

## RoHS (3) / REACH MATERIAL COMPLIANCE & Defense Federal Acquisitions Regulation Supplement SPECIALTY METALS CERTIFICATION

We hereby certify that we comply with the EU Directive 2011/65/EU (recast of 2002/95/EC) & addendums through 2017/2102 on the use of certain hazardous substances in electrical and electronic equipment, by exemption as stated in the Annex III, paragraph 6 (the use of lead as an alloying element). Furthermore, our products are REACH compliant and contain less than 0.1% by weight of SVHC's as denoted within the 2019-07 Reach Candidate List: <http://echa.europa.eu/candidate-list-table> . Our raw materials list is below for your review.

We hereby certify that we comply, on a contractual basis, with 252.225-7009 Restriction on Acquisition of Certain Articles Containing Specialty Metals in the application of Stainless Steel, Kovar, and Nickel Steel (revised Oct 2014). Reference: <http://www.acq.osd.mil/dpap/dars/dfars/html/current/252225.htm#252.225-7009>

The materials listed below are according to the denoted specifications:

### Metals:

- DHP soft copper, CDA 122
- Phosphor bronze, ASTM-B-159, Alloy 510 (.05% by weight Pb); ASTM-B-139, Alloy B2 or C54400
- Brass: ASTM-B-16 (2.5-3.7% Pb) or ASTM-B-36
- Stainless Steel, ASTM-A-582, SS-303 (subject to DFARS)
- Beryllium Copper per ASTM-B-196 or ASTM-B-194
- Kovar: ASTM-F15 (subject to DFARS)
- Nickel Steel: ASTM-F30, Alloy 52, EI #7 (subject to DFARS)
- Solder: Sn96.5/Ag3.0/Cu0.5 Alloy (implemented April 2006)
- Solder: Sn63Pb37
  - Typically required by MIL/Aerospace applications
  - isolated to customer specific applications
    - Permitted under 2011/65/EU, Annex III, para 7(b)
  - isolated to cable assembly series 9911-, 9912-, 9961-, 9967-, 9968-
- Silver Braze: Ag56/Cu22/Zn17/Sn5 Alloy #560

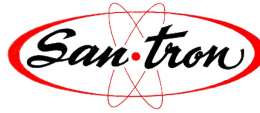
### Non-metals:

- PTFE, ASTM-D-1710 – Fire rating V-0 (dielectric)
- Delrin, Acetal Homopolymer
- Fluoroloy-H
- Rexolite
- Neoflon PCTFE (Kel-F)
- Polysulfone PSU-1000
- Ultem-1000 Polyetherimide
- Silicon rubber ZZ-R-765, Gr. 50, red – Fire rating N/A (gasket)
- Rubber Buna - N, fuel resistant per MIL-P-5315 (gasket)
- Silver plated aluminum filled silicone per MIL-G-83528 (gasket)
- Silicon rubber per AN- 6227-17 Class B
- Thick wall polyolefin, MIL-I-23053/4, class3 – Fire rating UL 224 (shrink sleeve)
- Thin wall polyolefin, MIL-I-23053/5, class1 – (shrink sleeve)
- 2 component epoxy
- Glass: Corning # 10, 7052

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- PVC Caps (protective packaging) contains 34.6% DEHP (not REACH compliant)

**Finishes [per STI 7.3.1-8]:**

- Silver per ASTM-B700, Semi-bright
- Tarniban: 8% stannous chloride (anhydrous)
- Trivalent Chromium Passivation
- Nickel per AMS-QQ-N-290, Class 1, Bright
- Electroless Nickel per Mil-C-26074, Class 1, Bright
- Gold per ASTM-B488, Type II, Grade C, reference Class 0.76
- Albaloy (Tri-M3) composition: 55-60% Cu, 20-25% Sn, 15-20% Zn  
Alternative 50-55% Cu, 30-35% Sn, 13-17% Zn Semi-Bright
- Black Chrome per Mil-C-14538
- Cadmium per ASTM-A165 (RoHS non-compliant)
- Copper per Mil-C-14550, reference Class 4
- Chemical Passivation per ASTM-A-967.
- Tin per ASTM-B545, matte finish

Hazardous material content of non RoHS compliant assemblies: Cadmium plated assemblies are customer specific military applications and are excluded by the RoHS directive from the scope of application.

**DFARS Contractual Products:**

- When required under contractual agreement Product Group A and part numbers with the plating suffix “-P” are subject to annex 3B of the DFARS Contract Clause for Specialty Metals.
- Product Group A is subject to DFARS restrictions as noted above:

|            |            |           |
|------------|------------|-----------|
| 0406-40    | 1106-02    | UG-492A/U |
| 0407-09    | 2007-01-NS | UG-492D/U |
| 0407-17-NS | UG-30D/U   | UG-680/U  |
| 1106-01    | UG-30E/U   | UG-680A/U |

The materials declaration data is accurate, to the best of my knowledge.

Sincerely,

Fred Hull  
Director of Engineering  
21 Oct 2019