

## Choosing The Best Wire For The Application

	Early Treatment	Mid Treatment	Late Treatment
THERMADENT - Low Force	██████████		
THERMADENT - Medium Force	████████████████████		
FLEXADENT NiTi Superelastic	████████████████████		
PERFECT TI NiTi Low Frict.	████████████████████		
TRIDENT CNA Beta III/TM		██	
TWISTADENT Stainless Steel - 8 Braid	██████████		
TWISTADENT Stainless Steel - 6 Coax			████████████████████
TWISTADENT Stainless Steel - 3 Strand			████████████████████
DURADENT Stainless Steel - Solid			██

### Nickel Titanium Heat Activated - THERMADENT™

THERMADENT™ wires are shape memory, heat-activated wires.

Shape memory properties exhibited by heat-activated, or thermal, Nickel Titanium wires:

- Superb flexibility at room temperature, allowing for even easier ligation. Soft in the hand.
- Very responsive to chilling.
- Gentle forces are initiated by intraoral heat and remain consistent throughout treatment.
- Noticeably more comfortable for the patient due to low forces.
- Allows for patient to control discomfort with cold water rinses.

### Nickel Titanium Superelastic - FLEXADENT™

(NiTi - approximately 55% Ni and 45% Ti):

FLEXADENT™ - Ideal for alignment and leveling in early to mid-stages of treatment. All NiTi wires exhibit a unique "Superelastic" behavior.

Superelastic behavior provides:

- Light to moderate, consistent forces.
- Responsiveness to chilling.
- Near consistent force over a long activation period.
- Greater patient comfort over Stainless Steel wires.
- Excellent resiliency, resulting in high resistance to permanent set.
- High flexibility.
- Leveling, torque, and rotation can be addressed simultaneously early in treatment. No need to treat each of these individually, as is the case if using Stainless Steel wires.

## Choosing The Best Wire For The Application - continued

### Nickel Titanium - PERFECT-Ti™

(NiTi -approximately 55% Ni and 45% Ti):

Your customers will love the **efficiency** of our PERFECT-Ti™ superelastic premium wires! adenta developed this ultra smooth, hard black surface nickel titanium wire engineered specifically for **reduced friction and efficient tooth movement**.

- 30% less friction than traditional Nickel Titanium wire provides improved sliding mechanics.
- Our highest force Superelastic NiTi wire.
- Hard surface is an integral part of the wire; not a coating.
- Black color nearly indistinguishable from other wires when in the mouth.
- Very resilient.
- Ideal for self-ligating brackets.

### CNA BETA III/TM - TRIDENT™

(A titanium molybdenum wire composed of 79% Ti, 11% Mo, 6% Zr, and 4% Sn):

The characteristics of our custom designed, nickel-free Beta III Titanium wire make this perfect for use in mid- to late stages of treatment where space closure, rotation, and proper molar relationship are the goal.

- CNA Beta III/TM significantly outperforms TMA Beta III and easily accepts 1st and 2nd order bends without the known breaking issues.
- Nickel-free! Eliminates treatment concern of nickel sensitivity in patients.
- Excellent formability allows easy fabrication of loops and bends for space closure and tooth movement.
- Easily accepts 1st and 2nd order bends for tipping and aligning.
- Very good resiliency as compared to Stainless Steel.
- Approximately half the tooth-moving force of Stainless Steel.
- Excellent finishing wire.
- Retainer and appliance fabrication is easy with our CNA Beta III/TM 14" lengths

### Stainless Steel Solid - DURADENT™

Our archwires are manufactured from medical grade 304V Stainless Steel material (70% Fe, 19% Cr, 9% Ni, 1.5% Mn, 0.5% Si). These archwires can be used throughout treatment but are best suited for mid - to late stages of treatment.

- Superior surface finish.
- Higher force and limited resiliency as compared with Beta III CNA™ wire.
- Forces drop quickly; best suited as a finishing wire.
- Easy to bend.
- Greater patient discomfort when used in early treatment stages.

### Stainless Steel Multi-strand - TWISTADENT™

adenta's three types of multi-strand wires made of medical grade Type 302SS (71% Fe, 18% Cr, 9% Ni, 1% Mn, 0.5% Si) are well suited for early stages of treatment as well as the finishing stage of detailing and retention. Lower forces and better resiliency than solid Stainless Steel.

- TWISTADENT™ 3d-strand (twisted) wire provides moderate forces and limited flexibility.
- TWISTADENT™ Coax (6-strand) wire provides lighter to moderate forces and slightly better resiliency than 3-strand.
- TWISTADENT™ (7-strand) provides light forces
- TWISTADENT™ 8-Braid wire provides the lightest forces of the multi-strand Stainless Steel wires, with relatively good resiliency.



#### Packaging Options:

Wire pouch  
5/10/25 wires per pouch

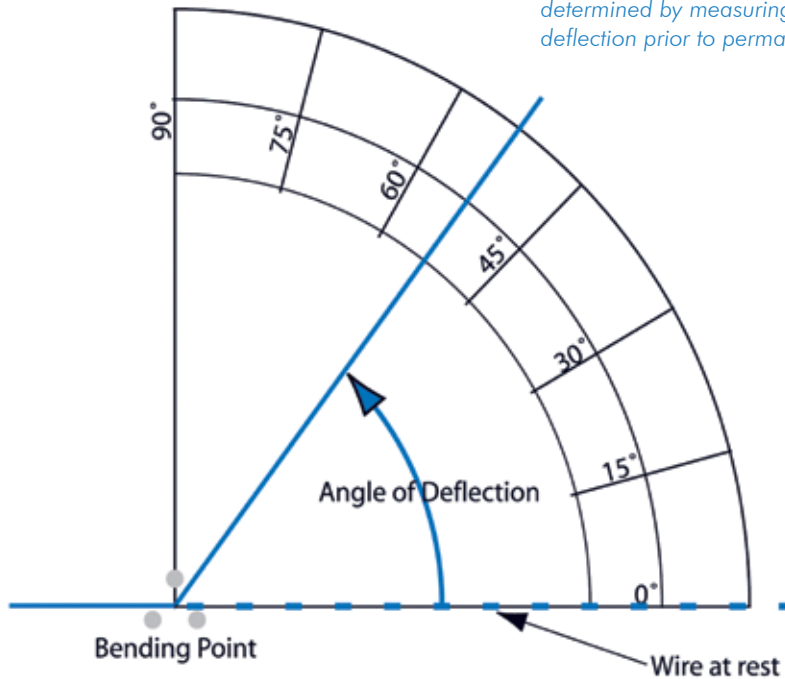
Individual packaging also available in plain white envelopes. *Please specify your pouch option when ordering.*

*Please note: Mushroom and Looped wires are not available in new pouch option.*

## Nickel Titanium Maximum Bend Angles

NiTi is so resilient that it is tempting to bend it just a little more: but, how far can it go without being over-stressed and permanent deformations is introduced?

We used a three prong (.020" radius) bending pliers (jaws depicted as grey circles in diagram above) to replicate the bend angle of a wire exiting a bracket. The maximum bend angle was determined by measuring, on a degree wheel, the angle of deflection prior to permanent deformation.



### Maximum Bend Angle Guide

<b>75°</b>	<b>.012</b> wire
<b>70°</b>	<b>.013</b> wire
<b>60°</b>	<b>.014</b> and <b>.014 x .025</b> wire
<b>50°</b>	<b>.016</b> and <b>.018</b> wire
<b>45°</b>	<b>.020</b> , <b>.016 x .016</b> , <b>.016 x .022</b> , <b>.016 x .025</b> , and <b>.017 x .025</b> wire
<b>43°</b>	<b>.018 x .018</b> , <b>.018 x .025</b> , and <b>.019 x .025</b> wire
<b>40°</b>	<b>.021 x .025</b> wire

*NOTE: This data is for approximate reference only. Actual bend angles will be dependent upon specifics of a particular case. Actual wire dimension, bracket position, slot edge radius, wire span, and ligating techniques, etc. will all affect maximum bend angle.*