

# RAAPLAS INTERNATIONAL LTD.



## Additive Layer Manufacturing Metal Powders

|  | Alloy   | Chemical Composition  |   | UNS    | ASTM               | ISO                       | AMS                  | DIN              | Similar Powders |
|--|---------|---|---|--------|--------------------|---------------------------|----------------------|------------------|-----------------|
| <b>Nickel &amp; Cobalt Based Powders</b> |         |   |   |        |                    |                           |                      |                  |                 |
| LPW CoCr-1LC                             | CoCrMo  | C 0.16 max<br>Si 1.0 max<br>Ni 0.50 max<br>Fe 0.75 max<br>P 0.020 max<br>Ti 0.10 max<br>B 0.010 max   | Mn 1.0 max<br>Cr 27.0-30.0<br>Mo 5.0-7.0<br>S 0.010 max<br>Al 0.10 max<br>W 0.20 max<br>Co Bal                                      | 31537  | F1527<br>F75       | ISO 5832-4<br>ISO 5832-12 |                      |                  | MP1             |
| LPW 718-2                                | 718     | Al 0.30-0.70<br>Ca 0.01 max<br>Cr 17.0-21.0<br>Na+Ta 4.75-5.50<br>Fe 15.0-21.0<br>Mn 0.35 max<br>Ni 50.0-55.0<br>Se 0.005 max<br>Ti 0.75-1.15 | B 0.006 max<br>C 0.02-0.08<br>Co 1.0 max<br>Cu 0.30 max<br>Mg 0.01 max<br>Mo 2.80-3.30<br>P 0.015 max<br>Si 0.35 max<br>S 0.015 max | 7718   | B537<br>B670       |                           | AMS 5832<br>AMS 5596 | 2.4668           | IN718           |
| LPW 625-2                                | 625     | Mo 8.0-10.0<br>Nb+Ta 3.15-4.15<br>Ti 0.40 max<br>Fe 3.0- 5.0<br>Mg 0.50 max<br>Mn 0.50 Max<br>S 0.015 max<br>Ni Bal                           | Co 1.0 max<br>Al 0.40 max<br>C 0.10 max<br>Si 0.50 max<br>P 0.015 max<br>Cr 20.0-23.0<br>Cu 0.50 max                                | 6625   | 446 Gr1<br>443 Gr1 |                           | AMS 5599<br>AMS 5666 | 2.4856           | IN625           |
| <b>Iron Based Powders</b>                |         |   |   |        |                    |                           |                      |                  |                 |
| LPW M300-1                               | 18Ni300 | C 0.03 max<br>Si 0.10 max<br>Mo 4.50-5.20<br>Ti 0.80-1.20<br>S 0.010  | Mn 0.15<br>Ni 17.0-19.0<br>Co 8.50-10.0<br>P 0.010 max<br>Fe Bal  |        |                    |                           | AMS 6514             | 1.2709           | MS1             |
| LPW 174-1                                | 17-4ph  | Cr 15.0-17.0<br>Cu 3.0-5.0<br>Si 1.0 max<br>Nb+Ta 0.15-0.45<br>Fe Bal   | Ni 3.0-5.0<br>Mn 1.0 max<br>Mo 1.0 max<br>C 0.10 max  | 17400  | A708               | ISO15156-3                | AMS 5604<br>AMS 5643 | 1.4548           | GP1             |
| LPW 155-1                                | 15-5ph  | Cr 14.0-15.0<br>Cu 2.5-4.5<br>Si 1.0 max<br>Nb 0.15-0.45<br>Fe Bal  | Ni 3.5-5.5<br>Mn 1.0 max<br>Mo 0.5 max<br>C 0.07 max  | S15500 | A564<br>A693       |                           | AMS 5659<br>AMS 5862 |                  | PH1             |
| LPW 316-1                                | SS 316L | C 0.03 max<br>Mn 2.0 max<br>S 0.01 max<br>Ni 12.5-13<br>Cu 0.50 max   | Si 0.75 max<br>P 0.025 max<br>Cr 17.5-18.0<br>Mo 2.25-2.50<br>Fe Bal  | S31673 | F138<br>F745       | ISO 5832-1                |                      | 1.4404<br>1.4401 |                 |

|                                | Alloy     | Chemical Composition %  |   | UNS    | ASTM               | ISO        | AMS                              | DIN       | Similar Powders |
|--------------------------------|-----------|---|---|--------|--------------------|------------|----------------------------------|-----------|-----------------|
| <b>Titanium Based Powders</b>  |           |   |   |        |                    |            |                                  |           |                 |
| LPW Ti6-4 -2                   | Ti6-4     | Al 5.5-6.5<br>N 0.03 max<br>H2 0.0125 max<br>O 0.20 max<br>Res Total 0.4          | V 3.5-4.5<br>C 0.08 max<br>Fe 0.25 max<br>Res Each 0.1<br>Ti Bal    | R56400 | F1472<br>B348 gr 5 | ISO 5832-3 | AMS 4954<br>AMS 4911<br>AMS 4928 | 3.7164    | Ti64            |
| LPW Ti6-4ELI-2                 | Ti6-4 ELI | Al 5.5-6.5<br>N 0.03 max<br>H2 0.0125 max<br>O 0.13 max<br>Res Total 0.4          | V 3.5-4.5<br>C 0.08 max<br>Fe 0.25 max<br>Res Each 0.1<br>Ti Bal    | R56401 | F136<br>B348 gr 23 | ISO 5832-3 | AMS 4956                         |           |                 |
| LPW CpTi1-2                    | CpTi gr 1 | N 0.03 max<br>H2 0.015 max<br>O 0.18 max<br>Res Total 0.4                         | C 0.08 max<br>Fe 0.20 max<br>Res Each 0.1<br>Ti Bal                 | R50250 | F67<br>B348 gr 1   | ISO 5832-2 |                                  |           |                 |
| LPW CPTi2-2                    | CpTi gr 2 | N 0.03 max<br>H2 0.015 max<br>O 0.25 max<br>Res Total 0.4                         | C 0.08 max<br>Fe 0.30 max<br>Res Each 0.1<br>Ti Bal                 | R50400 | F67<br>B348 gr 2   | ISO 5832-2 | AMS 4921<br>AMS 4902             |           |                 |
| <b>Aluminium Based Powders</b> |           |   |   |        |                    |            |                                  |           |                 |
| LPWAlSi10Mg-1                  | AlSi10Mg  | Si 9.0-11.0<br>Fe 0.55 max<br>Cu 0.05 max<br>Mn 0.45 max<br>Sn 0.05 max<br>Al Bal | Mg 0.2-0.45<br>Ni 0.05 max<br>Zn 0.10 max<br>Pb 0.05<br>Ti 0.15 max | A13600 | A03600             |            |                                  | 3.2381.01 |                 |

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