Advanced Alloy for Specialty Needles

Javelin is a high performance alloy for specialty needle applications that enables better surgical outcomes. The alloy is optimized for longer needles that must navigate long and complex anatomical paths or needles that sample difficult tissue types such as those with a dense mass. Javelin features:

- Excellent shape set resilience
- Greater material hardness
- High column strength
- Superior resistance to damage

Shape Set Resilience

For specialty needles used in conjunction with diagnostic devices such as endoscopes it is imperative that the needle demonstrates maximum straightness and does not adopt a pronounced curvature when exiting the endoscope and accessing a sample site. Any permanent deformation that reduces efficient force transmission can induce drift of the needle tip thereby making accurate needle deployment at the sample site more difficult. Javelin’s superior shape set resilience maintains needle straightness while navigating the endoscope channel and improves accuracy of the overall needle assembly during deployment. Javelin exhibits up to a 95% improvement over standard materials in shape set testing.
Material Hardness/Sharpness
Javelin exhibits up to 35% greater material hardness than conventional 304 SS. Enhanced material hardness maintains needle point sharpness during repeated deployment and facilitates easier sample penetration. Javelin also enables the product designer to develop more advanced needle tip profiles as its increased hardness can produce a sharper needle point.

Column Strength
Javelin exhibits improved column strengths up to 30% higher than standard needle materials. This improves needle pushability and contributes to minimizing needle deflection. Javelin demonstrates kink resistance equivalent to standard materials.

Damage Resistance
On longer needles Javelin exhibits superior damage resistance in use - a key factor in maintaining needle efficacy when multiple passes or repeat sampling is required.

Javelin is a corrosion resistant, biocompatible, non-magnetic alloy.

Specialty Needles - achieve better clinical outcomes with Javelin
- Superior physician control - during testing, users reported an improvement in handling over standard stainless steel
- Accurate navigation to sample site
- Easier biopsy penetration
- Maintain needle efficacy during repeat deployment