

Lead-free: Friction and Wear

- ❑ Some lead free connectors will be used as separable interfaces.
- ❑ Coefficient of friction (COF) was tested mating identical materials to each other
 - Room temperature and humidity
 - 100 g normal force
 - 6mm ball on flat geometry
- ❑ COF values
 - Matte 93/7 Sn/Pb = 0.45
 - Matte tin = 0.5
 - Bright 93/7 tin-lead = 0.4 - 0.5
 - Bright tin-copper = 0.4
 - Bright tin= 0.3 to 0.4
- ❑ Wear durability can also be an issue for separable interfaces
 - Strongly a function of load and tip geometry
 - High loads typically used for tin plated contacts have short wear durability life
 - No significant difference between tin-lead and lead free finishes

