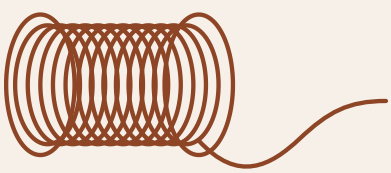
SAUDI TRADE · 2023–2025 / INDEPENDENT RESEARCH

Saudi Arabia’s two-way trade in copper winding wire

Saudi Arabia exported 8,038 tonnes of insulated copper winding wire in 2025 and imported 4,920 tonnes. A buyer evaluating local supply still needs to know which grades crossed the border in each direction.

3,118 t

Excess of gross export weight over gross import weight in 2025



The heavier flow switched from imports to exports

Saudi Arabia · insulated copper winding wire · metric tonnes



Each bar shows a gross flow under HS 854411. Both directions use the same product, reporter, calendar year and weight basis.

UN Comtrade · 2024 UN Comtrade · 2025

EXHIBIT 02 · INDUSTRIAL MATERIALS

Imports carried a higher value per kilogram

Saudi flow	Value · $m	Mass · t	USD/kg
2023 imports	20.89	1,828	11.43
2023 exports	3.24	291	11.13
2024 imports	56.55	6,024	9.39
2024 exports	18.97	2,614	7.26
2025 imports	54.93	4,920	11.16
2025 exports	56.70	8,038	7.05

Declared value divided by net weight. Imports use CIF and exports use FOB in 2025. UN Comtrade flags the 2023 weights as estimated.

Fewer imported tonnes carried nearly the same bill

Import weight fell 18.3% in 2025, while the dollar bill fell 2.8%. Average import value moved from $9.39 to $11.16 per kg. Changes in the copper price, product mix and freight can all affect that comparison.

Buying and selling followed different routes

India and China supplied 81.4% of Saudi import weight. Iraq and Jordan received 90.0% of export weight. An export commitment in one grade can coexist with an import requirement in another.

REGIONAL DEMAND SCREEN

Oman and Kuwait merit separate buyer screens

The regional comparison counts finished insulated copper winding wire crossing a border. Importers may be OEMs, service firms or distributors. A tonne can be re-exported and counted in another country’s imports.

Gross imports by reporting market

2024 · USD million · HS 854411



> The same annual world-partner query returned five Gulf reporters. It returned no UAE observation for this series. The five values therefore cover a partial region. Cross-border re-exports and domestic production prevent a direct conversion from imports to end-user demand.

How to size a serviceable market

For each accessible manufacturer, multiply confirmed machines or windings per year by kilograms of the specified grade per unit. Deduct contracted supply and qualify the remaining tonnes by the buyer’s willingness to trial a new wire. Use customs totals as a reasonableness check.

UN Comtrade · Saudi Arabia and Oman UN Comtrade · Bahrain, Kuwait and Qatar

BUYERS, SUPPLIERS AND QUALIFICATION

A purchase order starts with the winding specification

A round enamelled motor wire, a rectangular transformer conductor and a repair spool can have different coating systems, tolerances and minimum runs. National HS records combine grades. Three buying routes give a manufacturer quite different paths to recurring volume.

Buying route	First technical screen	Commercial evidence
Motor or transformer OEM	Conductor geometry, insulation build, thermal class and winding-machine acceptance	Annual forecast by part number, trial-coil result and change-control process.
Rewinding workshop	Short-run diameter availability and repeat performance	Repeat orders by gauge, spool size and local delivery promise.
Distributor	Mix of stock grades, lot traceability and shelf availability	SKU-level sales, minimum batch size, stock turns and return rights.

Benchmark the right product

IEC 60317-0-1 covers enamelled round copper wire. Record the part and amendment called up by the customer before comparing test certificates. Specify the copper reference, quotation period, metal factor, conversion fee and freight on separate offer lines.

IEC · enamelled round copper winding wire IEC · 2026 amendment to 60317-0-1
London Metal Exchange · physical copper reference

COMMERCIAL SENSITIVITY / ILLUSTRATIVE CASE

The cheaper winding-wire quote can change with copper

Two sample offers carry the same grade and delivery point. A charges a lower fixed conversion-and-freight amount. B uses less indexed metal per billed kilogram. Both must be evaluated over the same reference month.

Copper input · USD/kg	A · USD/kg delivered	B · USD/kg delivered	Lower bid
$8.00	$9.37	$9.41	A
$10.00	$11.40	$11.42	A
$12.00	$13.43	$13.43	Equal
$14.00	$15.46	$15.44	B

Assumed offer A = 1.015 × copper input + USD 1.25/kg. Offer B = 1.005 × copper input + USD 1.37/kg. All metal prices and terms here are illustrative. Obtain a live reference and confirm the metal factor and scrap adjustment with each vendor.

USD 12/kg crossover

The fixed-charge difference is USD 0.12/kg and the metal-factor difference is 0.010. Their ratio gives the crossover. At USD 10/kg, A saves USD 0.02/kg, or USD 20,000 on 1,000 tonnes. A difference in yield or rejection cost of the same size would erase the saving.

MANUFACTURING FEASIBILITY / ILLUSTRATIVE CASE

What volume would justify a local finishing line?

A five-year investment screen translates the sales question into qualified annual tonnes. RV assumes USD 3.0m for plant, USD 0.60m for working capital at startup, USD 0.72m annual fixed cash cost and USD 0.95/kg contribution after variable costs.

Saleable tonnes / year	Annual operating cash · USD m	Five-year NPV · USD m
1,200 t	0.42	-1.64
1,800 t	0.99	+0.53
2,400 t	1.56	+2.69

Constant annual throughput from year one. Cash flows arrive at year end, discounted at 10%. Working capital is fully released in year five. The plant has zero residual value. Cash flows are unlevered and pre-tax, with no expansion or further capital spending.

1,655 t/year to clear zero NPV

At the threshold, five years of discounted operating cash plus the working-capital release recover upfront investment. Delayed qualification, lower yield or longer receivable terms raise the hurdle. Compare it with contracted, grade-specific tonnes before buying equipment.

DECISION AND DILIGENCE

Qualify the first grade before adding the next

A producer needs recurring orders large enough to absorb the conversion line’s overhead. An import declaration indicates a market to investigate. A signed annual call-off by grade changes the investment case.

01 Product engineer

Identify one repeatable gauge and insulation system. Obtain the customer’s trial protocol, failure criteria and sample schedule.

02 Buying team

Request grade-level volumes, incumbent lead times and the metal adjustment formula. Reconcile annual demand against model-level production or workshop jobs.

03 Finance and operations

Rebuild unit contribution using actual yield, labour, coating, energy, scrap credit and receivable days. Obtain a line quotation and a commissioning plan.

Investment decision

Authorize qualification trials and matched quotes first. A manufacturing commitment requires credible annual tonnes above the modeled threshold after allowing for ramp-up. A distributor agreement can test demand while technical approval is in progress.

OPERATING IMPLICATIONS

Compare the conversion service separately from the copper

For a qualified winding-wire grade, request the copper pricing reference, averaging window, metal-content factor and conversion charge. Match conductor cross-section, insulation build and thermal class across offers. This lets a buyer compare processing terms even when the underlying copper price is moving.

DECISION

For a sourcing decision, ask local suppliers for qualified grades, available tonnes and delivery windows. Compare landed quotes for the same specification and copper pricing period.

Method

Source: UN Comtrade. Use annual Saudi HS 854411 world-partner aggregates for totals and bilateral records for origin and destination shares. Divide nominal USD by net kilograms for unit values. Figures are rounded after calculation.

Scope of the evidence

Trade records group conductor sizes and insulation grades. Gross exports can include re-exports. Domestic shipments and stock changes are needed to estimate consumption.

Source documents

UN Comtrade · 2023 UN Comtrade · 2024 UN Comtrade · 2025
IEC · enamelled round copper winding wire IEC · 2026 amendment to 60317-0-1
London Metal Exchange · physical copper reference UN Comtrade · Saudi Arabia and Oman
UN Comtrade · Bahrain, Kuwait and Qatar