

# Description of the steel products covered by the worldsteel LCI Study

Product	Product description
<b>Cold rolled coil</b>	<p>Obtained by a further thickness reduction of a pickled hot rolled coil. This step is achieved at low temperature in a cold-reduction mill; can be further processed.</p> <p>Used as primary material for finished cold rolled coils and coated coils. Typical thickness between 0.15 - 3 mm. Typical width between 600 - 2100 mm.</p>
<b>Electro-galvanised steel</b>	<p>Obtained by electro plating finished cold rolled steel with a thin layer of zinc or zinc-nickel to provide corrosion resistance; can be further processed.</p> <p>They have excellent forming properties, paintability, weldability, and are suitable for fabrication by forming, pressing and bending.</p> <p>Applications include domestic applications, building applications (e.g. wall elements, roofing applications), automotive applications (e.g. body in white for vehicles underbody auto parts), lighting fixtures, drums and various kinds of sections applications, profiled sheets, etc.</p> <p>Typical thickness between 0.3 - 3 mm. Typical width between 600 - 2100 mm.</p>
<b>Engineering steel (tool steel)</b>	<p>Engineering Steel is rolled on a Hot Rolling mill. It can be found on the market and is further processed into finished products by the manufacturers.</p> <p>This steel is used in the manufacture of tools, dies, components for engines, drives, equipment, transmissions, etc.</p>
<b>Finished cold rolled coil</b>	<p>Obtained by heat treatment (annealing) and strain-hardening of cold rolled steel in a way to achieve final mechanical properties making the steel suitable for further uses (forming and bending); can be further processed.</p> <p>Classified into the following: formable steels, high strength formable steels, weathering structural steels, structural steels, hardenable steels.</p> <p>They have excellent forming properties, electromagnetic properties, paintability, weldability, and are suitable for fabrication by forming, pressing and bending. Applications include domestic applications, automotive applications, lighting fixtures, electrical components (stators, rotors) and various kinds of sections roofing applications, profiled sheets, wall elements, etc.</p> <p>Typical thickness between 0.3 - 3 mm. Typical width between 600 - 2100 mm.</p>
<b>Hot-dip galvanised steel</b>	<p>Obtained by passing cold rolled coil through a molten zinc bath, in order to coat the steel with a thin layer of zinc to provide corrosion resistance; can be further processed. They have excellent forming properties, paintability, weldability, and are suitable for fabrication by forming, pressing and bending.</p>

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Applications include domestic applications, building applications (e.g. wall elements, roofing applications), automotive applications (e.g. body in white for vehicles underbody auto parts), lighting fixtures, drums and various kinds of sections applications, profiled sheets, etc.

Typical thickness between 0.3 - 3 mm. Typical width between 600 - 2100 mm.

**Hot rolled coil**

Steel coil rolled on a hot-strip mill; can be further processed.

Applications in virtually all sectors of industry: transport, construction, shipbuilding, gas containers, pressure vessels, energy pipelines, etc.

Typical thickness between 2 - 7 mm. Typical width between 600 - 2100 mm

**Organic coated**

Obtained by coating a steel substrate with organic layers such as paint or laminated film. The substrate is mainly hot-dip galvanized coil but may also be electrogalvanized coil, finished cold rolled coil or tin-free steel. It can be found on the market in coil or in sheets and is further processed into finished products by the manufacturers.

Used in all activity sectors e.g. construction (roof, wall and ceiling claddings, lighting, radiators etc.), general industry (e.g. office furniture, heating, ventilating, air conditioning), domestic appliances (refrigerators, washing machines, small kitchen appliances, computer casings, VCR & DVD casings, etc) and packaging.

Typical thickness between 0.15 - 1.5 mm. Typical width between 600 - 1300 mm.

**Pickled hot rolled coil**

Hot rolled steel from which the iron oxides present at the surface have been removed in a pickling process; can be further processed.

Applications in virtually all sectors of industry: transport, construction, shipbuilding, gas containers, pressure vessels, energy pipelines, etc.

Typical thickness between 2 - 7 mm. Typical width between 600 - 2100 mm.

**Plate**

A flat steel sheet rolled on a hot rolling mill; can be further processed.

Includes use in the following sectors: structural steels, shipbuilding, pipes, pressure vessels, boilers, heavy metal structures, offshore structures etc.

Typical thickness between 2 to 20 mm. The maximum width is 1860 mm.

**Rebar**

A steel reinforcing bar is rolled on a hot rolling mill; can be further processed.

This product is used to strengthen concrete in highway and building construction and also as a primary product for the wire rod process.

**Sections**

A steel section rolled on a hot rolling mill. Steel Sections include I-beams, H-beams, wide-flange beams, and sheet piling.

This product is used in construction, multi-story buildings, industrial buildings, bridge trusses, vertical highway supports, and riverbank reinforcement.

**Seamless tube**

The seamless tube is manufactured using a process called "extrusion". During this process a solid steel bar is pierced through the center using a die, turning

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the solid steel into a tube which is processed into the correct shape and dimensions. They have an advantage in aggressive environments as there is no weld.

**Tinplate**

Obtained by electro plating a thin finished cold rolled coil with a thin layer of tin. It can be found on the market in coil or in sheets and is further processed into finished products by the manufacturers.

Tin plated steel is used primarily in food cans, industrial packaging (e.g. small drums).

Typical thickness between 0.13 - 0.49 mm. Typical width between 600 - 1100 mm.

**Tin-free (ECCS)**

Also known as Electrolytic Chrome Coated Steel (ECCS).

Obtained by electro plating a thin finished cold rolled coil with a thin layer of chrome. It can be found on the market in coil or in sheets and is further processed into finished products by the manufacturers.

ECCS is used primarily in food cans, industrial packaging (e.g. small drums).

Typical thickness between 0.13 - 0.49 mm. Typical width between 600 - 1100 mm.

**UO pipe**

UO pipe is usually large in diameter and produced one piece at a time by forming plates. The plate is first pressed into a U shape by the U-press, and then into an O shape by the O-press.

Because relatively thick material is used for making UO pipes, submerged arc welding is used for joining. UO pipe is mainly used as line pipe for transporting petroleum and natural gas in large quantity over long distances.

**Welded pipe**

A flat plate steel coil that is bended and welded into a tube. It can be found on the market for final use.

A heavy-wall pipe is technically used to transport fluids (e.g. oil, gases, water, chemicals)

**Wire rod**

Wire rod is a rolled steel product, produced from a semi and having a round, rectangular or other cross-section. Particularly fine cross-sections may be achieved by subsequent cold forming (drawing). Wire rod is wound into coils and transported in this form.