

Alleima 12C27 is a martensitic stainless chromium steel.  
After heat treatment the composition of carbon and chromium gives a unique combination of properties including:

- Very high hardness
- Good corrosion resistance
- Very high wear resistance

Standards

- ASTM: 420
- UNS: S42000

Certificates

Status according to EN 10 204 3.1

Chemical composition (nominal)

| Chemical composition (nominal) % |     |     |        |        |      |
|----------------------------------|-----|-----|--------|--------|------|
| C                                | Si  | Mn  | P      | S      | Cr   |
| 0.60                             | 0.4 | 0.4 | ≤0.025 | ≤0.010 | 13.5 |

Forms of supply

Sizes and tolerances

Round-cornered square, as well as round billets, are produced in a wide range of sizes according to the following tables. Larger sizes offered on request.

Surface conditions

Square billets

Unground, spot ground or fully ground condition.

Round billets

Peel turned or black condition.

**Square billets**

| Size                    | Tolerance | Length  |
|-------------------------|-----------|---------|
| mm                      | mm        | m       |
| 80                      | +/-2      | 4 - 6.3 |
| 100, 114, 126, 140, 150 | +/-3      | 4 - 6.3 |
| 160, 180, 195, 200      | +/-4      | 4 - 6.3 |
| >200 - 350              | +/-5      | 3 - 5.3 |

Sizes and tolerances apply to the rolled/forged condition.

**Peel turned round billets**

| Size                     | Tolerance | Length |
|--------------------------|-----------|--------|
| mm                       | mm        | m      |
| 75 - 200 (5 mm interval) | +/-1      | max 10 |
| >200 - 450               | +/-3      | 3 - 8  |

**Unground round billets**

| Size                     | Tolerance | Length |
|--------------------------|-----------|--------|
| mm                       | mm        | m      |
| 77 - 112 (5 mm interval) | +/-2      | max 10 |
| 124, 134                 | +/-2      | max 10 |
| 127, 147, 157            | +/-2      | max 10 |
| 142, 152, 163            | +/-2      | max 10 |
| 168, 178, 188            | +/-2      | max 10 |
| 183, 193                 | +/-2      | max 10 |

**Other products**

- Hollow bar

**Disclaimer:**

Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes in technical data without notice. This datasheet is only valid for Alleima materials.