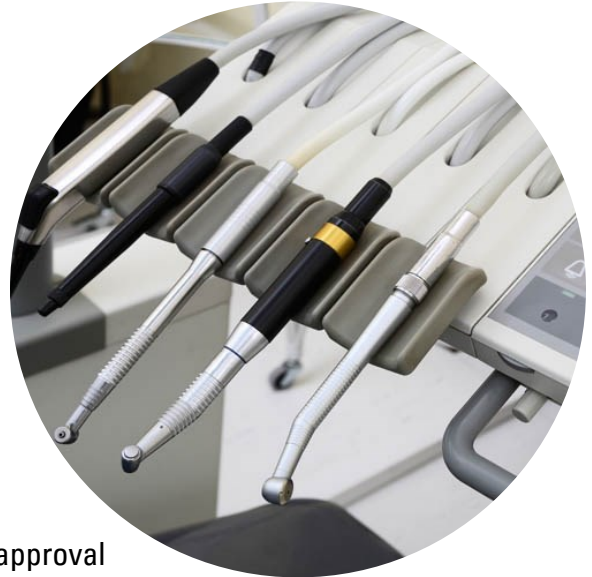


## Dicronite<sup>®</sup> in Medical Devices

### Key Considerations:

- Can reduce friction and wear
- Maximum 0.5 micron coating thickness enables precision tolerances and post-design fixes
- Wide functional temperature range (-188°C to +538°C in air, up to +1316°C in vacuum)
- Radiation and x-ray stable
- Withstands common sterilization procedures
- Biocompatible
- FDA Medical Device Masterfile to support FDA device approval



### Related Testing:

- ISO-10993 for biocompatibility
- ISO-13402 and ASTM F-1089 for sterilization of surgical hand instruments
- Gamma ray stability for sterilization
- ASTM F-945 for titanium stress corrosion
- ASTM E-595 for vacuum stability/outgassing
- Can support additional testing upon request

### Example Applications:

- Dental air-drill gear and bearing lubrication providing longer life, lower friction and reduced maintenance
- Surgical tool hinge/pivot lubrication enabling higher precision tolerances, reduced wear and greater reliability
- Anti-galling treatment for titanium and stainless bone fixturing hardware
- Bearing, magnetic motion component and linear guide lubrication in vacuum environments inside medical imaging equipment enabling longer life and reduced cost
- Guide wires, endo-surgical tool guides and cannula to reduce insertion force and minimize galling
- Ophthalmological biopsy sampling device with sliding inside diameter sampling tube against outside diameter tube to prevent galling and reduce actuation force