MATERIAL DATA SHEET

AA7020 cold-rolled sheet, 1 mm (CC BY experimental)

Measured base-metal tensile properties for laboratory cold-rolled AA7020 sheet.

Field	Value
Material ID	mdpi-aa7020-cold-rolled-sheet-1mm
Category	Metal
Condition	AA7020 laboratory sheet, hot rolled at 470 degC then cold rolled to 1 mm | sheet
Unit system	Common SI
Unit contract	Material properties stored in SI engineering units.
Generated	2026-11-15 23:20

Source and Validity

Field	Value
Quality	Experimental screening
Design release allowed	No
Source family	Experimental screening dataset
Confidence	Reference-grade
License	Open
Source note	Condition-specific base-material values from a CC BY 4.0 peer-reviewed article.
Citation	Saheed B. Adisa et al., Effect of Laser Welding Process Parameters and Filler Metals on the Weldability and the Mechanical Properties of AA7020 Aluminium Alloy, JMMP 2018, 2, 33, Table 2, https://doi.org/10.3390/jmmp2020033.
Valid temperature	Tensile-test temperature is not stated in Table 2.
Valid pressure	Pressure dependence is not represented.
Valid phase / condition	AA7020 laboratory sheet, hot rolled at 470 degC then cold rolled to 1 mm
Uncertainty	Experimental base-metal values for one laboratory cold-rolled 1 mm sheet; temper and sample statistics are not stated, and the values are not EN minima.
Last reviewed	2026-08-03
Reviewer	scripts/import_mdpi_open_aluminum_public.py
Review status	Checked
Review scope	Checked article CC BY notice, DOI and PDF hash, exact alloy/temper, source geometry, table values, and reported or measured rather than specified-minimum semantics.
Notes	Experimental base-metal values for one laboratory cold-rolled 1 mm sheet; temper and sample statistics are not stated, and the values are not EN minima.
License ID	CC-BY-4.0

Field	Value
License URL	https://creativecommons.org/licenses/by/4.0/
Attribution	Saheed B. Adisa et al.

Material Condition

Field	Value
Condition	AA7020 laboratory sheet, hot rolled at 470 degC then cold rolled to 1 mm
Temper	not stated; do not infer T6
Heat treatment	hot rolled at 470 degC and subsequently cold rolled; no final age treatment stated
Product form	sheet
Thickness / diameter range	1 mm
Test direction	not stated for the Table 2 base-metal values
Processing route	laboratory hot rolling followed by cold rolling
Temperature range	Tensile-test temperature is not stated in Table 2.
Notes	Experimental base-metal values for one laboratory cold-rolled 1 mm sheet; temper and sample statistics are not stated, and the values are not EN minima.

Properties

Mechanical

Property	Value	Unit	Type	Applies to
Tensile yield strength	310.0	MPa	Experimental Measured Screening	laboratory hot-rolled then cold-rolled AA7020 base metal, 1 mm sheet; tensile direction and sample statistics not stated in Table 2
Ultimate tensile strength	372.0	MPa	Experimental Measured Screening	laboratory hot-rolled then cold-rolled AA7020 base metal, 1 mm sheet; tensile direction and sample statistics not stated in Table 2
Elongation	14.0	%	Experimental Measured Screening	laboratory hot-rolled then cold-rolled AA7020 base metal, 1 mm sheet; tensile direction and sample statistics not stated in Table 2

Engineering note: seed solid-material values are reference values only. Verify against the project material specification or supplier data sheet before release.