

## Phosphating Agent

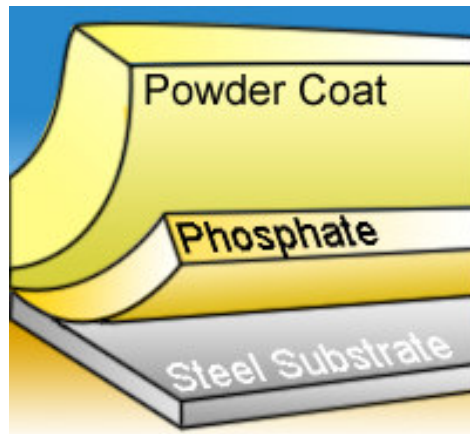
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### OTHERS :

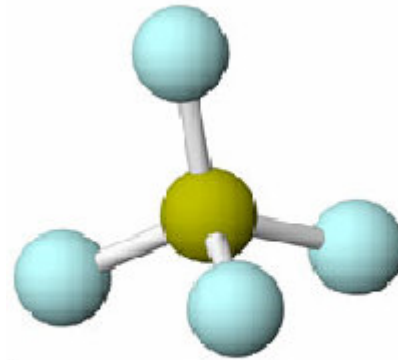
Stamping oils

Degreasers

Phosphating is to provide a thin film to the substrate to improve the over-all performance of the finished coating by strengthening the bonding between the 2 surfaces. It is some times called conversion coating. It can be iron, zinc, polycrystalline, chromate, or manganese phosphate film. They are applicable on both ferrous and non-ferrous surfaces (zinc, aluminum or manganese). Iron and Zinc phosphating are the commonest among all phosphating agents. Iron phosphate is the thinnest of phosphate films. In this application process, an iron oxide base is developed, followed by a flat or amorphous metal phosphate top-coat. To form the oxide coating, an accelerator or an oxidizer is involved. Mild acids of phosphorous are often incorporated to provide etching and source of phosphorous. 3 factors of Times, Concentrations and Temperature are parameters that will determine the thickness of iron phosphate film



built-up on substrate.



**Phosphate Molecule**

Zinc phosphate is more adherent than iron phosphate . It forms a crystalline coating with the ferrous substrate. The principle of its phosphating process is anodic. It is more corrosive resistant. However the downside for Zn phosphating is that it is economically less competitive and that when performing powder coating extra care must be directed to avoid uneven coating. Larger crystals of Zn phosphate might form capillary in ovens to affect coatings firmness.

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