

AQUAGOLD® fine touch™ Technical Specification

AQUAGOLD® fine touch™ is a Class I microneedle medical device designed for intradermal treatments. The device consists of a vial attached to a head containing 20 microneedles. The microneedles use a patented screw-like thread design that helps deliver therapeutic substances into the intradermal space.

Parameter	Value
Device	AQUAGOLD® fine touch™ microneedle applicator
Number of microneedles	20
Microneedle material	Medical-grade stainless steel (SUS 304)
Microneedle coating	24-karat gold
Microneedle length	600 µm
Microneedle diameter	130 µm
Microneedle tip diameter	10 µm
Optimal viscosity	50-500 cP
Vial volume	~4 mL, marked and recommended fill volume 1 mL
FDA registration number	3009522919
Product number	AQT-001
Shelf life	2 years from packing date

Durability

Identically constructed microneedles with a diameter of 250 µm underwent durability testing. After 30,000 test cycles, no visible wear was observed.

Effectiveness

Pig and rat skin were punctured with AQUAGOLD® fine touch™ filled with India ink. Histologic evaluation confirmed skin penetration by the microneedles. In these studies, the microneedle diameter was 250 µm and the penetration depth was 174 µm. Scanning electron microscopy confirmed the presence of skin punctures.

Priming

Depending on the viscosity of the therapeutic mixture, repeated priming punctures (5-50) with AQUAGOLD® fine touch™ may be needed. Preliminary stimulation of the treatment area using these punctures is recommended.