

# CHROME-X®

For shiny and mirror-like surfaces  
in plastic injection molding



CHROME-X® is ideal for plastic mold steels with low annealing temperatures.

The film is applied onto highly polished surfaces and is characterized by a low surface roughness, which does not require any post-treatment.

The low surface roughness is ideal for conserving the gloss level of tools and workpieces and reduces material adhesions. It also ensures improved demoldability in plastic molding – even over several PIM injection cycles.

## ADVANTAGES

For your tools:

- » Especially for temperature-sensitive, i.e. case-hardened, low annealed and low-alloy steels
- » **Harder and smoother** than classic hard chrome plated coatings
- » Protects highly polished surfaces
- » **Reduced material adhesions** due to the dense and droplet-free coating growth based on the sputter technology

For your plastic parts:

- » Improved **demolding** behavior and reducing demolding marks
- » **Shinier and significantly more color intensive plastic parts** with the first injection cycle
- » Ideal for molding **filligree structures, textures and holograms**
- » **Food safe.** Therefore also suitable for food processing and packaging

## COATING PROPERTIES

<b>Hardness H<sub>IT</sub></b>	15 – 23 GPa
<b>Hardness HV</b>	1,400 – 2,200 HV
<b>Coating thickness</b>	1 – 3 µm*
<b>Maximum operating temperature</b>	400 °C
<b>Roughness**</b>	Ra ≤ 0.022 Rz ≤ 0.180
<b>Colour</b>	Silvery, shiny metallic

\* Further adjustments of the coating thickness possible on request

\*\* The roughness is a reference value and depends in particular on the pre-treatment, i.e. the polishing.

## APPLICATION

- » Plastic Injection Molding (PIM)

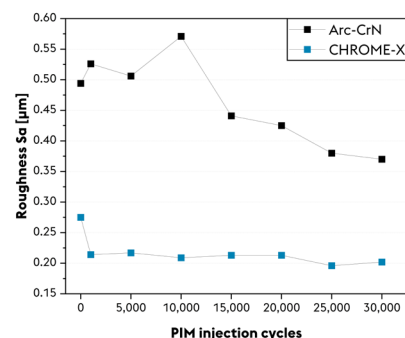


Fig. 1: Development of the tool roughness (Sa) over PIM injection cycles with polyamide (PA) compared to Arc-CrN