

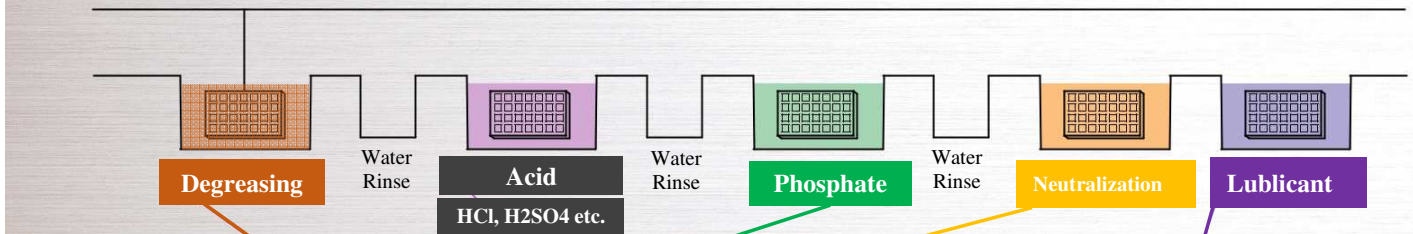
# Chemicals for Cold Forming

Used for Pre-Treatment of Cold Forming.  
High Lubricant properties.

Application ;  
Motorbike, Electro Appliance, Metal product, etc.



Process chart example of Pre-Treatment for Lubricant



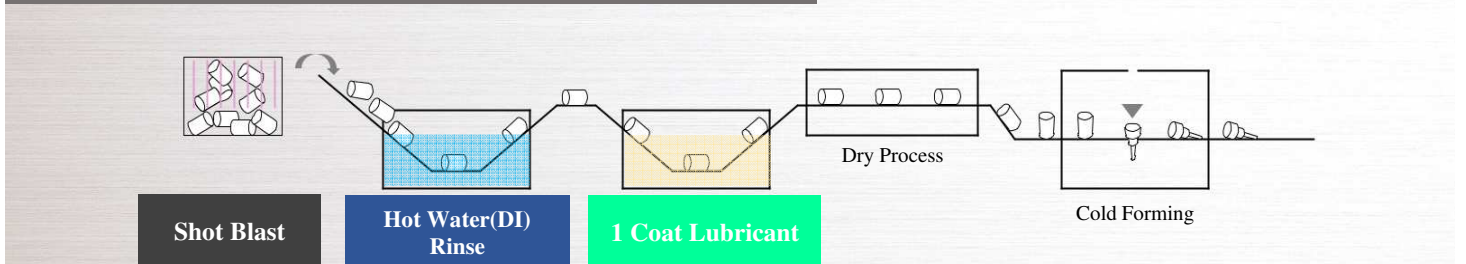
## Example of Combination

Variation	Degreasing	Phosphate	Neutralization	Lubricant	Remark
①	FC-6000 series	PB-181X	PL-21	LUB-235V	Zn phosphate type
②	CL-357	PB-3670X	PL-27		Ca-Zn phosphate type

## Details

Application	Type	Product	System	Temp. °C	Time s	Remark	Substrate
Degreasing	FINECLEANER	FC-6000 series	Dip	40 ~ 60	120 ~	Alkaline type	Fe
Etching	PALCLEAN	CL-357	Dip	80 ~ 95	120 ~	High Alkaline type, Removable Lubricant	Fe
Phosphate	PALBOND	PB-181X	Dip	70 ~ 80	180 ~ 600	For Cold Forming	Fe
		PB-3670X	Dip	80 ~ 85	300 ~ 600	For Hard Cold Forming, Wire drawing	Fe
Neutralization	PLEPALEN	PL-21	Dip	RT ~ 80	60 ~	Contain Borate	Fe
		PL-27	Dip	RT ~ 80	60 ~	No Contain Borate	Fe
Lubricant	PALLUBE	LUB-235	Dip	70 ~ 90	30 ~ 300		Fe

Process chart example of 1 Coat Lubricant



Application	Type	Product	System	Temp. °C	Time s	Remark	Substrate
1 Coat Lubricant	FINELUBE	FL-E740C	Dip	60 ~ 70	120 ~	Standard type, Contain Borate	Fe
		FL-E721	Dip	60 ~ 70	120 ~	No Contain Borate, Contain P component	Fe

The above chemicals are representative example. We can suggest the most suitable chemicals for each customer.

Please contact us at first.