

TECHNICAL DATA

# STELLITE™ 190 ALLOY

**STELLITE™ COBALT-BASED ALLOYS** consists of complex carbides in an alloy matrix. They are resistant to wear, galling, and corrosion and retain these properties at high temperatures. Their exceptional wear resistance is due mainly to the unique inherent characteristics of the hard carbide phase dispersed in a CoCr alloy matrix.

**STELLITE™ 190** has the highest carbon content of all the current cobalt-chromium alloys. It is recommended for the most severe abrasive environments. It is available in the form of bare rod for hardfacing purposes. As is the case with other cobalt-chromium alloys of high carbon content, care must be taken to minimize cooling stresses incurred during hardfacing and to avoid service conditions which involve severe mechanical or thermal shock.

## CORROSION RESISTANCE

Stellite™ 190 shows good corrosion resistance in Phosphoric Acid (concentration 60%, 66°C) and in Sulphuric Acid (concentration 90%, Room Temperature). In Nitric Acid (concentration 60%, boiling) a good corrosion resistance has been observed.

## NOMINAL CHEMICAL COMPOSITION (MASS%)

ALLOY	Co	Cr	W	C	Others
Stellite™ 190	Bal.	27	13.5	3.2	Fe, Ni, Mn, Si

## PHYSICAL PROPERTIES

ALLOY	Hardness	Density	Melting Range
Stellite™ 190	52 – 59 HRC	~ 8.66 g/cm <sup>3</sup>	~ 1240 – 1290°C

## NOMINAL HOT HARDNESS (HV resp. DPH) TIG/GTA

20°C	400°C	500°C	600°C	750°C
495	350	300	295	250

## Product Forms

Consumables for Cladding / Hardfacing and Additive Layer Manufacturing (ALM)		
Rods	TIG-Welding	Oxy-Acetylene Welding
Powder	PTA Cladding	Laser Cladding