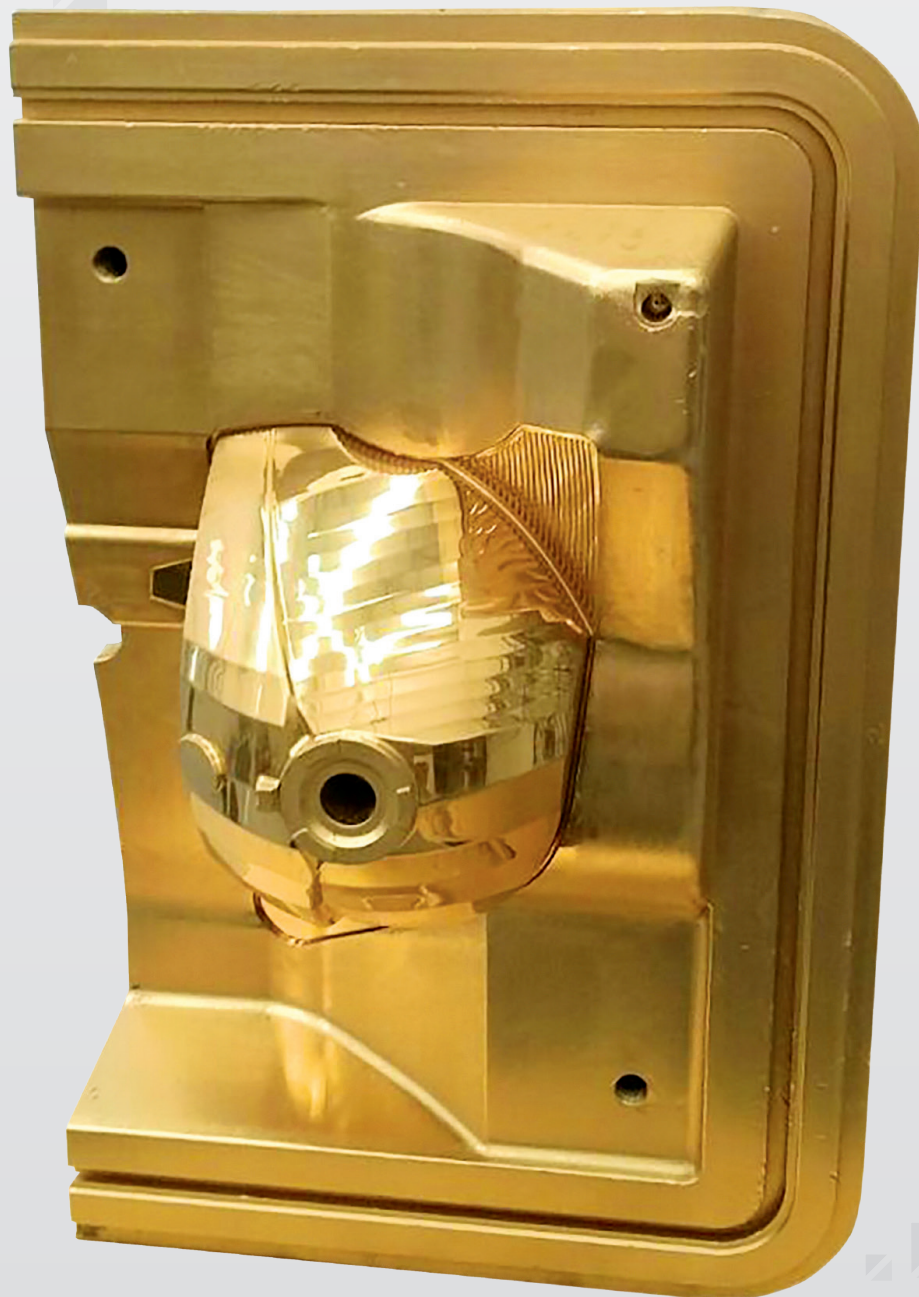




# PVD Coatings for Plastic Injection Molds



# PVD Coatings for Plastic Injection Molds

Our PVD coatings were specially developed to reduce friction, increase surface hardness, and reduce wear on all plastic injection molds, dies, inserts and extractors. Besides increased tool life, the coatings allow longer maintenance cycles and faster tool changes.

With over 30 years of experience of coating molds and dies, our R&D center has been developing high performance coatings dedicated to Plastic Injection.

## SPECIFICATIONS AND APPLICATIONS OF PRIMUS COATING FOR PLASTIC INJECTION MOLDS AND DIES

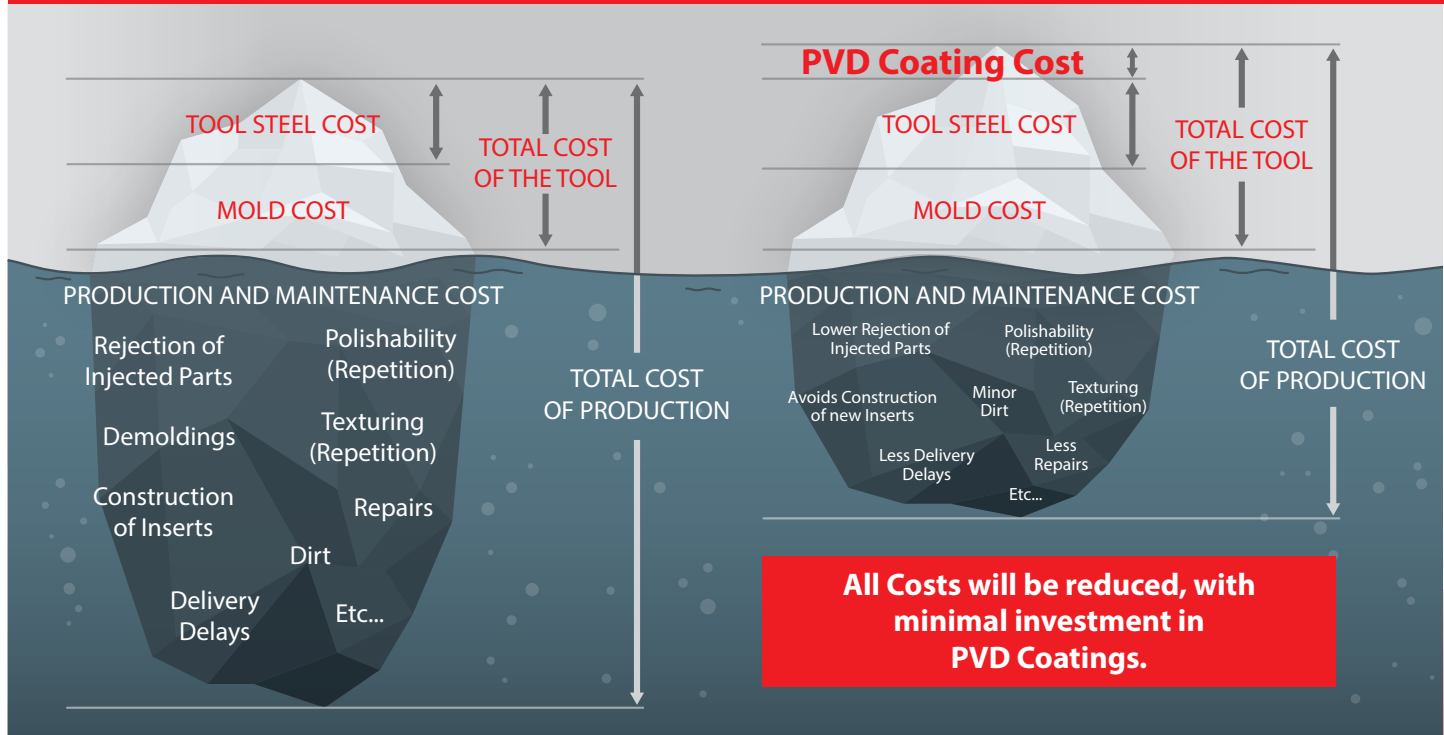
| Coatings                        |   | TiN*                  | HP Form**   | HP Dura**  | HP Cera*         |   |
|---------------------------------|---|-----------------------|-------------|------------|------------------|---|
|                                 |   | Features              |             |            |                  |   |
| CHARACTERISTICS                 | Composition                                 | TiN                   | TiAlN Based | AlCr Based | Cr Based         |   |
|                                 | Hardness (GPa)                              | 30 GPa                | 37 GPa      | 38 GPa     | 30 GPa           |   |
|                                 | Coefficient of friction (dry against steel) | 0.25                  | 0.4         | 0.33       | 0.1              |   |
|                                 | Coating thickness (µm)                      | 3.5 ~ 4.5 µm          | 4 ~ 6 µm    | 4 ~ 6 µm   | 2.5 ~ 3.5 µm     |   |
|                                 | Maximum oxidation temperature (°C)          | 500°C                 | 800°C       | 1,100°C    | 550°C            |   |
|                                 | Coating deposition temperature (°C)         | 200° C<br>450° C      | 450° C      | 450° C     | 200° C<br>450° C |   |
|                                 | Coating Color                               | Gold                  | Violet      | Dark Grey  | Dark Grey        |   |
|                                 | Coating structure                           | Monolayer             | Multilayer  | Multilayer | Multilayer       |   |
|                                 | RECOMMENDED APPLICATIONS                    | Thermoplastics        | PE, PP, PB  | ⊙          | -                | ○ |
| PS, SB, SAN, ABS, ASA           |   |                       | ⊙           | ○          | ○                | ⊙ |
| PVC                             |   |                       | -           | -          | ⊙                | ⊙ |
| PTFE, SPTFE, PVDF               |   |                       | ⊙           | -          | ⊙                | ○ |
| POM                             |   |                       | ○           | ⊙          | ⊙                | - |
| PA                              |   |                       | ○           | ⊙          | ○                | ⊙ |
| PC, PBT (B), PET (P)            |   |                       | ⊙           | -          | -                | ⊙ |
| PPE, PEEK, PAEK / PPS, PSU, PES |   |                       | ○           | ⊙          | -                | - |
| PI                              |   |                       | ○           | ⊙          | ○                | ⊙ |
| CA, CP, CAP                     |   |                       | -           | ⊙          | -                | ⊙ |
| PMMA                            |   |                       | -           | ⊙          | -                | ⊙ |
| TPU                             |   |                       | -           | ⊙          | ○                | ⊙ |
| Thermosets                      |   |                       | PF          | ⊙          | -                | ○ |
|                                 |   | EP                    | ○           | -          | ⊙                | ⊙ |
|                                 |   | UP                    | ○           | -          | ⊙                | ○ |
|                                 |   | MF, UF, MP            | ○           | -          | ⊙                | ⊙ |
| Elastomers                      |   | PUR                   | ⊙           | -          | ○                | - |
|                                 |   | NBR, EPDM, SI         | ⊙           | -          | ○                | - |
|                                 |   | Multipolymer TPE, FPM | ⊙           | -          | ○                | - |

\* Available in Low Temperature.

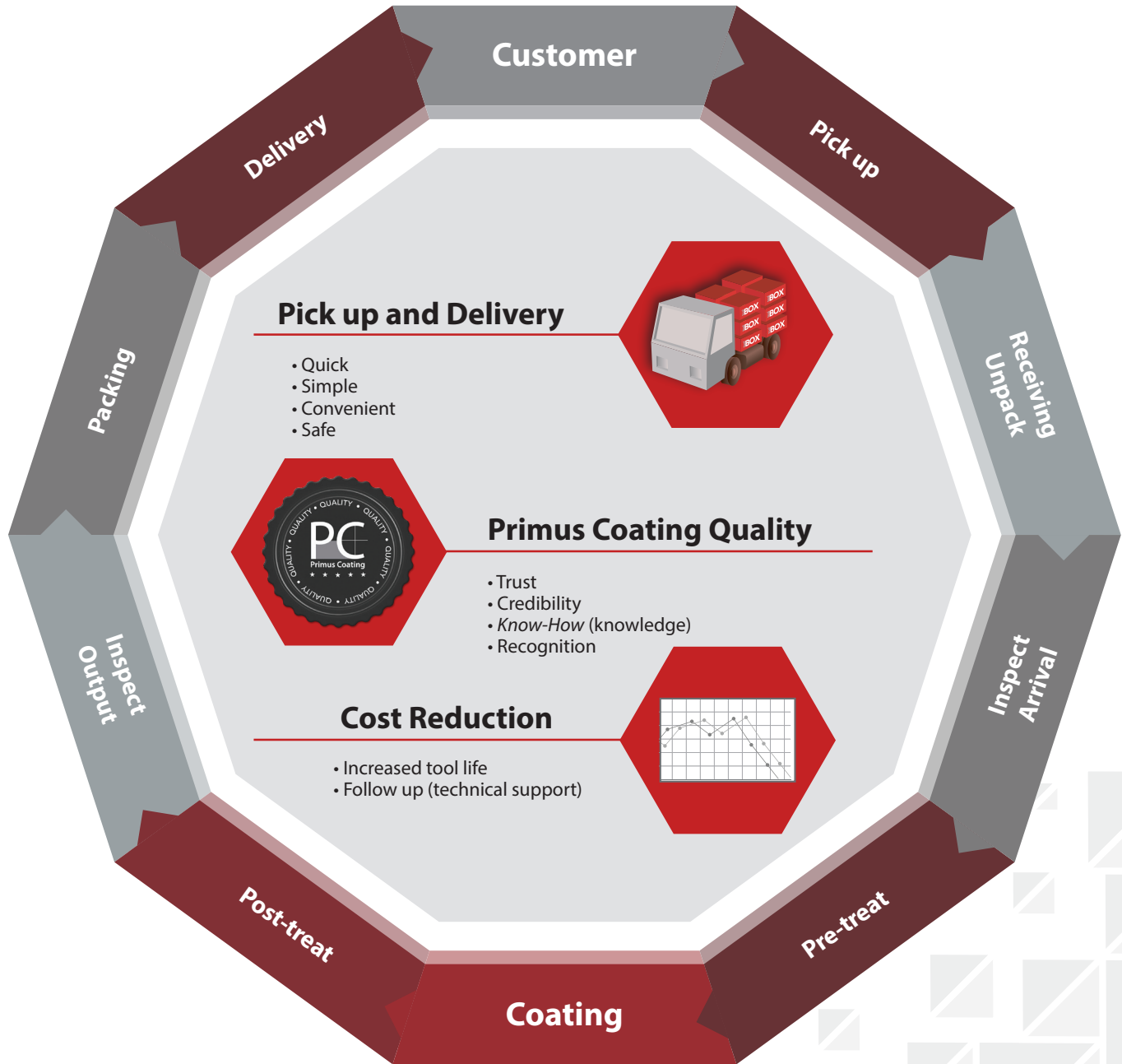
\*\* Duplex coating available (Nitride + Coating), for more information, please contact our sales department. The depth of nitriding will depend on the material of the mold.

⊙ Excellent ○ Good

## Hidden cost of Plastic Injection process (iceberg)



■ PRIMUS COATING QUALITY ASSURANCE



**We** listen understand deliver

**PrimCoat**

PrimCoat PVD Technology India Private Limited

**Pune Plant**

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Chakan Industrial Area - Savardari Village  
Tal Khed, Pune - 410 501  
Maharashtra, India

**Bangalore Plant**

Plot No: 22-J2, Attibele Industrial Area  
Survey No 125, 126,127 - Ichhangur Village  
Attibele Hobli, Anekal Taluk, Bangalore- 562 107  
Karnataka, India

**Chennai Plant**

Plot No: K-16, Phase II  
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Sriperumbudur Taluk, Kancheepuram - 602105  
Tamil Nadu, India

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