MATERIAL DATA SHEET

EN AW-1070A metallizing wire, 2.7 mm (CC BY composition)

Exact-grade instance composition for source-identified 2.7 mm EN AW-1070A metallizing wire.

Field	Value
Material ID	mdpi-en-aw-1070a-metallizing-wire-2p7mm-composition
Category	Metal
Condition	source-identified EN AW-1070A metallizing wire; delivery temper not stated | 2.7 mm diameter metallizing wire used for thermal-spray coating repair
Unit system	Common SI
Unit contract	Material properties stored in SI engineering units.
Generated	2026-11-15 23:14

Source and Validity

Field	Value
Quality	Unknown
Design release allowed	No
Source family	peer_reviewed_open_article
Confidence	Reference-grade
License	Open
Source note	Table 3 reports the chemical composition of the exact source-identified EN AW-1070A wire, but does not state the analytical method, measurement uncertainty, heat/batch identifier, delivery temper or mechanical properties. Values are instance composition data, not EN 573 acceptance limits, supplier guarantees or design allowables. Aluminum is reported only as rest and is preserved as a non-numeric balance entry.
Citation	K. Zaba and T. Trzepiecinski, The Role of Al-10%Si Coating in the Manufacture and Use of Aluminized Open-Joint Steel Tubes, Materials 15 (2022) 4210, Table 3, doi:10.3390/ma15124210.
Valid temperature	The composition is not supplied with a temperature-dependent validity range.
Valid pressure	Pressure dependence is not represented.
Valid phase / condition	source-identified EN AW-1070A metallizing wire; delivery temper not stated
Uncertainty	Table 3 reports the chemical composition of the exact source-identified EN AW-1070A wire, but does not state the analytical method, measurement uncertainty, heat/batch identifier, delivery temper or mechanical properties. Values are instance composition data, not EN 573 acceptance limits, supplier guarantees or design allowables. Aluminum is reported only as rest and is preserved as a non-numeric balance entry.
Last reviewed	2026-08-03
Reviewer	scripts/import_exact_open_aluminum_public.py

Field	Value
Review status	Checked
Review scope	Checked the CC BY notice, article identity, exact alloy label, source table, units, product geometry and downloaded PDF hash.
Notes	Table 3 reports the chemical composition of the exact source-identified EN AW-1070A wire, but does not state the analytical method, measurement uncertainty, heat/batch identifier, delivery temper or mechanical properties. Values are instance composition data, not EN 573 acceptance limits, supplier guarantees or design allowables. Aluminum is reported only as rest and is preserved as a non-numeric balance entry.
License ID	CC-BY-4.0
License URL	https://creativecommons.org/licenses/by/4.0/
Attribution	Zaba and Trzepiecinski (2022), Materials 15, 4210

Material Condition

Field	Value
Condition	source-identified EN AW-1070A metallizing wire; delivery temper not stated
Temper	not stated
Heat treatment	not stated
Product form	2.7 mm diameter metallizing wire used for thermal-spray coating repair
Thickness / diameter range	2.7 mm diameter
Test direction	not applicable to chemical composition
Processing route	metallizing wire fed continuously to a thermo-mechanical spray process
Temperature range	The composition is not supplied with a temperature-dependent validity range.
Notes	Composition applies to the source's identified 2.7 mm EN AW-1070A metallizing wire only.

Properties

Chemical

Property	Value	Unit	Type	Applies to
Iron mass fraction	0.12	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Silicon mass fraction	0.07	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Copper mass fraction	0.002	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Zinc mass fraction	0.008	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Titanium mass fraction	0.001	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Vanadium mass fraction	0.001	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Chromium mass fraction	0.001	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Manganese mass fraction	0.002	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Magnesium mass fraction	0.002	%	Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire
Aluminum balance	rest		Source Reported Material Composition Screening	source-identified 2.7 mm diameter EN AW-1070A metallizing wire

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