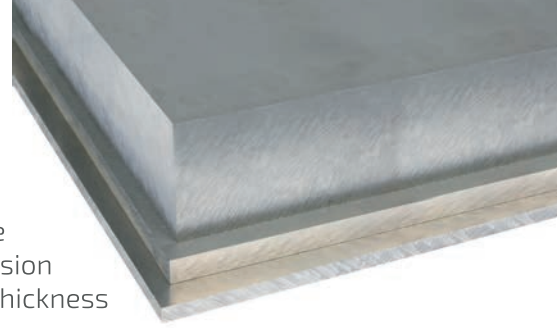




SPECIAL ALLOYS FOR MOULDS

CERTAL® SPC

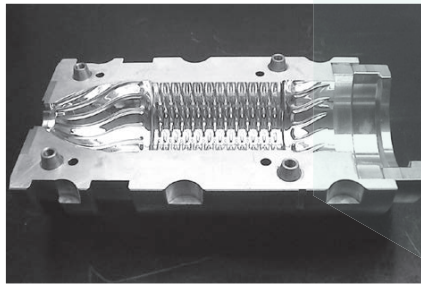
Certal® SPC has been optimized to provide excellent machinability, good dimensional weldability and high mechanical resistance across the entire thickness of the plate. Typical applications include injection and compression moulds for plastics. It is distinguished from Certal® by the availability in thickness over 150mm.



CHEMICAL COMPOSITION (WEIGHT %)

| ELEMENTS | Si | Fe | Cu | Mn | Mg | Cr | Zn | Zr | Ti |
|----------|------|------|-----|-----|-----|-----|-----|------|------|
| Minimum | - | - | 0.5 | - | 2.6 | - | 4.3 | 0.15 | - |
| Maximum | 0.25 | 0.35 | 1.0 | 0.1 | 3.7 | 0.1 | 5.2 | 0.25 | 0.15 |

Information transcribed from the supplier datasheet.



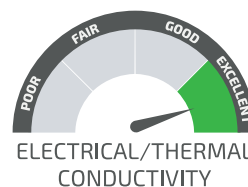
MAIN CHARACTERISTICS

- Excellent machining
- Good shape stability and high uniform mechanical properties (on plate thickness)
- High thermal conductivity (shorter cycles) and possibility of thicker parts
- Uniform resistance
- It is possible to weld* (TIG/MIG)

* Welding for recharging is possible under certain conditions. The reduction of the resistance in the welding area must be considered.

APPLICATIONS

- Hydraulic distribution blocks
- Injection and compression moulds for plastics
- Injection-blow moulds
- Thermoformed moulds
- End baseboards
- Machine elements
- Moulds for toys and automotive industry
- Industrial tools and related holders
- Mechanical guides





SPECIAL ALLOYS FOR MOULDS

MECHANICAL PROPERTIES

MINIMUM GUARANTEED VALUES

| ESPESSURAS (de...até) | Rm (MPa) | Rp0.2 (MPa) | A50 (%) |
|-----------------------|----------|-------------|---------|
| 150 - 240 mm | 510 | 440 | 4 |
| 240 - 305 mm | 490 | 430 | 2 |

Information transcribed from the supplier datasheet.

TYPICAL MECHANICAL VALUES BY DIFFERENT THICKNESSES

| ESPESSURAS (de...até) | Rm (MPa) | Rp0.2 (MPa) | A50 (%) | HB - BRINELL DUREZA |
|-----------------------|----------|-------------|---------|---------------------|
| 150 - 240 mm | 530 | 460 | 7 | 160 |
| 240 - 305 mm | 520 | 450 | 5 | 140 |

Information transcribed from the supplier datasheet.

PHYSICAL PROPERTIES

| | |
|------------------------------|---------------------------------------|
| DENSITY | 2.76 g/cm ³ |
| MODULUS OF ELASTICITY | 72 000 MPa |
| LINEAR EXPANSION COEFFICIENT | 23.6 10 ⁻⁶ K ⁻¹ |
| THERMAL CONDUCTIVITY | 150 W/mK |
| ELECTRICAL CONDUCTIVITY | 18 - 22 MS/m |

DELIVERY PROGRAM

PLATES

| THICKNESSES (mm) | DIMENSIONS (mm) | PLATE WEIGHT (kg) | STOCK T652 |
|------------------|-----------------|-------------------|------------|
| 150 | 3020 x 1520 | 1900.426 | ● |
| 160 | 3020 x 1520 | 2027.121 | ● |
| 180 | 3020 x 1520 | 2280.511 | ● |
| 200 | 3020 x 1520 | 2533.901 | ● |

Average production weights.

CERTAL® vs CERTAL® SPC

- Certal® is available up to 150mm thickness
- Certal® SPC is available from 150 mm up to 200 mm thickness