

# MATERIAL DECLARATION SHEET



|                 |               |     |     |  |
|-----------------|---------------|-----|-----|--|
| Material Number | 3500S-1-103L  |     |     |  |
| Product Line    | Precision Pot |     |     |  |
| Compliance Date |               |     |     |  |
| RoHS Compliant  | Yes           | MSL | N/A |  |

| No. | Construction Element (subpart) | Homogeneous Material | Material weight [g] | Homogeneous Material\ Substances | CASRN if applicable | Materials Mass % | Material Mass % of total unit wt. | Subpart mass of total wt. (%) |
|-----|--------------------------------|----------------------|---------------------|----------------------------------|---------------------|------------------|-----------------------------------|-------------------------------|
| 1   | Mandrel Wire                   | Copper               | 1.00600             | Copper                           | 7440-22-4           | 100.00           | 1.006                             | 4.3437                        |
|     |                                | Coating              | 0.00010             | Polyamide                        | 6342-83-1           | 100.00           | 0.000                             | 0.0004                        |
| 2   | Resist Wire                    | Metal                | 3.1520              | Nickel                           | 7440-02-0           | 74.00            | 2.332                             | 13.6096                       |
|     |                                |                      |                     | Chromium                         | 7440-47-3           | 21.00            | 0.662                             |                               |
|     |                                |                      |                     | Manganese                        | 7439-96-5           | 1.00             | 0.032                             |                               |
|     |                                |                      |                     | Silicon                          | 7440-21-3           | 1.00             | 0.032                             |                               |
|     |                                |                      |                     | Aluminum                         | 7440-44-0           | 1.00             | 0.032                             |                               |
|     |                                |                      |                     | Copper                           | 7723-14-0           | 1.00             | 0.032                             |                               |
|     |                                |                      |                     | Cobalt                           | 7704-34-9           | 1.00             | 0.032                             |                               |
| 3   | Epoxy                          | Epoxy BP-FRC         | 0.00100             | Epoxy resin                      | 25085-99-8          | 49.00            | 0.00049                           | 0.0043                        |
|     |                                |                      |                     | Antimony trioxide                | 1309-64-4           | 11.00            | 0.00011                           |                               |
|     |                                |                      |                     | silicon dioxide                  | 7440-21-3           | 11.00            | 0.00011                           |                               |
|     |                                |                      |                     | aluminum oxide                   | 1344-28-1           | 11.00            | 0.00011                           |                               |
|     |                                |                      |                     | kaolin clay                      | 1332-58-7           | 9.00             | 0.00009                           |                               |
|     |                                |                      |                     | Mg alumino silicate              | 1302-88-1           | 9.00             | 0.00009                           |                               |

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| 4              | Varnish          | Insulating Varnish  | 0.0970    | Phenolic Resin             | 9039-25-2  | 100.00 | 0.097   | 0.4188  |
| 5              | Housing          | PBT                 | 4.5470    | PBT                        | 30965-26-5 | 49.00  | 2.228   | 19.6329 |
|                |                  |                     |           | glass fiber                | 65997-17-3 | 35.00  | 1.591   |         |
|                |                  |                     |           | brominated flame retardant |            | 10.00  | 0.455   |         |
|                |                  |                     |           | antimony trioxide          | 1309-64-4  | 6.00   | 0.273   |         |
| 6              | Tab              | Silver solder Alloy | 0.0100    | Silver                     | 7440-22-4  | 56.00  | 0.006   | 0.0432  |
|                |                  |                     |           | copper                     | 7440-50-8  | 22.00  | 0.002   |         |
|                |                  |                     |           | Zinc                       | 7440-66-6  | 17.00  | 0.002   |         |
|                |                  |                     |           | Tin                        | 7440-31-5  | 5.00   | 0.001   |         |
|                |                  |                     |           | Nickel                     | 7440-02-0  | 0.15   | 0.000   |         |
| 7              | T.R Terminal X 3 | Brass               | 0.0820    | Copper                     | 7440-50-8  | 97.47  | 0.080   | 0.3541  |
|                |                  |                     |           | Cobalt                     | 7440-48-4  | 0.10   | 0.000   |         |
|                |                  |                     |           | Beryllium                  | 7440-41-7  | 0.03   | 0.000   |         |
|                |                  | Under Plating       | 0.0021    | Nickel                     | 7440-02-0  | 100.00 | 0.002   | 0.0091  |
| Finish Plating | 0.0030           | Gold                | 7440-57-5 | 100.00                     | 0.003      | 0.0130 |         |         |
| 8              | Epoxy            | Epoxy BP-8          | 0.0450    | epoxy resin                | 25085-99-8 | 51.00  | 0.02    | 0.1943  |
|                |                  |                     |           | silicon dioxide            | 7440-21-3  | 34.00  | 0.02    |         |
|                |                  |                     |           | kaolin clay                | 1332-58-7  | 15.00  | 0.01    |         |
| 9              | Retaining Ring   | Stain Steel         | 0.07900   | Chromium                   | 7440-47-3  | 13.00  | 0.01027 | 0.3411  |
|                |                  |                     |           | Carbon                     | 7440-44-0  | 1.00   | 0.00079 |         |
|                |                  |                     |           | Silicon                    | 7440-21-3  | 1.00   | 0.00079 |         |
|                |                  |                     |           | Manganese                  | 7439-96-3  | 1.00   | 0.00079 |         |
|                |                  |                     |           | Iron                       | 1309-37-1  | 84.00  | 0.06636 |         |

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|    |         |                 |         |                            |            |       |        |         |
|----|---------|-----------------|---------|----------------------------|------------|-------|--------|---------|
| 10 | Lid     | PBT             | 0.77000 | PBT                        | 30965-26-5 | 49.00 | 0.3773 | 3.3247  |
|    |         |                 |         | glass fiber                | 65997-17-3 | 35.00 | 0.2695 |         |
|    |         |                 |         | brominated flame retardant |            | 10.00 | 0.0770 |         |
|    |         |                 |         | antimony trioxide          | 1309-64-4  | 6.00  | 0.0462 |         |
| 11 | Bushing | Aluminum        | 1.17000 | aluminum                   | 7429-90-5  | 0.075 | 0.001  | 5.0518  |
|    |         |                 |         | copper                     | 7440-50-8  | 0.100 | 0.001  |         |
| 12 | Rotor   | PBT             | 1.56200 | PBT                        | 30965-26-5 | 49.00 | 0.7654 | 6.7444  |
|    |         |                 |         | glass fiber                | 65997-17-3 | 35.00 | 0.5467 |         |
|    |         |                 |         | brominated flame retardant |            | 10.00 | 0.1562 |         |
|    |         |                 |         | antimony trioxide          | 1309-64-4  | 6.00  | 0.0937 |         |
| 13 | Shaft   | Stainless steel | 8.79100 | carbon                     | 7440-44-0  | 0.15  | 0.0132 | 37.9576 |
|    |         |                 |         | manganese                  | 7439-96-5  | 2.00  | 0.1758 |         |
|    |         |                 |         | phosphorus                 | 7723-14-0  | 0.20  | 0.0176 |         |
|    |         |                 |         | sulfur                     | 7704-34-9  | 0.15  | 0.0132 |         |
|    |         |                 |         | silicon                    | 7440-21-3  | 0.90  | 0.0791 |         |
|    |         |                 |         | chromium                   | 7440-47-3  | 18.00 | 1.5824 |         |
|    |         |                 |         | nickel                     | 7440-02-0  | 9.00  | 0.7912 |         |
|    |         |                 |         | iron                       | 7439-89-6  | 69.00 | 6.0658 |         |
|    |         |                 |         | molybdenum                 | 7439-98-7  | 0.60  | 0.0527 |         |
| 14 | Washer  | Stainless steel | 0.0235  | carbon                     | 7440-44-0  | 0.15  | 0.00   | 0.1015  |
|    |         |                 |         | manganese                  | 7439-96-5  | 2.00  | 0.00   |         |
|    |         |                 |         | phosphorus                 | 7723-14-0  | 0.05  | 0.00   |         |
|    |         |                 |         | sulfur                     | 7704-34-9  | 0.03  | 0.00   |         |
|    |         |                 |         | silicon                    | 7440-21-3  | 1.00  | 0.00   |         |
|    |         |                 |         | chromium                   | 7440-47-3  | 17.00 | 0.00   |         |

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|                |                       |                  |           |                            |            |        |         |        |
|----------------|-----------------------|------------------|-----------|----------------------------|------------|--------|---------|--------|
|                |                       |                  |           | nickel                     | 7440-02-0  | 7.00   | 0.00    |        |
|                |                       |                  |           | iron                       | 7439-89-6  | 72.78  | 0.02    |        |
| 15             | Washer                | Teflon           | 0.0145    | Polytetrafluoroethylene    | 9002-84-0  |        | 0.00    | 0.0626 |
| 16             | Slider                | Polyamide        | 0.14100   | Polyamide 66               | 32131-17-2 | 90.00  | 0.13    | 0.6088 |
|                |                       |                  |           | glass fiber                | 65997-17-3 | 10.00  | 0.01    |        |
| 17             | Contact Spring        | Palmet           | 0.01000   | Copper                     | 7440-50-8  | 16.00  | 0.00    | 0.0432 |
|                |                       |                  |           | Nickel                     | 7440-02-0  | 1.00   | 0.00    |        |
|                |                       |                  |           | Palladium                  | 7440-05-3  | 1.00   | 0.00    |        |
|                |                       |                  |           | Platinum                   | 7440-06-4  | 44.00  | 0.00    |        |
|                |                       |                  |           | Silver                     | 7440-22-4  | 38.00  | 0.00    |        |
| 18             | Collector Bar         | Beryllium Copper | 0.02240   | Copper                     | 7440-50-8  | 98.10  | 0.0220  | 0.0967 |
|                |                       |                  |           | Silicon                    | 7440-21-3  | 0.20   | 0.0000  |        |
|                |                       |                  |           | Beryllium                  | 7440-41-7  | 1.50   | 0.0003  |        |
|                |                       |                  |           | Aluminum                   | 7429-90-5  | 0.20   | 0.0000  |        |
|                |                       | Under Plating    | 0.00320   | Nickel                     | 7440-02-0  | 100.00 | 0.0032  | 0.0138 |
| Finish Plating | 0.00320               | Gold             | 7440-57-5 | 100.00                     | 0.0032     | 0.0138 |         |        |
| 19             | Cover                 | PBT              | 1.06600   | PBT                        | 30965-26-5 | 49.00  | 0.52234 | 4.6028 |
|                |                       |                  |           | glass fiber                | 65997-17-3 | 35.00  | 0.37310 |        |
|                |                       |                  |           | brominated flame retardant |            | 10.00  | 0.10660 |        |
|                |                       |                  |           | antimony trioxide          | 1309-64-4  | 6.00   | 0.06396 |        |
| 20             | Epoxy (Lid and Cover) | Epoxy BP-22      | 0.2320    | Epoxy resin                | 25085-99-8 | 61.00  | 0.14    | 1.0017 |
|                |                       |                  |           | silicon dioxide            | 7440-21-3  | 23.00  | 0.05    |        |
|                |                       |                  |           | kaolin clay                | 1332-58-7  | 16.00  | 0.04    |        |
| 21             | Wiper Terminal        | Brass            | 0.32290   | Copper                     | 7440-50-8  | 94.80  | 0.30611 | 1.3942 |
|                |                       |                  |           | Tin                        | 7440-31-5  | 5.00   | 0.01615 |        |

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|    |      |                |              |                                                                |            |        |         |        |
|----|------|----------------|--------------|----------------------------------------------------------------|------------|--------|---------|--------|
|    |      |                |              | Phosphorus                                                     | 7723-14-0  | 0.20   | 0.00065 |        |
|    |      | Under Plating  | 0.00075      | Nickel                                                         | 7440-02-0  | 100.00 | 0.00075 | 0.0032 |
|    |      | Finish Plating | 0.00160      | Gold                                                           | 7440-57-5  | 100.00 | 0.00160 | 0.0069 |
| 22 | Lube | Lube 799       | 0.00090      | Decanoic acid, mixed esters with heptanoic acid, octanoic acid | 68130-53-0 | 54.40  | 0.00049 | 0.0039 |
|    |      |                |              | Lithium 12-hydroxystearate                                     | 7620-77-1  | 5.70   | 0.00005 |        |
|    |      |                |              | Isohexadecylisooctadecanoate                                   | 52006-45-8 | 33.70  | 0.00030 |        |
|    |      |                |              | Polyisobutylene                                                | 9003-27-4  | 6.20   | 0.00006 |        |
| 23 | Lube | Versilube G321 | 0.00090      | Siloxanes and Silicones, di-Me, di-Ph                          | 68038-14-7 | 68.9   | 0.00062 | 0.0039 |
|    |      |                |              | Lithium stearate                                               | 4485-12-5  | 25.4   | 0.00023 |        |
|    |      |                |              | Silane, dichlorodimethyl-reaction products with silica         | 68611-44-9 | 4.8    | 0.00004 |        |
|    |      |                |              | Diphenylamine                                                  | 122-39-4   | 0.9    | 0.00001 |        |
|    |      | Total weight   | <b>23.16</b> |                                                                |            |        |         |        |

**This Document was updated on:** September/03/14

**Important remarks:**

1. It is the responsibility of the user to verify they are accessing the latest version.
2. Please see RoHS Certificate of Compliance for exemptions used.