

**Specifications:**

AWS A5.21  
AWS Class ERCoCr-C  
ASME SFA 5.21

**Properties:**

**Hardness:** 51-60 HRC  
**Density:** ~8.7 g/cm<sup>3</sup>  
**Melting Range:** ~1190 – 1345°C

**Description:**

Stellite™ 1 is a hardfacing alloy that is resistant to wear, galling and corrosion. This alloy is able to maintain the properties at higher temperatures. The good corrosion and wear resistance is due to the inherent characteristics of the hard carbide phase that is dispersed in a cobalt-chromium alloy matrix. The typical applications Stellite™ 1 is used for pump sleeves, rotary seal rings, bearing sleeves. The high primary carbides allow for the alloy to be best suited in applications with extreme low-angle erosion and severe abrasion. Stellite™ 1 should only be finished by grinding. Stellite™ 1 typically corrodes by a pitting mechanism and not by general mass loss in chloride and seawater solutions.

**Typical Chemical Composition (Wt%)**

Co	Cr	W	C	Mn	Si	Ni	Mo	Fe
BAL	26.0-33.0	11.0-14.0	2.0-3.0	1.0	2.0	3.0	1.0	3.0

Note: Single values are maximum unless otherwise noted.

**Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.**

**CAUTION:** Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, "Safety in Welding and Cutting," published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33126: OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.