



Metaltech srl | Via Saviabona 113/G | 36010 | Cavazzale di Monticello Conte Otto (VI) | ITALIA C.F. e P.IVA 03955300243 | Reg. Imprese VI: 03955300243 | REA: VI - 367516 | Cap. Soc. € 10.000,00 i.v.





## **TECHNICAL DATA SHEET** SPARK595HD

Alloy for the production of bronze items, jewels and models obtained by investment casting. The elements contained in this product ensure a high deoxidation after casting and a high surface quality, making it suitable for castings with and without stones in place.

TAB.1 - Mechanical data

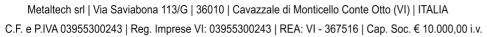
| Hardness as cast            |                       | 130        | HV        |  |  |
|-----------------------------|-----------------------|------------|-----------|--|--|
| Hardness hardened           |                       | 350        | HV        |  |  |
| Tensile strength            |                       | n.d.       |           |  |  |
| Yield strength              |                       | n.d.       |           |  |  |
| Elongation                  |                       | n.d.       |           |  |  |
| TAB.2 - Physical data       |                       |            |           |  |  |
| Color                       | Pale yellow           |            |           |  |  |
| Colour Coordinates          | n.d.                  |            |           |  |  |
| Density                     |                       | 8.31       | g/cm3     |  |  |
| Melting Range               | Solidus:<br>Liquidus: | 900<br>995 | °C<br>°C  |  |  |
| TAB.3 - Heat treatments     |                       |            |           |  |  |
| Solution annealing          |                       | 660<br>30  | °C<br>min |  |  |
| Recrystallization Annealing |                       | 660<br>30  | °C<br>min |  |  |
| Hardening                   |                       | 350<br>180 | °C<br>min |  |  |











## TAB.4 - Investment casting parameters

| Premelting temperature                 |                          | 1095           | °C                      |
|--|--------------------------|----------------|-------------------------|
| Casting Temperature                    | Min:<br>Max:             | 1045<br>1145   | °C                      |
| Water investment powder ratio          |                          | 36-38          | %                       |
| Flask temperature                      | Min:<br>Max:             | 450<br>700     | °C                      |
| Quenching time without stones in place | Min:<br>Max:             | 5<br>20        | min<br>min              |
| Quenching time with stones in place    |                          | 15             | min<br>in boiling water |
| Pickling                               | H2SO4:<br>Temp:<br>Time: | 20<br>50<br>50 | %<br>°C<br>min          |