

## THERMAL SPRAY METHODS FOR METALLIC AND CERAMIC MATERIALS

**Technical Data Sheet**  
Cobalt-Base Material

# Stellite™ 21

### Chemical Composition

Element	Nominal Analysis
Chromium	27.00 %
Molybdenum	5.50 %
Nickel	3.00 %
Cobalt	Balance

Coating Hardness: **30 – 34 HRC**

### Description:

- A cobalt-base alloy suitable for plasma and laser spraying, providing good wear-protection properties, especially under compressive and abrasive loads.
- The material is also corrosion-resistant to (saline) water, steam, and various acids.
- Due to its excellent machinability—turning, grinding, polishing, etc.—it is frequently used for sealing and sliding surfaces.

### Typical Applications:

- Coatings on sliding and sealing surfaces of valves and pumps, valve seats and cones, shaft and bushing bearing surfaces; hot-work tooling subject to high thermal shock; wear components experiencing combined corrosion and wear stresses.
- When applied by laser spraying, the material metallurgically bonds with the substrate. This bond delivers longer service life under impact and shock loading than any other thermally sprayed coating.

Stand: 04.2025