



## STAINLESS STEEL FORMING WIRE

### Grades, features & applications

- Stainless Steel wire is ideal for many applications where the wire needs to be formed, bent or shaped into a manufactured product. These «forming» applications span a very large array of products in household , industrial as well as medical environments where the attractive combination of properties of stainless steels makes them uniquely suited, in view of their
  - resistance to corrosion
  - combination of ductility & strength
  - aesthetics
  - easiness of cleaning & upkeepAfter forming, the stainless wire can end up in a variety of configurations such as: bent, woven, braided, meshed, stranded, shaped
- Main grades and corrosion resistance criteria for selection :
  - Ferritic 17%Cr grades types 430/434: limited corrosion resistance but quite sufficient for many domestic applications in appliances, flatware, etc...
  - «Low cost» Mn-Cu Austenitic grades type 204Cu: intermediate corrosion resistance. Adequate for household appliances, bakery equipment, etc...
  - Standard 18%Cr-8%Ni Austenitic grades type 304: good corrosion resistance making it a multi-purpose grade for appliances, food and beverages industries, restaurant equipment, etc...

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- Cr-Ni-Mo Austenitic grades type 316: very good corrosion resistance due to the addition of Molybdenum. Widely used in corrosive industrial media and marine/ salty environments
  - Refractory Austenitic 25%Cr- 20% Ni grades types 310/314: good resistance to oxidation at high temperatures.
- Mechanical characteristics for forming applications :

Ferritic stainless steels are generally used in annealed or lightly drawn conditions.

The broad array of applications of formed Austenitic stainless steels imply a wide range of tensile strength, from fully annealed to full hard wire, through the various intermediate levels :

1/8 hard (R~680 N/mm<sup>2</sup>), 1/4 hard (750 N/mm<sup>2</sup>),

1/2 hard (950 N/mm<sup>2</sup>), 3/4 hard (1250 N/mm<sup>2</sup>).

Most usual forming applications require tensile strengths in the range 1/8 hard to 1/2 hard.

- Surface quality – Electro-polish quality (EPQ) :

Except for annealed wire, Sadevinox's forming wire exhibits a « bright finish » surface. Thus, such wire is well suited for electro-polished finishing (EPQ = electro-polish quality).

The EPQ quality of our bright finish wires is regularly checked through appropriate tests...

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- Main applications & usages of formed stainless wire :
  - Food processing, household appliances, restaurant equipment:  
Such applications are the key areas of use of formed stainless steel wires.  
For example:
    - Kitchenware & appliances such as: flatware, whips, graters, picks, strainers, grids, racks...
    - Restaurant equipment: strainers, trays, fryers, grids, hooks, food racks...
    - Equipment of food processing industries: conveyors, bakery equipment, filters, oven grids, cable trays, hooks, storage racks...
  - Equipment of hospitals, schools: trays, strainers, sterilization baskets, trolleys, various racks...
  - Agriculture/ Animal breeding: cages, cattle & poultry feeders, filters, milk/cheese processing equipment, vineyard and orchard trellising, beehive wire, etc...
  - Industries & construction: cable trays, conveyor belts, filters, hoppers, anchors, grids, safety fences, flexible hoses, cables, etc...
  - Hardware / Decoration: staples, nails & screws, interior decoration, jewelry...

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