

TECHNICAL DESCRIPTION OF SURGICAL NEEDLES

Surgical needles are made of modern stainless steel material (W Nr. 1.4028/1.4031) with spring or regular eyes and electropolished design.

The flexibility, hardness, durability of the edge and piercing tip, and corrosion resistance of the needles meet the most demanding requirements for use and storage.

The hardness and flexibility of the needles are ensured by heat treatment with a shielding gas. The hardness of the needles is HV 4700-6000 N / mm².

The elasticity of the needles is checked by a bending test. The flexibility of the needles is adequate if the heat-treated finished needle is not broken by bending to the center at 60°, but is broken by bending to 90° or broken when bent back at 10° from 90°.

The corrosion resistance of the needles, the clean, burr-free, evenly shiny surface of the needles is achieved by electrochemical polishing, which ensures corrosion and acid resistance for 10 years.

The surgical needles are marketed without sterilization. To increase the efficiency of sterilizations and ensure pyrogen-free performance, needles should be washed vigorously in an aseptic environment and rinsed in distilled water prior to sterilization.

Recommended sterilization methods (without damaging the needles):

- In a steam sterilizer at 120 °C for 15 minutes.
- In a gas sterilizer at low temperature (60 °C).

In order to preserve the durability and quality of the needles, it is very important to follow the handling and use recommendations below.

- For small, thin and strongly bent (types Pb, Og, Ob) needles, we recommend the use of smaller tapered needle grippers.
- The longer than average and relatively thinner size, more flexible (Pb, Pd, Pc) wound needles are suitable only for intestinal suturing or for suturing soft tissue and membranes of a similar nature.
- Needles with a stronger structure and relatively thicker sizes (types B, G, Ga, H) are suitable for sewing skin, muscle and connective tissues.
- Only use the correct size (thickness) sewing material for the needles. The use of larger diameter yarns increases the risk of buckling and breaking of the needle, and the suture canal of the wound is unnecessarily damaged.

During a clinical trial a:

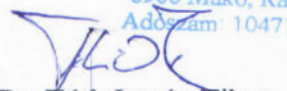
- Needles of type B-8, B-10, B-12 could be used in large abdominal surgeries for an average of 5-6 surgeries and their impeccable use value was maintained.
- When using G-6, G-8, G-10 needles when closing abdominal incisions and hernia surgeries, they remained usable after an average of 10 procedures.
- PB-4 type needles could be used in small bowel surgeries during an average of 4 procedures.
- PB-1, PB-3 needles retained their usefulness 10 times when used in lung surgery (less mechanical stress than gastrointestinal surgery).

There is also a medical practice where the user bends the needle as many times as desired while sewing. In this case, of course, you need to stick to single use.

We operate an ISO 9001 quality management system during the production of surgical needles.

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