

# What Are Wire Nails Used For?

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Nails · DIN 1151 · Application guide

Typical applications, the industries that specify wire nails, and how to choose the right size, material and finish for the joint.

Wire Nails are used for fast fixing in timber and packaging. They are manufactured to DIN 1151, and selection is driven by the nominal diameter, the fit and tolerance the assembly requires, and the service environment.

## Primary duty

Fast fixing in timber and packaging

## Governing standard

DIN 1151

## Nominal diameter range

1 mm to 8 mm

## Category

Nails

Application notes are general engineering guidance. Verify the property class and any approval requirement against your own design calculation.



Application guide for Wire Nails to DIN 1151. The core duty of the type is fast fixing in timber and packaging. The typical industries, the how-to-specify checklist, assembly practice and the exclusion cases are set out below. Stocked across roughly 1 mm to 8 mm, they cover general to heavy-duty work.

## Typical Applications for Wire Nails

The most common settings where these are specified:

- **Packaging & crating:** closing cases and pallets at speed.
- **Fencing & landscaping:** outdoor timber fixing.
- **General machine building:** fastening covers, brackets, motors and sub-assemblies on production equipment.
- **Maintenance & repair (MRO):** a stocked size for servicing existing plant where the original fastener spec must be matched.
- **Fabrication & metalwork:** bench and on-site assembly of steel frames, enclosures and weldments.

## How to Specify Wire Nails for Your Application

- **Size:** Select on nominal diameter, then on the hole tolerance and fit class — the fit, not the diameter alone, determines whether the part locates or slips. This product spans 1 mm–8 mm; check the full table below for the exact dimensions of each size.

- **Material:** Choose the material and finish for the service environment — plated steel for general use, stainless for corrosion resistance.
- **Environment:** For damp, coastal or chemical exposure prefer A4/316 stainless or a suitable coating; indoors, plated steel or A2 is usually sufficient.
- **Standard:** This product is supplied to DIN 1151. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

## Where Wire Nails Are Not the Right Choice

Not for joints needing later removal or high withdrawal resistance — a screw holds far better in tension.

## Technical Drawing

Customize the parameters below — every spec field is editable, and the drawing redraws to match the values you choose. Changing the size will snap the other fields to that size's standard values; you can then override any individual value.

Sends the selected values to the quote form below.

## Request a Quote

The form below follows the current technical drawing configuration. Change the drawing values above and the request details update automatically.

## Dimensions & Specifications (DIN 1151)

| Diameter d (mm) | Length l (mm) | Head diameter dk (mm) | Head type | Material              | Reference standard  |
|-----------------|---------------|-----------------------|-----------|-----------------------|---------------------|
| 1.0             | 20            | 2.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 1.2             | 25            | 3.0                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 1.4             | 30            | 3.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 1.6             | 35            | 4.0                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 1.8             | 40            | 4.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 2.0             | 40            | 5.0                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 2.0             | 50            | 5.0                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 2.5             | 50            | 6.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 2.5             | 60            | 6.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 2.8             | 65            | 7.0                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 3.0             | 60            | 7.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 3.0             | 70            | 7.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 3.0             | 80            | 7.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 3.4             | 80            | 8.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 3.4             | 90            | 8.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 3.8             | 90            | 9.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 3.8             | 100           | 9.5                   | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 4.2             | 100           | 10.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 4.2             | 110           | 10.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 4.6             | 110           | 11.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 4.6             | 120           | 11.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 5.0             | 120           | 12.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 5.0             | 130           | 12.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 5.5             | 130           | 14.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |

| Diameter d (mm) | Length l (mm) | Head diameter dk (mm) | Head type | Material              | Reference standard  |
|-----------------|---------------|-----------------------|-----------|-----------------------|---------------------|
| 5.5             | 140           | 14.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 5.5             | 150           | 14.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 6.0             | 150           | 15.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 6.0             | 160           | 15.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 6.7             | 160           | 17.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 6.7             | 180           | 17.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 7.0             | 180           | 17.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 7.0             | 200           | 17.5                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 8.0             | 200           | 20.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |
| 8.0             | 250           | 20.0                  | Dome head | Low-carbon steel wire | DIN 1151 / ISO 1051 |

Inside the plant

## Manufactured in our own plant

This part is cold-formed, threaded, heat-treated and finished in-house. The stages below are where its class and finish are actually decided.

1.



01

## Cold heading

Wire rod is drawn to size and cold-formed into blanks. Forming rather than cutting keeps the grain flow continuous around the head, which is where a bolt is most likely to fail.

Head dimensions and under-head radius checked at set-up and per shift.



2.

02

## Thread rolling

Threads are rolled between hardened dies rather than cut. Rolled threads are stronger in fatigue than cut threads and hold pitch and flank angle far more consistently across a batch.

Go / no-go ring gauges to ISO 965 tolerance class 6g.

3.



03

### Heat treatment

Quench-and-temper brings carbon and alloy steel to the property class ordered — 8.8, 10.9 or 12.9 — with the furnace charge tracked so a finished lot can be traced back to it.

Core hardness and tensile tested per lot to ISO 898-1.

4.



04

### Surface treatment

Zinc, zinc-nickel, hot-dip galvanizing, black oxide, phosphate and Dacromet, selected against the service environment rather than against the price list.

Coating thickness and neutral salt spray hours to ISO 9227.

## Frequently Asked Questions

Are Wire Nails made to a recognized standard?

Yes — they are manufactured to DIN 1151, so dimensions are interchangeable between suppliers when you quote the standard on your order.

What are Wire Nails used for?

Fast fixing in timber and packaging. They are supplied to DIN 1151.

Which industries use Wire Nails?

They are commonly specified in general machine building, maintenance & repair (mro) and fabrication & metalwork, among other sectors.

How do I choose the right size of Wire Nails?

Select on nominal diameter and on the fit the assembly requires. This product is available from 1 mm to 8 mm; the full dimension table on this page lists each size.

Can I get a quote for Wire Nails in the size and material I need?

Yes. Use the technical drawing and quote form on this page to set the size and options, then send the exact configuration to our team for pricing and lead time.

## Related Pages

Product page: [Wire Nails — specifications & sizes](#)

### Wire Nails Specification Guides

- [A4 stainless Wire Nails](#)

### Related Fastener Applications

- [Specialty Nails applications](#)