



**PHOSPHATING**

**Description**

Phosphate provides a temporary corrosion protection. This corrosion resistance can be enhanced with the use of oil. Hence, it is important to maintain proper storage conditions, for example, absence of heat relative humidity, storage under roof and not in the outside.

Phosphate reduces friction in parts that are in sliding contact. It provides a controlled roughness of the surfaces.

Phosphate can be used as an undercoat for zinc flake coatings and organic layers. Corrosion resistance can be increased with the use of subsequent treatments, not by the phosphate itself. Micro-crystalline phosphate is used at GALOL SA



**Corrosion resistance properties**

Phosphate does not provide good corrosion protection in atmospheric environments or in salt spray test acc. To ISO 9227. Nevertheless, corrosion resistance can be enhanced with oil application. For this reason it is used as a temporary protection for parts stored in warehouses or for parts in applications without corrosion resistance requirement ( gearboxes, parts in contact with oil, engine bolts etc...)

**Application technology**

Barrel

Rack

**Types of phosphate**

Type	Micro-crystalline manganese phosphate (MnPh)	Micro-crystalline zinc phosphate (ZnPh)
System	Rack	Barrel/Rack
Coating weight	10 to 30 g/m <sup>2</sup>	6 to 16 g/m <sup>2</sup>
Uses	<ul style="list-style-type: none"> <li>Temporary corrosion protection</li> <li>Friction applications</li> </ul>	<ul style="list-style-type: none"> <li>Temporary corrosion protection</li> <li>Undercoats for zinc flakes coating and organic top-coats</li> </ul>

Protection	Layer thickness μm	Coating weight g/m <sup>2</sup>	Salt spray test ISO 9227
ZnPh	> 3	6 to 16	6 h
ZnPh + aceite	> 3	6 to 16	24 h
ZnPh + Delta-Seal®	> 3 + 8	6 to 16	72 h

**Standards and specs**

- GME: 00253-U
- GME: 00253-V
- GME: 00253-W
- GME: 00253-X
- PSA: B15 3100 P2a
- VW: 13750 Off-b100
- VW: 13750 Off-b110
- FORD: WX 100 S430

**Applicable products**

- **Oil.** Oils with temporary corrosion protection and lubrication properties.
- **Delta Tone.** Zinc flakes coatings acc. To ISO 10683.
- **Delta Seal.** Organic thin layer top-coat.

**Uses**

Zinc phosphate (ZnPh) provides a coefficient of friction between  $\mu_{tot} = 0,15$  and  $0,20$  acc. to ISO 16047 in metric threaded unions. Oils can be applied in order to reduce coefficient of friction and provide more regular values between  $\mu_{tot} = 0,09$  and  $0,15$  acc to ISO 16047.

**THIS TREATMENT IS APPLIED DIRECTLY IN LINE OR IN COMBINATION WITH PREVIOUS AND SUBSEQUENT APPLICATIONS.**

**GALOL S.A. offers the possibility to reduce logistic costs between the different operations of manufacturing of the part.**

**GALOL S.A.**

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