

TKM 2085 / 2394

AISI: —

Other designations

Germany : X 30 Cr Mo S 17
Euronorm : X 33 Cr S 16

Old designations

THYROPLAST 2394

Applications areas

Thin-walled mould frames with cooling circuit at temperatures of 10°C and below. Inserts and moulds required to withstand corrosion.

Steel properties

Steel with added sulphide to improve its machinability.

This prehardened grade at 1095-1240 Mpa (or 320-365 HB or 34-39 HRC) is used for producing moulds for corrosive plastic or rubber materials. Further quenching and tempering is not recommended owing to the risk of quench cracks.

Chemical composition

typical analysis in %

| C | Cr | Mo | S |
|------|------|------|-------|
| 0,30 | 16,5 | 1,20 | 0,060 |

Traitement thermique

| | |
|------------------------|-------------|
| Recuit d'adoucissement | 850-880 °C |
| Refroidissement | au four |
| Dureté | 230 HB maxi |

Physical Properties

| Thermal conductivity | | | |
|----------------------|------|------|------|
| ° C | 20 | 350 | 700 |
| W/(m.k) | 22,5 | 25,7 | 26,2 |

| Thermal expansion | | | | |
|----------------------------|--------|--------|--------|--------|
| ° C | 20-100 | 20-200 | 20-300 | 20-400 |
| 10 ⁻⁶ m / (m.k) | 11,1 | 11,5 | 11,6 | 11,7 |

Etat de livraison

Hardness as delivered for 1095-1240 MPa, 320-365 HB or 34-39 HRC (quenched and tempered).

Available stock

Square bars

| Dimension, mm | | | | | | | | | | |
|---------------|----|----|----|----|----|--|--|--|--|--|
| 20 | 25 | 30 | 40 | 50 | 60 | | | | | |

Flat bars

Hardened and tempered for 950-1100 MPa

| mm | 105 | 115 | 120 | 125 | 135 | 150 | 165 | 175 | 205 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1700 | | | | | | | | | ● |

| mm | 20 | 25 | 30 | 40 | 50 | 60 | 80 | 100 | 125 | 150 | 200 |
|----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| 8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 10 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 15 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 30 | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| 40 | | | | | ● | ● | ● | ● | ● | ● | ● |

TKM 2085 / 2394

AISI: —

Flat bars - Square bars - Ground

Precision ground material with machining allowance

Length: 1000 mm

Tolerances: on thickness: - 0.4 / + 0.65

on width: - 0.4 / + 0.8

on length: - 0 / + 30

| mm | 20 | 25 | 30 | 40 | 50 | 60 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| 8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 10 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 15 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 30 | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 40 | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 50 | | | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| 60 | | | | | | | ● | ● | ● | ● | ● | ● | ● |