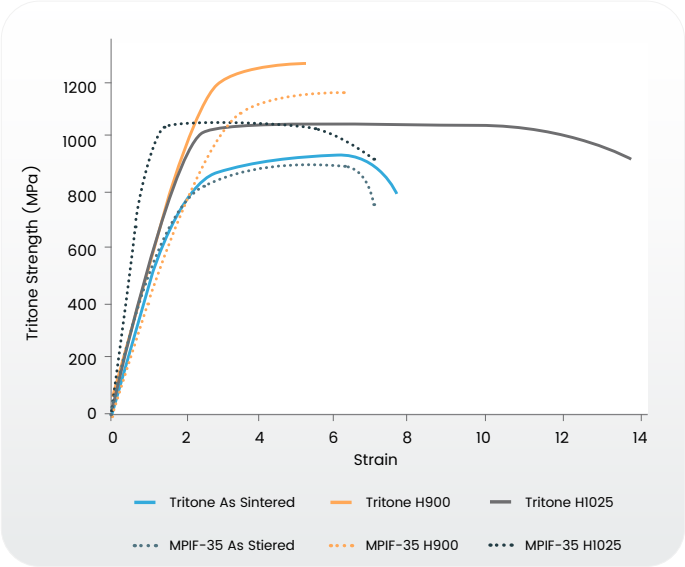
MATERIAL DATASHEET

# 17-4 PH STEEL

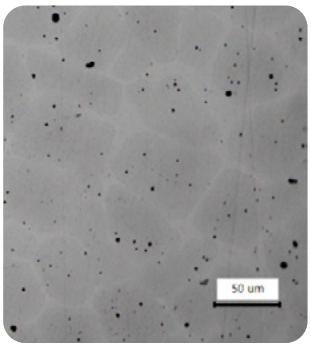
## COMPOSITION (ASTM A564-04)

| Composition | Amount |
|---|---|
| Carbon | 0.07% max |
| Silicon | 1.0% max |
| Manganese | 1.0% max |
| Phosphorous | 0.04% max |
| Sulfur | 0.03% max |
| Chromium | 15.0-17.5% |
| Nickel | 3.0-5.0% |
| Copper | 3.0-5.0% |
| Niobium, Tantalum | 0.15-0.45% |
| Iron | Bal. |




## TYPICAL MECHANICAL PROPERTIES - AS SINTERED

| Properties | Standard | Tritone As sintered | MIM MPIF-35 |
|---|---|---|---|
| Ultimate Tensile Strength | ASTM E8 | 940 MPa | 1070 MPa |
| 0.2% Yield Strength | ASTM E8 | 730 MPa | 1000 MPa |
| Elongation at Break | ASTM E8 | >6.5% | 12% |
| Hardness | ASTM E18 | 27 HRC | 35 HRC |
| Relative Density | ASTM B962 | >98% | 100% |




## TYPICAL MECHANICAL PROPERTIES – HEAT TREATED

| | | H900 | | H1025 | |
|---|---|---|---|---|---|
| Properties | Standard | Tritone | MIM MPIF-35 | Tritone | MIM MPIF-35 |
| Ultimate Tensile Strength | ASTM E8 | 1260 MPa | 1190 MPa | 1070 MPa | 1070 MPa |
| 0.2% Yield Strength | ASTM E8 | 1120 MPa | 1090 MPa | 1015 MPa | 1000 MPa |
| Elongation at Break | ASTM E8 | 6% | 6% | 14% | 7% |
| Hardness | ASTM E18 | 40 HRC | 35 HRC | 35 HRC | 31 HRC |

The mechanical properties are typical values obtained by independent laboratory from parts processed in an industrial sintering furnace.