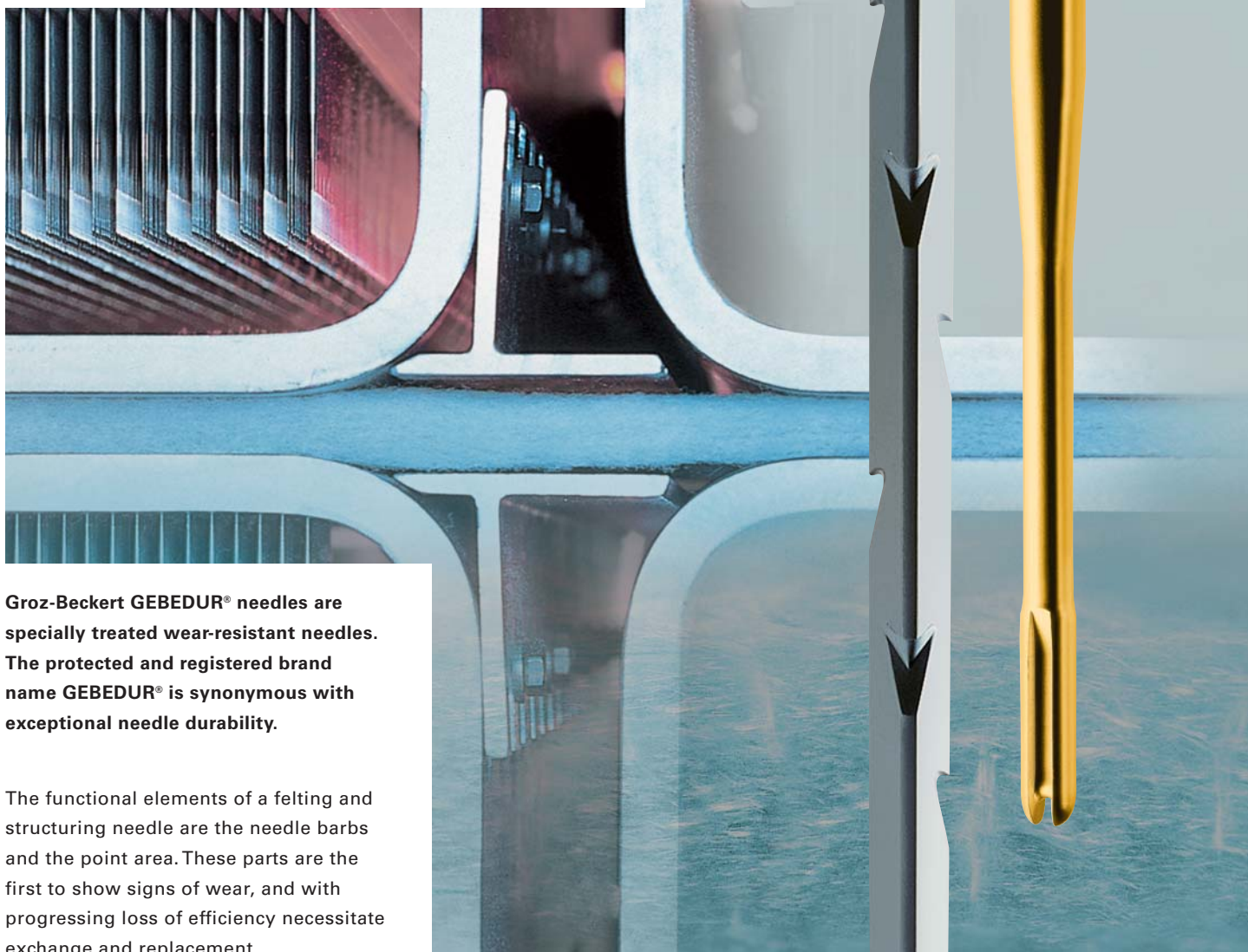


GEBEDUR® NEEDLES
FELTING AND STRUCTURING
NEEDLES WITH SUBSTANTIALLY
LONGER LIFE



Groz-Beckert GEBEDUR® needles are specially treated wear-resistant needles. The protected and registered brand name GEBEDUR® is synonymous with exceptional needle durability.

The functional elements of a felting and structuring needle are the needle barbs and the point area. These parts are the first to show signs of wear, and with progressing loss of efficiency necessitate exchange and replacement.

Good needle durability coupled with extreme low wear ensure consistently good product characteristics even over protracted needling periods. GEBEDUR® treated felting and structuring needles achieve longer exchange cycles and so

help improve product quality and process reliability. Machine downtimes are reduced to an absolute minimum. GEBEDUR® needles achieve even needling performance coupled with a high degree of functional reliability and maximum productivity.

GEBEDUR® I
GEBEDUR® II

**Special needles from
Groz-Beckert**

GEBEDUR®-NEEDLES

CLEARLY HIGHER LIFETIME

Groz-Beckert GEBEDUR® I needles

Long life due to a special surface treatment with titanium nitride. Suitable for all grades of needle fineness and particularly for fine fork needles. Exceptionally long needle service life for a wide range of applications such as technical felts, geotextiles, filter media, synthetic leather and automotive lining fabrics.



Groz-Beckert GEBEDUR® II needles

Substantially longer service life due to a special metallurgical treatment, in particular in the medium needle fineness grades. Extended needle service life for many applications such as needling flat felts, inorganic fibres or felted carpets.



Partially chromium-plated needles

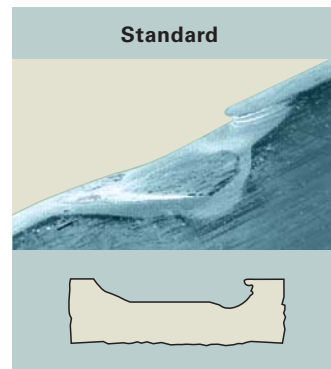
Ever more stringent demands in terms of needle resistance made by the market due to the increasing use of abrasive fibres, natural fibres, special fibres and fine fibre cross sections have resulted in the development of different coating types.



GEBEDUR® I NEEDLES: A COMPARISON

LONGER IN SHAPE, BETTER IN PERFORMANCE

GEBEDUR® I needles – wearing characteristics of felting needles

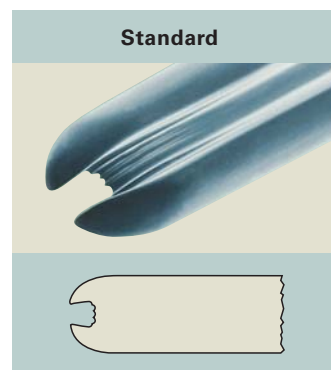


After a relatively short running period, deformed barbs, reduced efficiency and changes in the physical characteristics of the end-product are visible.

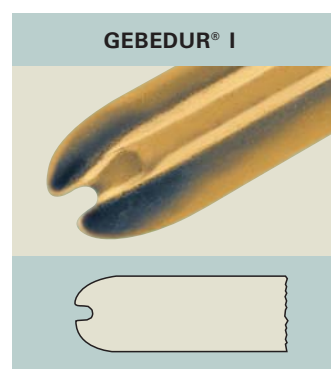


Original barb shape unaffected, performance remains constant over a prolonged period of time. No readjustment of the needle-punching parameters is required leading to greater functional reliability and end-products of perfect quality.

GEBEDUR® I needles – wearing characteristics of fork needles



Fork area enlarged even after a short running period. Consequences: Changed end product due to increased structuring effect, needle breakage due to extreme loads, damage to the brush conveyor in the machine resulting from an advanced stage of wear.

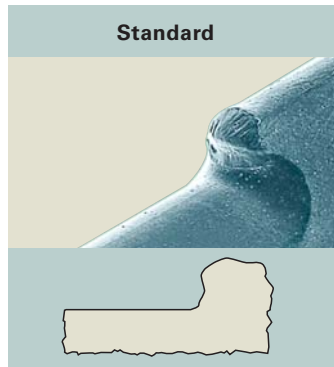


Even after prolonged use, provides uniform structuring since the fork retains its original shape longer, making end-products of consistent quality and exceptional needle durability.

GEBEDUR® II NEEDLES: A COMPARISON

MINIMUM WEAR

GEBEDUR® II needles – initial wear stage

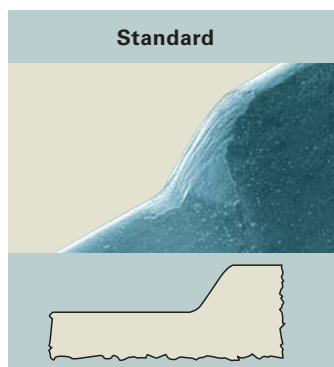


Substantial abrasion wear in the area of the barb kick-up. The needling effect has already changed.



The shape of the barb has barely changed at all, fibre transport remains unaffected.

GEBEDUR® II needles – advanced wear stage



The standard needle barb is already completely worn; fibres can no longer be transported and the needle is unusable.



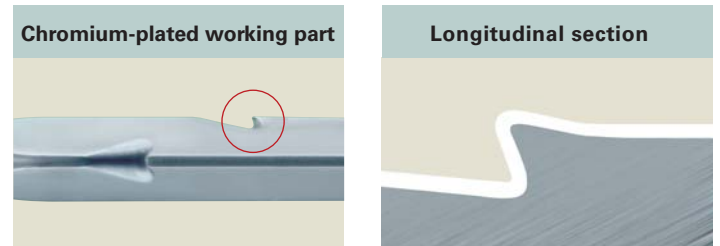
The barb kick-up on the wear resistant Groz-Beckert needle is only slightly rounded. Fibre transport and needling effect continue to remain excellent.

PARTIALLY CHROMIUM-PLATED NEEDLES

CHROMIUM PLATING FOR STRINGENT REQUIREMENTS

One of the most efficient solutions is chromium plating.

Groz-Beckert offers a further improvement in needle characteristics in the form of needles with partially coated working parts.



Advantages of partially chromium-plated needles

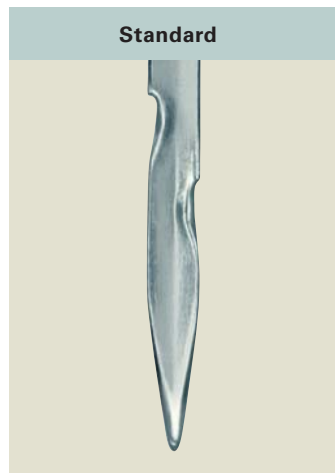
- Physical properties change negligibly compared with uncoated needles
- Improved anti-adhesive characteristics (minimum accumulations of dust)
- Greater needle endurance
- No change in dimensions – straightforward needle installation and removal
- Numerous opportunities for variations in coating thickness and length



Applications

- Abrasive fibres (glass, ceramics, carbon...)
- Interior automotive linings (crown and fork needles)
- Ultra-fine fibres (technical felts, filter felts, artificial leather)
- Abrasive composite materials

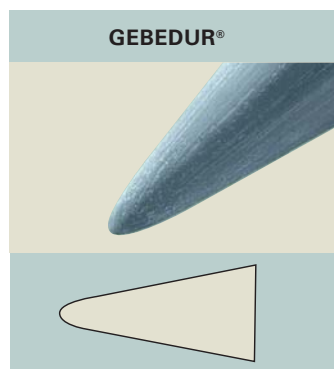
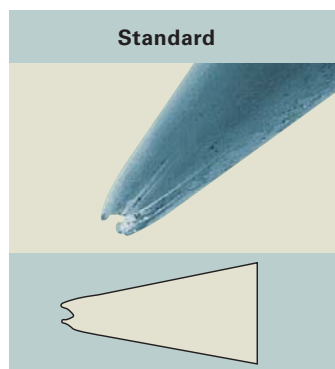
CONSTANT POINT QUALITY



Exceptional needle durability and consistently high standards of product quality depend not only on the barb but also on the needle point.

Exceptional needle durability and consistently high standards of product quality depend not only on the barb but also on the needle point. Groz-Beckert GEBEDUR® needles are distinguished by superior durability and quality, ensuring reliable, cost-efficient production at all times.

In a direct comparison, the superiority of GEBEDUR®-wear resistant needles can clearly be recognized, even at the needle point. Whereas the point of the standard needle is rounded and thus shorter, the GEBEDUR® needle remains fully functional.



After a certain period of use, the shape of the needle point can be so badly affected that it will actually transport fibres. The potential consequences are a reduction in quality in the appearance of the product, damage to accompanying backing fabrics, deterioration of the product's physical characteristics and needle breakage.

Even after prolonged use, the wear resistant GEBEDUR® needle retains its original point shape, ensuring extreme durability and long-term consistency of product characteristics and quality.

Applications

Groz-Beckert GEBEDUR®-Needles are particularly suitable for:

- Production of synthetic leathers
- Processing of materials for the automotive industry, such as head liners, trunk linings, door panels and floor coverings
- Production of industrial felts, such as geotextiles, filter felts, press felts, etc.
- Processing of abrasive fibres of all kinds, such as glass-, ceramic and carbon fibres, etc.
- Manufacture of products from natural fibres, such as jute, coir, sisal, hemp, flax etc.