# ATT 2085 MOD

## CHEMICAL ANALYSIS (PERCENTAGE BY MASS)

| | C | Si | Mn | P | S | Cr | Ni |
|---|---|---|---|---|---|---|---|
| Guide analysis | 0.34 | 0.30 | 0.95 | 0.025 | 0.100 | 15.0 | |
| Standard | 0.28 – 0.38 | ≤ 1.00 | ≤ 1.40 | ≤ 0.030 | 0.050-0.100 | 15.00 - 17.00 | ≤ 1.00 |

## CHARACTERISTICS

Corrosion-resistant mold steel with higher sulfur content compared with ATT 2316 MOD for very good machining properties.

| | |
|---|---|
| SEL | X33CrS16 |
| AFNOR | ~Z33CS16 |
| AISI | ~422 + S |

## APPLICATION

Mold frames and mold assemblies for corrosion-resistant injection molding dies.

Not suitable for contour-giving mold parts.

## DELIVERED CONDITION

Quneched and tempered to 265 – 310 HB.*

## PHYSICAL PROPERTIES

| | | | |
|---|---|---|---|
| Thermal Conductivity (W/m.K) at | 20°C | 250°C | 500°C |
| | 23.0 | 24.0 | 25.0 |
| Thermal Expansion (µm/m) from 20°C to | 100°C | 250°C | 500°C |
| | 10.0 | 12.0 | 13.2 |
| Young's modulus (GPa) | 20°C | 250°C | 500°C |
| | 215 | 203 | 180 |

* Surface hardness in Brinell, converted to DIN EN ISO 18265 Table A.1.

**Advanced Tooling Tek Shanghai Co., Ltd.**
1F-A, 2F-A, No.1, Lane 499, Xin Miao San Rd.,
Xinqiao Town, Songjiang Dist., Shanghai China
Tel: +86 21 3373 8146 | info@att-metal.com

www.att-metal.com WeChat



ATT 2085 MOD

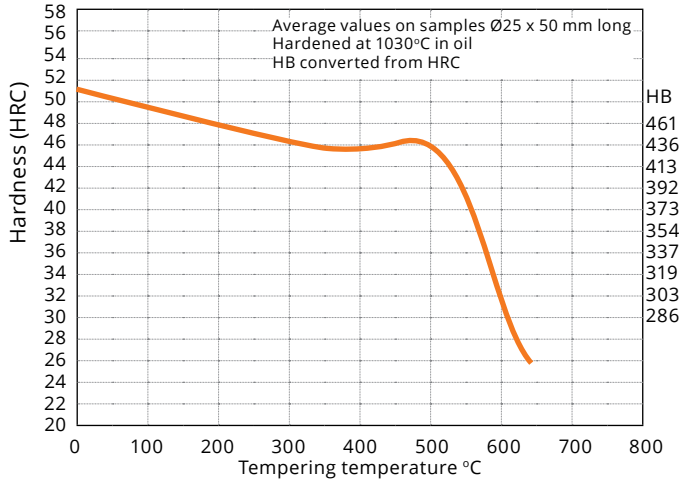
20260415

# ATT 2085 MOD

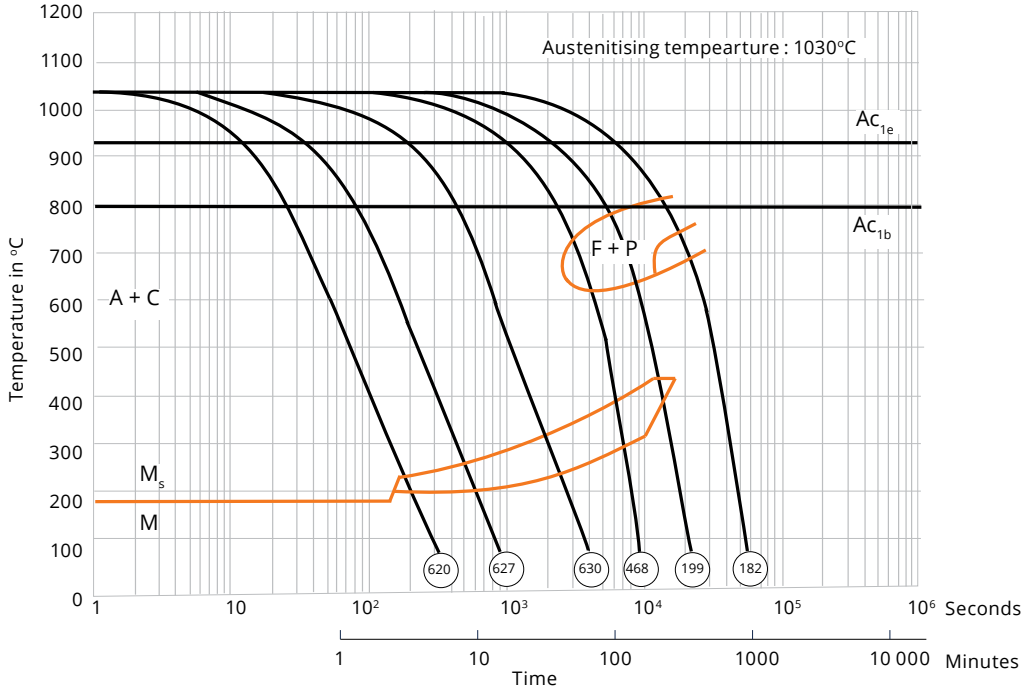
## HEAT TREATMENT

| | | |
|---|---|---|
| Stress relieving | Temperature | Approx. 500°C in the quenched and tempered state |
| | Duration | 1 hour per 50 mm wall thickness |
| | Cooling | Furnace |
| Soft annealing | Temperature | 820°C |
| | Duration | 1 hour per 25mm wall thickness |
| | Cooling | Furnace |
| Hardening | Temperature | 1030°C |
| | Duration | 1 min per mm wall thickness |
| Quenching hardness | Max. 48 HRC | in oil or vacuum |
| Tempering | Temperature | See tempering curve |
| | Duration | 1 hour per 25 mm wall thickness |
| | Cooling | Air |
| Working hardness | 265-310 HB | |

### Tempering curve




### TTT curve (continuous)






ATT 2085 MOD

20260415