LASERBOND®
PRODUCTIVITY | INNOVATION | CONSERVATION

Sliding wear resistance of LaserBond claddings and coatings

Sliding wear occurs when 2 parts are in relative motion to each other. This is the case, for example, for shafts and journals, bearings, wear sleeves, pistons and hydraulic rods. In order to reduce wear and extend wear life, materials that combine high hardness with good friction capabilities are especially suitable for components subject to relative sliding motion.

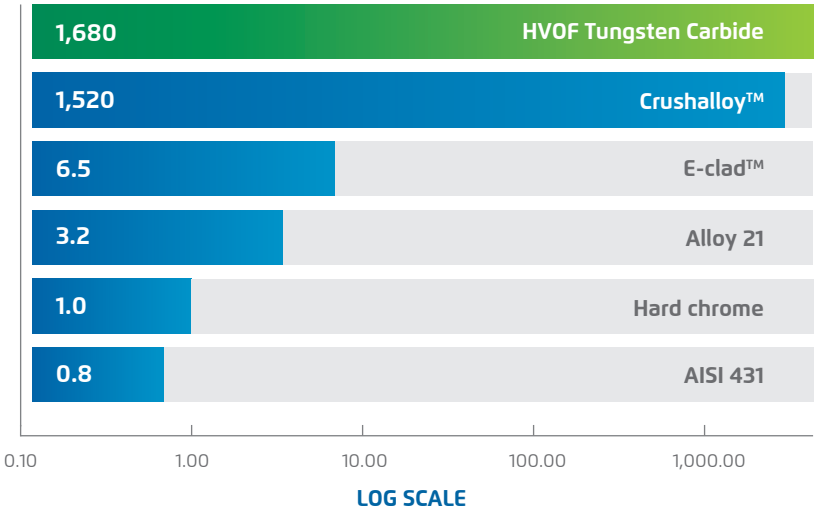
University of South Australia | Future Industries Institute

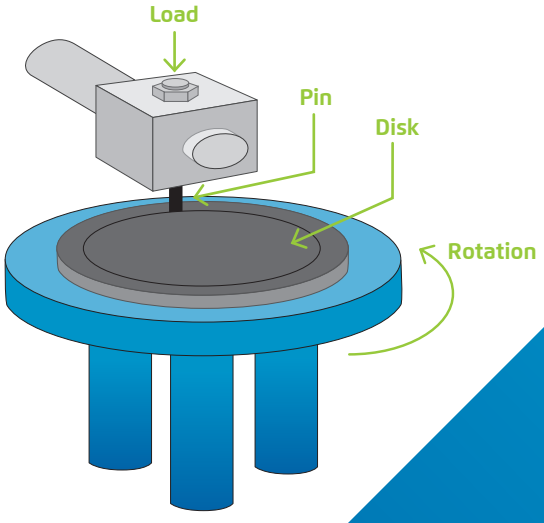
To test and predict the sliding wear resistance of a material, the test ASTM G99 "Standard Test Method for Wear Testing with a Pin-on-Disk Apparatus" is utilized. In this test a material sample is fixed onto a rotating table which can spin at adjustable rpm. The sample rubs in a circular motion against a pin - in this case an alumina ball - which is applied with a defined load. After more than 2 hours of testing time, the equivalent of 1,000 m total sliding distance, the wear volume is measured.

In the graph below the sliding wear resistance of several LaserBond surface engineering products is compared to electroplated hard chrome. The cobalt based Alloy 21 provides more than 3 times the wear resistance than hard chrome. E-clad™ is 6.5 times more wear resistant, and LaserBond's Crushalloy™ and HVOF tungsten carbide provide extreme wear resistance with wear factors of 1,520 and 1,680, respectively.

If you are concerned about corrosion in your sliding wear application, please contact a LaserBond representative for a recommendation on the most suitable material.

WEAR RESISTANCE FACTOR





LaserBond Limited
ABN 24 057 636 692

NSW: 2/57 Anderson Rd
Smeaton Grange
Sydney NSW 2567
p. +61 2 4631 4500
p. 1300 LaserBond

SA: 112 Levels Rd, Cavan
South Australia 5094 Australia
p. +61 8 8262 2289

VIC: 26-32 Aberdeen Rd, Altona
Victoria 3018 Australia
p. +61 3 9398 5925

QLD: 74 High Rd, Bethania
Queensland 4205
P: +61 7 3200 9733

info@laserbond.com.au
www.laserbond.com

ISO 9001 Quality management system
ISO 14001 Environment management system
ISO 45001 OH&S management system
JAS-ANZ

LASERBOND®