

# NovaBone® Dental Putty & NovaBone® Morsels

The synthetic solution to bone regeneration



## NovaBone® Putty in Cartridges

### Cartridges

NA3620	0.5 cc	(2 per box)
NA3640	0.5 cc	(4 per box)
NA4640	0.25 cc	(4 per box)

### Cartridge Applicator Gun

NA4600 (Fits all cartridges)

## NovaBone® Putty in Syringes

NA1610	0.5 cc
NA1611	1.0 cc
NA1612	2.0 cc



## NovaBone® Putty in Trays

NA0660	0.5 cc	(6 per box)
NA0610	0.5 cc	(1 per box)
NA0622	1.5 cc	(2 per box)



## NovaBone® Morsels in Trays

NovaBone® Morsels is a particulate product made up of a crystalline composite calcium phosphosilicate (CPS). The particle size ranges from 0.5 mm – 1.0 mm with pore sizes ranging from 0.05 mm – 0.10 mm. The pore size results in slow and sustained resorption that is completed over a 12–18 month period. The morsels have an "osteostimulative" effect similar to NovaBone® Dental Putty.

EU0820	1.3 cc	(2 per box)
EU0822	4.0 cc	(2 per box)



not actual size.

# Overview of NovaBone® Dental Putty

## Unique Formulation of NovaBone® Dental Putty

NovaBone® Putty is 100% synthetic and fully resorbable. It is composed of calcium phosphosilicate (CPS) particles in a bimodal size distribution combined with a polyethylene glycol and glycerine binder. The binder improves handling and aids in maintaining the space between the particles, which facilitates revascularization after implantation. The bioactive CPS component makes up 70% of the putty by volume. Upon implantation, the water soluble binder is absorbed within 24 to 72 hours, creating a 3-dimensional porous scaffold that facilitates diffusion of blood and tissue fluids through the matrix. The smaller CPS particles (32-125 µm) are more rapidly resorbed, providing the initial burst of Ca and P ions. Subsequently, the larger particles (90-710 µm) react, and being more resistant to resorption, continue the process of bone regeneration.

## Osteostimulative & Osteoconductive

Unlike most synthetic grafts that are only osteoconductive, bioactive NovaBone® Putty also has an "osteostimulative" effect. After implantation, surface reactions result in absorption of the graft material, a controlled release of Si, Ca, and P ions, and concurrent new bone formation. These surface reactions result in an osteostimulative effect, defined as the stimulation of osteoblast proliferation *in vitro* as evidenced by

increased DNA content and elevated osteocalcin and alkaline phosphatase levels. *In vitro* gene array analysis has confirmed that when human primary osteoblasts are exposed to extracts of CPS, upregulation of several gene families occurs.

## Superior Delivery System & Handling

NovaBone® Putty is available in multiple delivery options: trays, pre-filled syringes, and a unique industry-first cartridge delivery system. NovaBone® is the only graft material in the world that is available in disposable uni-dose cartridges. The cartridges simplify dispensing of the graft, especially in hard-to-reach areas, thus facilitating minimally invasive techniques (and hard-to-access defects such as gaps in immediate implant placement and crestal-approach sinus lifts). Cartridges are available in various sizes and are used in conjunction with NovaBone®'s cartridge delivery system; each cartridge holds 0.25 to 0.5 cc's of putty.

NovaBone® Putty significantly simplifies bone graft handling and delivery. It is ready to use and extremely user friendly. It is pre-mixed, cohesive, moldable, and adaptable. NovaBone® Putty is stable at room temperature, does not require refrigeration, has a 4-year shelf-life, and appears radiodense on radiographs.

