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. |
| Generated | 2026-11-15 23:15 |

## 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<br>Measured<br>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<br>Measured<br>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<br>Measured<br>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<br>Measured<br>Composition<br>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<br>Measured<br>Composition<br>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<br>Measured<br>Composition<br>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<br>Measured<br>Composition<br>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<br>Measured<br>Composition<br>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<br>Measured<br>Composition<br>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.