

SURFACE TREATMENT
CHROME PLATING_ HARD
DSF 1.3.2

Definition:

HARD: EN ISO 6158: 2011

A protective coating added to a wide range of substrates requiring high wear and corrosion resistance combined with excellent hardness and low friction properties. Useful as a refurbishment process for worn, damaged or over-machined surfaces (0.5mm max. thickness).

Coating Type:

HARD:

The substrate is prepared (surface etched & cleaned then masked with wax). The plating, an electrolytic process utilising a chromic acid-based electrolyte, the component requiring plating becomes the cathode and with the passage of a DC current, via anodes, chromium metal builds on the component surface. Time determines coating thickness, typically 25µm per hour.

Plating Thickness:

HARD:

Pre-plated substrate surface finish: 0,8 Ra µm(turned) and 0,2Ra µm(ground)

Appearance:

The plated article shall be free from visible plating defects such as blisters, pits or un-plated areas. The plating will be smooth and adherent, clean and free from damage.

The nickel provides the smoothness, most of the corrosion resistance & much of the reflectivity. The chrome adds a slightly 'bluish' hue, protecting the nickel against tarnish & corrosion.

Properties:

- Deposited direct on brass when non-magnetic properties are required.
- Can be deposited on stainless steel to increase corrosion resistance.
- Substrates include zinc, copper & aluminium alloys and some plastics.
- Mirrors underlying finish.

Issue	01	02	03	04	05	06	07	08	09
DCR	7135	30040	44725						

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Description:

Hard chrome plating (**Engineering**) is an electrolytic process forming a tough, hard (65-70Rc) silver coloured coating ($\leq 25\mu\text{m}$) that can be applied to all common engineering alloys. Components are etched prior to deposition ensuring a high level of substrate adhesion.

Properties:

- Can be ground, lapped & polished.
- High metal to metal sliding wear resistance
- Low friction characteristics
- Matt (as plated) but may be polished if stated (additional cost).

ASM (DEK) Applications:

Suitable for components that require wear resistance or salvage.

Note:

Hard chrome does not have a levelling effect, to avoid 'build up' replace, if possible, sharp edges with small radii.

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