MATERIAL DATA SHEET

EN AW-5251-H34 sheet, 1.2 mm, supplied state (CC BY experimental)

Five-test mean tensile strength, elongation and Vickers hardness plus measured chemistry for exact EN AW-5251-H34 sheet.

Field	Value
Material ID	mdpi-en-aw-5251-h34-sheet-1p2mm-supply
Category	Metal
Condition	EN AW-5251-H34 sheet in the supplied state before coating-removal thermal cycling | sheet
Unit system	Common SI
Unit contract	Material properties stored in SI engineering units.
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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	Oscar Rodriguez-Alabanda, Pablo E. Romero, and Guillermo Guerrero-Vaca, Evaluation of Substrates of Al-Mg and Aluminized Steel Coated With Non-Stick Fluoropolymers after the Removal of the Coating, Materials 2018, 11, 2309, https://doi.org/10.3390/ma11112309.
Valid temperature	Tensile- and hardness-test temperatures are not stated.
Valid pressure	Pressure dependence is not represented.
Valid phase / condition	EN AW-5251-H34 sheet in the supplied state before coating-removal thermal cycling
Uncertainty	Experimental supply-state means for five tests on one 1.2 mm EN AW-5251-H34 sheet batch. Yield strength, tensile direction and test temperature are not reported. Thermal-cycle results are deliberately excluded. Not an EN minimum.
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.

Field	Value
Notes	Experimental supply-state means for five tests on one 1.2 mm EN AW-5251-H34 sheet batch. Yield strength, tensile direction and test temperature are not reported. Thermal-cycle results are deliberately excluded. Not an EN minimum.
License ID	CC-BY-4.0
License URL	https://creativecommons.org/licenses/by/4.0/
Attribution	Oscar Rodriguez-Alabanda

Material Condition

Field	Value
Condition	EN AW-5251-H34 sheet in the supplied state before coating-removal thermal cycling
Temper	H34 (article describes the supplied state as one-half hard)
Heat treatment	as supplied H34; detailed prior strain-hardening/stabilization route not stated
Product form	sheet
Thickness / diameter range	1.2 mm; test-program units 140 x 120 mm
Test direction	not stated for Table 2 tensile values
Processing route	commercial sheet supplied by CAMEBE; supply-state values retained before thermal cycles
Temperature range	Tensile- and hardness-test temperatures are not stated.
Notes	Experimental supply-state means for five tests on one 1.2 mm EN AW-5251-H34 sheet batch. Yield strength, tensile direction and test temperature are not reported. Thermal-cycle results are deliberately excluded. Not an EN minimum.

Properties

Mechanical

Property	Value	Unit	Type	Applies to
Ultimate tensile strength	255.3	MPa	Experimental Measured Screening	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated
Elongation A50	10.5	%	Experimental Measured Screening	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated
Vickers hardness	70.6	HV0.3	Experimental Measured Screening	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated

Composition

Property	Value	Unit	Type	Applies to
Magnesium mass fraction	1.9	%	Experimental Measured Composition Reference	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated
Silicon mass fraction	0.15	%	Experimental Measured Composition Reference	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated
Iron mass fraction	0.4	%	Experimental Measured Composition Reference	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated
Manganese mass fraction	0.5	%	Experimental Measured Composition Reference	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated
Copper mass fraction	0.1	%	Experimental Measured Composition Reference	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated

Property	Value	Unit	Type	Applies to
Zinc mass fraction	0.3	%	Experimental Measured Composition Reference	EN AW-5251-H34 supplied sheet from CAMEBE, 1.2 mm thick; supply condition before coating-removal thermal cycles; mean of five tests for tensile strength, A50 elongation and Vickers hardness; tensile direction and test temperature not stated

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