



Forming fluids

Martol

The **Martol** range brings you multi-purpose and innovative products for metalforming applications that require optimized lubrication. This goes towards:

- Reduced VOC emissions and improved air quality
- Minimal or no degreasing step after stamping operation
- Enhanced forming capacity for stringent processes
- Longer tool lifetime and higher production rates
- Decrease in oil consumption



THREE TECHNOLOGIES FOR ALL YOUR NEEDS

1 - NEAT OILS

Our range of neat oils covers all the physical and chemical properties needed for the success of your cold forming operations: viscosity, lubricity, extreme pressure and non-extreme pressure properties, etc.

With our range, you are assured to find the suitable product for your needs.

FACING THE CHLORINE ISSUE

This use of chlorine is more and more regulated worldwide.

This is why TotalEnergies Lubrificants offers:

- Highly additivated sulfurised products, to be used successfully under very high loads
- New generation of chlorinated products that are non toxic following 1999/45/EC, or CLP



2 - SOLUBLE OILS

As the forming operations give off a lot of heat, our **Martol** soluble oils combine strong lubricating and cooling powers.

When used as an emulsion in water, they reduce product consumption.

3 - VANISHING OILS

Formulated from light petroleum cuts, vanishing oils allow to reduce or even eliminate degreasing operations.

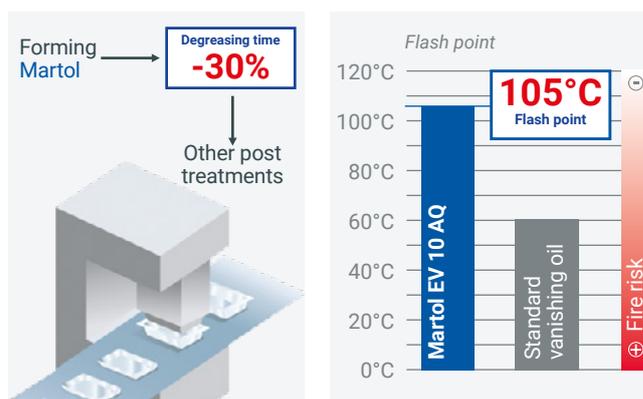
They are perfectly suited to medium difficulty or high throughput operations.

NEW GENERATION OF VANISHING PRODUCTS TO REDUCE VOC* EMISSIONS

The product does not contain any VOC and still has a fast evaporating rate, thus limiting the degreasing operations.

At the same time, the high flash point limits the fire risk to ensure the safety of the workshop, thus decreasing all related costs.

LIMITED DEGREASING TIME TO IMPROVE PRODUCTIVITY



*Volatile Organic Compound

PRODUCT OVERVIEW

Products	Materials					Forming operations				Specifications	
	Stainless Steel	Steel, galvanized steel	Aluminum	Copper	Thickness (mm)	Drawing	Deep drawing	Wire drawing	Stamping / Punching / Blanking	Flash point (°C)	Viscosity at 40°C (mm ² /s or cSt)
Neat oils											
Martol AL 150	...	•	•	•	≤ 100	•	> 180	147
Martol AL 60	...	•	•	•	≤ 10	...	•	•	•	> 180	55
Martol AL 20 HC	...	•	•	•	≤ 1	...	•	•	•	> 180	25
Martol EP 405 CF	•	•	•	•	From 2 to 5	•	•	•	•	> 180	400
Martol EP 235 CF	•	•	•	•	≤ 3	•	•	•	•	> 180	230
Martol EP 100 CF	•	•	•	•	≤ 3	•	•	•	•	> 180	101
Martol EP 65 CF	•	•	•	•	≤ 3	•	•	•	•	> 180	60
Martol EP 5 CF	•	•	•	•	≤ 2	•	•	•	•	94	3
Martol EP 185*	•	•	•	•	From 10 to 100	•	•	•	•	> 180	175
Martol EP 79*	•	•	•	•	From 1 to 10	•	•	•	•	> 180	78
Vanishing oils											
Martol EV 45	•	•	•	•	< 4	•	•	•	•	62,5	2,1
Martol EV 40 CF	•	•	•	•	< 4	•	•	•	•	59,5	1,5
Martol EV 10 AQ	•	•	•	•	< 2	•	•	•	•	104	2,5
Martol EV 10 CF	•	•	•	•	< 1,5	•	•	•	•	58,5	1,3
Martol LVG 25 AQ**	•	•	•	•	< 2	•	•	•	•	105	2,8
Martol LVG 25 CF**	•	•	•	•	< 2	•	•	•	•	74	1,7
Martol LVG 15 CF**	•	•	•	•	< 1	•	•	•	•	59	1,3
Food manufacturing oils (FMO)											
Martol FMO 235 CF	•	•	•	•	•	•	•	•	•	270	235
Martol FMO 75 CF	•	•	•	•	•	•	•	•	•	256	75
Martol FMO 15 CF	•	•	•	•	•	•	•	•	•	240	15

* Non toxic according to 1999/45/EC

** Both the oil and its additives can be washed away with an increase in temperature (brazing, annealing, etc...)

Aluminum	AL
Extreme Pressure	EP
Standard vanishing	EV
Thermal degreasing	LVG
Air Quality to reduce VOC emissions	AQ

Legend

•	Possible
••	Suitable
•••	Designed for