aluminum Alloys	Copper Alloys	Steel	Viscosity cST 40°C (mm <sup>2</sup> /s)
<b>METALFORM V 106</b>	Vanishing lubricant for punching operations with die-casted pieces.	●	●		1,4
<b>METALFORM P 30001</b>	Highly refined pure and additivated oil for blanking operations with thick steel.	●		●	320
<b>RECOMMENDED FOR FINE BLANKING OPERATIONS</b>					
<b>METALFORM V 214</b>	Vanishing lubricant recommended blanking operations with fine thickness sheets.	●	●		1,5
<b>METALFORM P 02401</b>	Oil based lubricant for steel and aluminum blanking operations, with fine and medium thicknesses sheets.	●		●	24

## Cold heading

	Description	Aluminum Alloys	Copper Alloys	Steel	Viscosity cST 40°C (mm <sup>2</sup> /s)
<b>METALFORM CH 0801</b>	Technical solution recommended for cold heading operations, low viscosity.	●	●		68
<b>METALFORM CH 1801</b>	Technical solution recommended for cold heading operations, medium viscosity.	●	●		150

# Roll forming

	Description	Aluminum Alloys	Copper Alloys	Steel
<b>METALFORM D 70</b>	Solid lubricant dispersion in water recommended for roll forming operations with copper.		●	
<b>METALFORM D 71</b>	Copper pipe protector developed to be applied during the cooling bath after manufacturing.		●	
<b>METALCOOL 312</b>	Lubricant developed for low and medium water hardness. Recommended for ferrous metals.	●		●
<b>METALCOOL 314</b>	Lubricant developed for medium and high-water hardness. Recommended for ferrous metals.	●		●



## Technical auxiliary products



Formulations designed for the protection and treatment of the surfaces and pieces related to forming operations. All the products have been formulated to extend the lifetime of the surfaces or parts where they are applied, as well as to prevent premature wear, rusting, corrosion and to facilitate its maintenance, cleaning, manipulation and replacement.

- (P) METALPROT COPPER**  
Copper grease for an optimum protection and lubrication of threads and screws. Developed to achieve an easy unscrewing.
- (P) METALPROT 9016**  
Aluminized grease for an optimum protection and lubrication of threads and screws. Developed to achieve an easy unscrewing.
- (P) METALPROT 9020**  
High temperature grease with refractory pigments for an optimum protection and lubrication of the back side of the die to ensure an easy disassembling when being necessary.
- (L) METALCLEAN 6030**  
Daily surface cleaner developed to remove possible excess greases from the die surface.
- (L) METALCLEAN 6000**  
Centralised circuit cleaner.
- (L) METALPROT 9040**  
Multifunctional lubricant and protector to facilitate the unscrewing of seized and rusted parts and to prevent long-term corrosion.
- (L) METALPROT 9045**  
Protects steel dies against corrosion during storage.

P = Paste    L = Liquid

## Industrial auxiliary products

	Description	Base	Viscosity ISO VG	Viscosity Index
<b>HYDROFLOW HFC</b>	Water-glycol based hydraulic security fluid with anti-wear properties for any application and requirement.	Water-glycol	32-68	> 200
<b>HYDROFLOW HFDU</b>	Self-extinguishing hydraulic oil with anti-wear properties for any application.	Synthetic Oil	32-68	> 180
<b>HYDROFLOW HM</b>	Highly refined mineral hydraulic oil for general applications (machine tools, valves, robotics, etc.).	Mineral Oil	22-100	> 95
<b>SLIDEFLOW</b>	Extreme pressure oil for sliding and slipping slideways. Antirust capacity and low friction coefficient.	Mineral Oil	32-220	> 95

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## METALWORKING FLUIDS

- Coolants
- Cutting Oils
- Forming Lubricants

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## DIE CASTING LUBRICANTS

- Die Casting Release Agents
- Gravity and Low Pressure Release Agents
- Plunger Lubricants
- Industrial & Technical Auxiliary Lubricants

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## FORGING LUBRICANTS

- Graphite Based Release Agents
- Graphite Free Release Agents

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## INDUSTRIAL LUBRICANTS

- Hydraulic Fluids
- Gear Oils
- Slideway & Chain Oils
- Thermic Oils
- Boundry lubrication additives

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## SURFACE TREATMENTS

- Cleaners
- Surface Protectors

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## EQUIPMENT

- Dosing & Application Equipment
  - Monitoring Equipment
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SPAIN - Barcelona

MEXICO - Querétaro

BRAZIL - São Paulo

INDIA - Pune

CHINA - Hefei



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