“New alloys, geared to generate biologically consistent forces, enable the clinician to provide controlled and predictable tooth movement. Copper Ni-Ti demonstrates precise transformation temperature control, is more resistant to permanent deformation and exhibits a smaller drop in unloading force than other nickel-titanium alloys. By applying the principles of variable transformation temperature orthodontics with Copper Ni-Ti, I am able to control tooth movement in my practice more efficiently.”

– Rohit C. L. Sachdeva, BDS, M Dent Sc

Copper Ni-Ti®

Copper Ni-Ti wires consist of nickel, titanium, copper and chromium. The addition of copper to the alloy enhances the thermal-reactive properties of the wire. Ormco offers four different Copper Ni-Ti series: Damon Copper Ni-Ti and 27°C, 35°C, and 40°C Copper Ni-Ti. The higher the temperature transition (TTR), the lower the relative forces delivered by the wire. The Copper Ni-Ti series provides a wide range of options in selecting and delivering the force of choice and the wire size for the dictates of the case and treatment modality.

• Unloading (springback) properties facilitate fast, efficient tooth movement.
• Due to the lower hysteresis of Copper Ni-Ti, the loading forces are smaller than their nickel-titanium counterparts, making wire engagement in the bracket slot easier.
• A unique unloading profile provides continuous forces, even at very small deflections (Fig. 1).
• More resistant to permanent deformation than other nickel-titanium wires.
• Batch-to-batch consistency, with a very precise temperature range, ensures true heat activation and consistent, predictable results (Fig. 2).
• Easy to engage, even in the most severe cases.