

Alleima® 7C27Mo2 is a martensitic stainless steel alloyed with molybdenum that is characterized by good formability. After hardening, the grade has:

- Very good corrosion resistance
- High toughness
- Excellent fatigue strength

Alleima® 7C27Mo2 is typically used for cutters in electric shavers and springs.

Standards

- UNS: S42026
- EN Number: (1.4031)\*

\*) Nearest equivalent grade

Chemical composition (nominal)

Chemical composition (nominal) %						
C	Si	Mn	P	S	Cr	Mo
0.38	0.4	0.6	≤0.025	≤0.010	13.5	1.0

Forms of supply

Strip can be supplied either in coils or as straightened lengths of 0.5 - 4.0 meters (1.6 - 13.1 feet). The coil weight is max. 5 kg/mm (280 lbs/in.) of strip width.

Hardening and tempering of the strip steel is needed to achieve the correct finish and to meet the properties required by the end-user.

Dimensions

Thickness		Width	
mm (in.)		mm (in.)	
Min.	Max	Min.	Max.
0.10 (0.0039)	4.5 (0.177)	5 (0.197)	350 (13.78)

Other sizes can be supplied to meet specific requirements.

## Tolerances

The thickness and width tolerances are +/- tolerances to the nominal size. The normal tolerance classes for most of our strip products are T2 and B1. Tighter tolerances as well as other tolerance limits can be offered upon request.

## Mechanical properties

As-delivered	Tensile strength	Hardness	
	MPa (ksi)	HV	HRB
Annealed	max. 700 (102)	max. 215	max. 94.3
Cold rolled	850-1000 (123-145)	265-315	101.4-106.6

## Physical properties

The physical properties of a steel are related to a number of factors, including alloying elements, heat treatment and manufacturing route, but the data presented below can generally be used for rough calculations.

### Density

g/cm <sup>3</sup>	7.7
lb/in. <sup>3</sup>	0.28

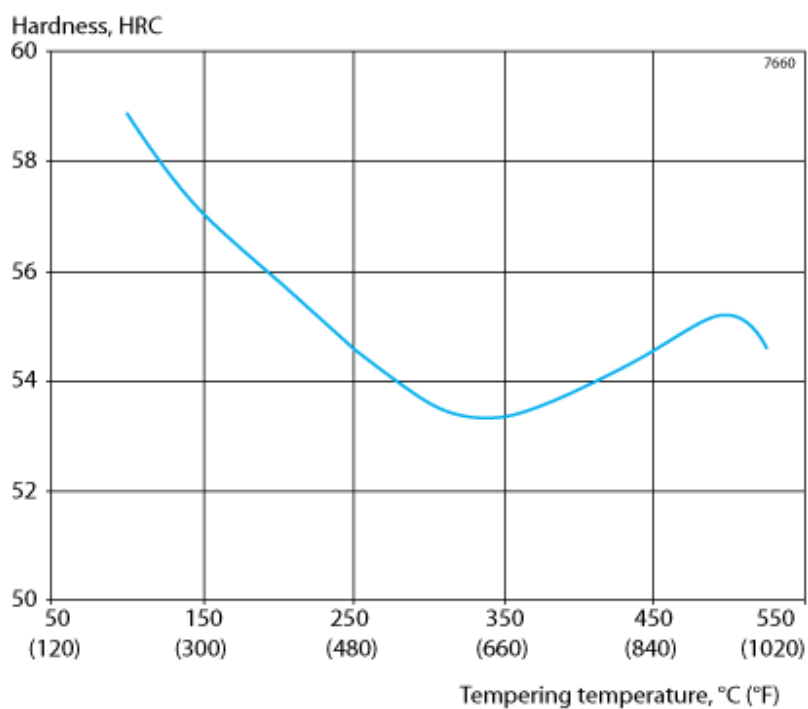
## Heat treatment

### Hardening data

Hardening temperature 1030°C (1885°F), strip thickness 3.5 mm (0.138 in.), holding time 6 minutes, quenching in oil.

### Tempering data

Tempering time 30 minutes.



Brittleness occurs with tempering above 450°C (840°F).

Additional recommendations regarding hardening can be found in Alleima's hardening guide.

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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.