

Nitinol™ Nickel Titanium Shape Memory Alloys

Nickel Titanium (also known as Nitinol) is the unique class of materials known as shape memory alloys. A thermoelastic martensitic phase transformation in the material is responsible for its extraordinary properties. These properties include the shape memory effect, superelasticity, and high damping capability. The properties of Nitinol can be modified to a great extent by changes in alloy composition, mechanical working, and heat treatment. In most cases a trial and error process is required to optimize these factors for a particular application.

Alfa Aesar offers a wide variety of NiTi components to meet your unique requirements. In addition, many standard items are in stock for immediate delivery.

Tubing

- Outer Diameter (O.D) from 0.005" to 0.250" (0.125 to 6.4mm)
- Wall Thickness down to less than 0.002" (0.05mm) dependent on O.D. size

Wire & Ribbon

- Wire: diameters from 0.001" (0.025mm) to 0.080" (2mm) and above
- Straight superelastic Nitinol wire with oxide; diameter from 0.0050mm to 0.0230mm
- Ribbon and Strip: from 0.001" x 0.002" (0.025mm x 0.05mm) to 0.030" x 0.400" (0.75mm x 10mm)
- Stranded Wire: many different configurations available
- NiTi ACTM Wire: Nitinol filled with alternate materials for conductivity, radiopacity, etc.

Sheet

- Thickness down to 0.007" (0.018mm)
- Width of about 1" to 4" (25mm to 100mm)

Thickness (mm)	Width (inches)	Length (inches)
0.0050	1.75	12
0.0075	3.50	12
0.0100	3.50	12
0.0125	3.50	12

Nitinol Educational Products, Kits and Books

A variety of products is also available to improve your knowledge of NiTi technology:

- Demo Wires and Springs
- SMST Conference Proceedings: contains technical papers from the well-known series of Shape Memory and Superelastic Technology Conferences

For a complete list of Nitinol products from Alfa Aesar, visit www.alfa.com/en/product/nitinol.