

# SIQUAL<sup>™</sup> 0503

## MEDIUM CARBON STEEL

**SIQUAL 0503** is a medium carbon steel intended for the manufacture of quenched and tempered or hardened machine parts.

### SPECIFICATIONS

SIQUAL 0503 is designated as C45 according to EN 10027-1 and as W.Nr. 1.0503, and conforms to the following standard:

- EN ISO 683-1:2018 – Heat treatable steels, alloy steels and free-cutting steels – Part 1: Non alloy steels for quenching and tempering

### CHEMICAL COMPOSITION

|           | C    | Mn   | Si   | P     | S     | Cr   | Ni   | Mo   | Cr+Mo+Ni |
|-----------|------|------|------|-------|-------|------|------|------|----------|
| Min. in % | 0.42 | 0.50 | 0.10 | -     | -     | -    | -    | -    | 0.63     |
| Max. in % | 0.50 | 0.80 | 0.40 | 0.045 | 0.045 | 0.40 | 0.40 | 0.10 |          |

\* Internally prescribed values

### MECHANICAL PROPERTIES

Hardness in as-rolled condition can be given as informative value.

According to EN ISO 683-1:2018

| Delivery condition | Thickness [mm] | R <sub>eH</sub> (R <sub>p0.2</sub> ) [MPa] | R <sub>m</sub> [MPa] | A <sub>5</sub> [%] |
|--------------------|----------------|--|----------------------|--------------------|
| Normalized (+N)    | ≤ 16           | min. 340                                   | min. 620             | min. 14            |
|                    | 16–100         | min. 305                                   | min. 580             | min. 16            |

### DIMENSIONS

|                             | Hot-rolled strip | Hot-rolled sheets | Hot-rolled quarto plates |
|-----------------------------|------------------|-------------------|--------------------------|
| Thickness [mm]              | 3–6              | 3–6               | 8–*                      |
| Width [mm]                  | 100–1000         | 800–1000          | 1000–2500                |
| Length [mm]                 | -                | 2000–6000         | up to 12000              |
| Internal coil diameter [mm] | 610              | -                 | -                        |

\*Max. thickness shall be discussed at the time of inquiry.

## **TOLERANCES ON DIMENSIONS**

- Hot-rolled quarto plates: EN 10029
- Hot-rolled strips/sheets: EN 10051

## **SURFACE CONDITION**

According to EN 10163-2 or by special agreement.

## **DELIVERY CONDITION**

| Hot-rolled strip/sheet     |                           | Hot-rolled quarto plates   |                           |                            |
|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|
| as-rolled (+ shot-blasted) | annealed (+ shot-blasted) | as-rolled (+ shot-blasted) | annealed (+ shot-blasted) | normalized (+shot-blasted) |

## **INSPECTION DOCUMENTS**

The type of document shall be agreed upon at the time of enquiry and order. A test certificate according to EN 10204/3.1 is issued mandatorily.

The information and data in this product data sheet are intended for informative purpose only and may be revised at any time without notice. Presented typical properties of the materials are described only to help readers make their own evaluations and decisions. They are not guaranteed.