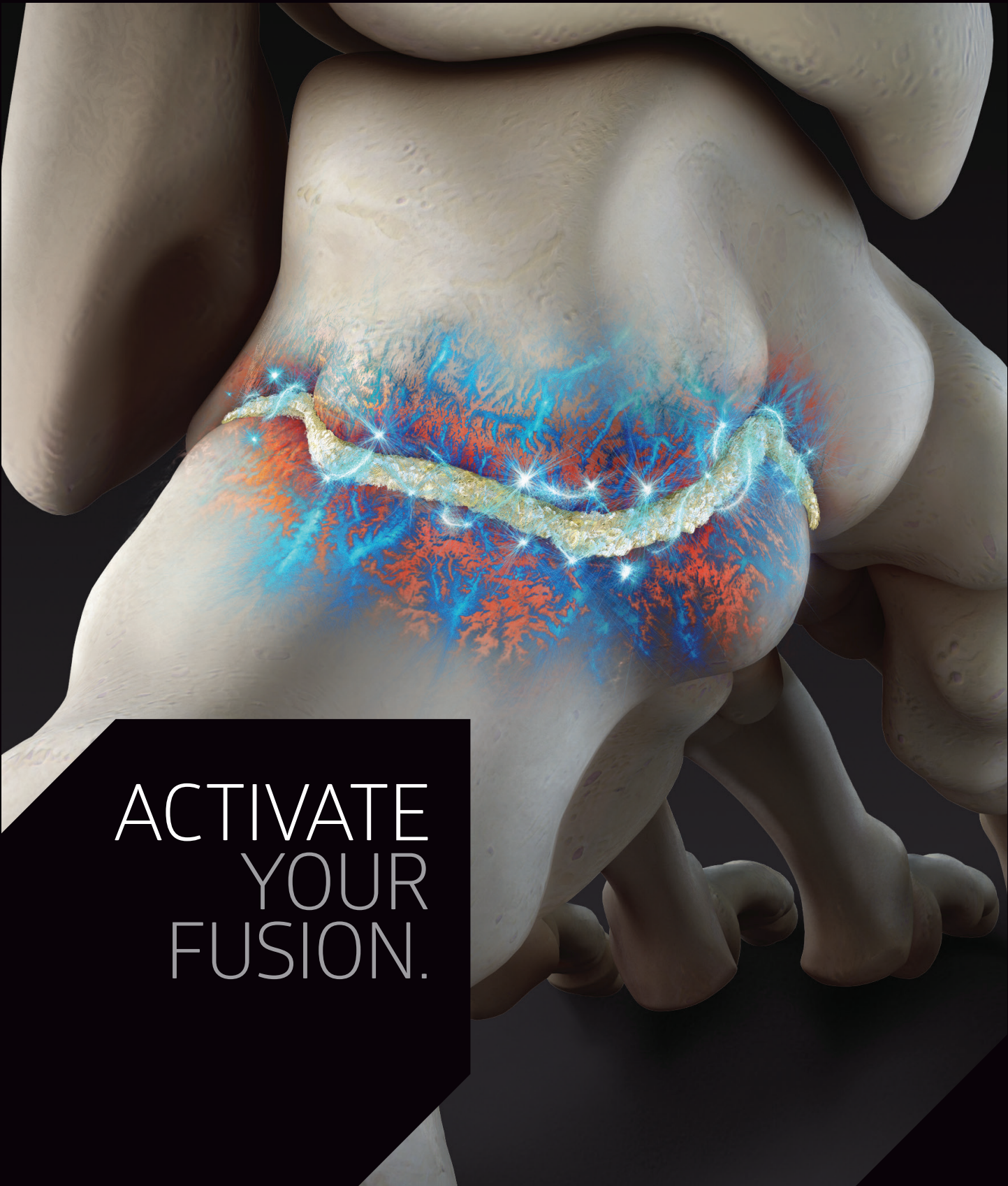




UNITE[®]
ORTHOBIOLOGICS

Advanced Orthobiologic Solutions
Intelligently designed to support bone healing.



ACTIVATE
YOUR
FUSION.

A force of nature against non-unions.

Literature shows that non-union rates are notoriously high for hindfoot and ankle fusions due to the physical challenges of those mobile areas: increased mechanical load, restricted blood supply and thin soft tissue coverage.¹ That risk dramatically increases with patient co-morbidities.¹

But it doesn't have to be the case. Research shows that orthobiologics, including bone graft and bone graft substitutes, can help improve fusion rates.² Although autograft is ideal, it has many limitations, including donor site morbidity, increased operative time and limited autograft material.³ **That's where we step in.**

Hindfoot and ankle fusions
in healthy patients



Patients with co-morbidities
such as diabetes and smoking



Build new life at the site.

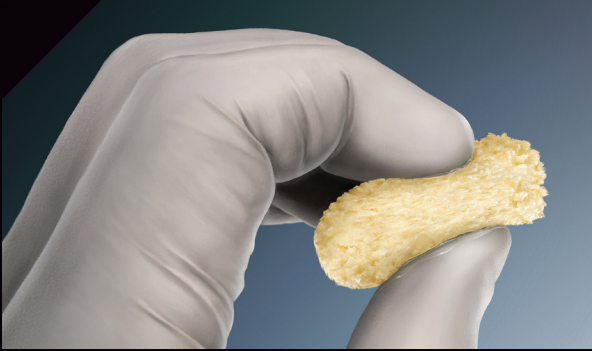
Biologically active grafts fused with superior handling characteristics.

To rebuild bone and revitalize tissue, the most viable solutions are full of life. That's the science behind our next-generation portfolio of orthobiologics. They're intelligently designed to nurture recovery through vitality, combining the power of biologically active cells and growth factors with superior handling characteristics. Our solutions stand up to every challenge and fill every void, helping to stimulate new life at the surgical site.

Activate your fusion with Medline UNITE orthobiologics.

4

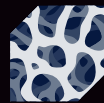
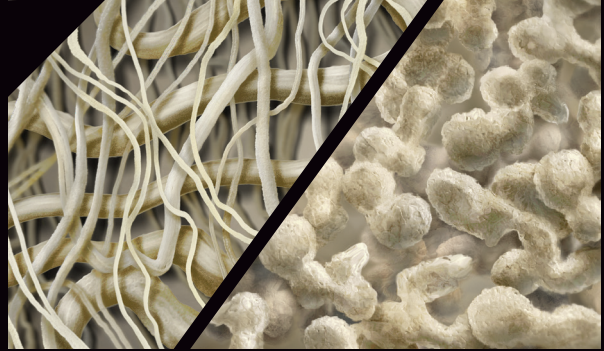
factors for better bone regeneration.
Our advanced orthobiologics deliver on them all.



Superior Handling Shape

Moldability and irrigation resistance to fill voids and defects of all shapes and sizes

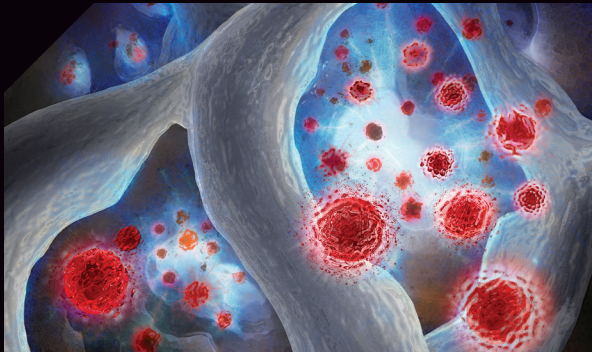
Sources: Cortical Fibers, Synthetic Carriers



Osteoconductive Support

Physical scaffold that supports cellular activity and bony ingrowth

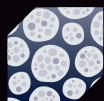
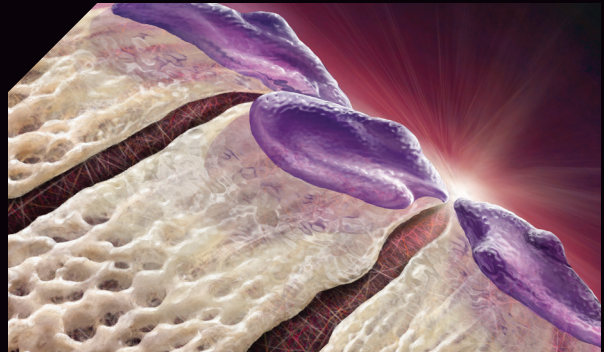
Sources: Allograft bone chips, bone fibers, and synthetics/ceramics, such as β -TCP and HA



Osteoinductive Stimulate

Growth factors such as BMPs that recruit and stimulate a patient's own cells to differentiate into osteoblasts

Sources: BMPs (growth factors) from allograft demineralized bone matrix






Osteogenic Start

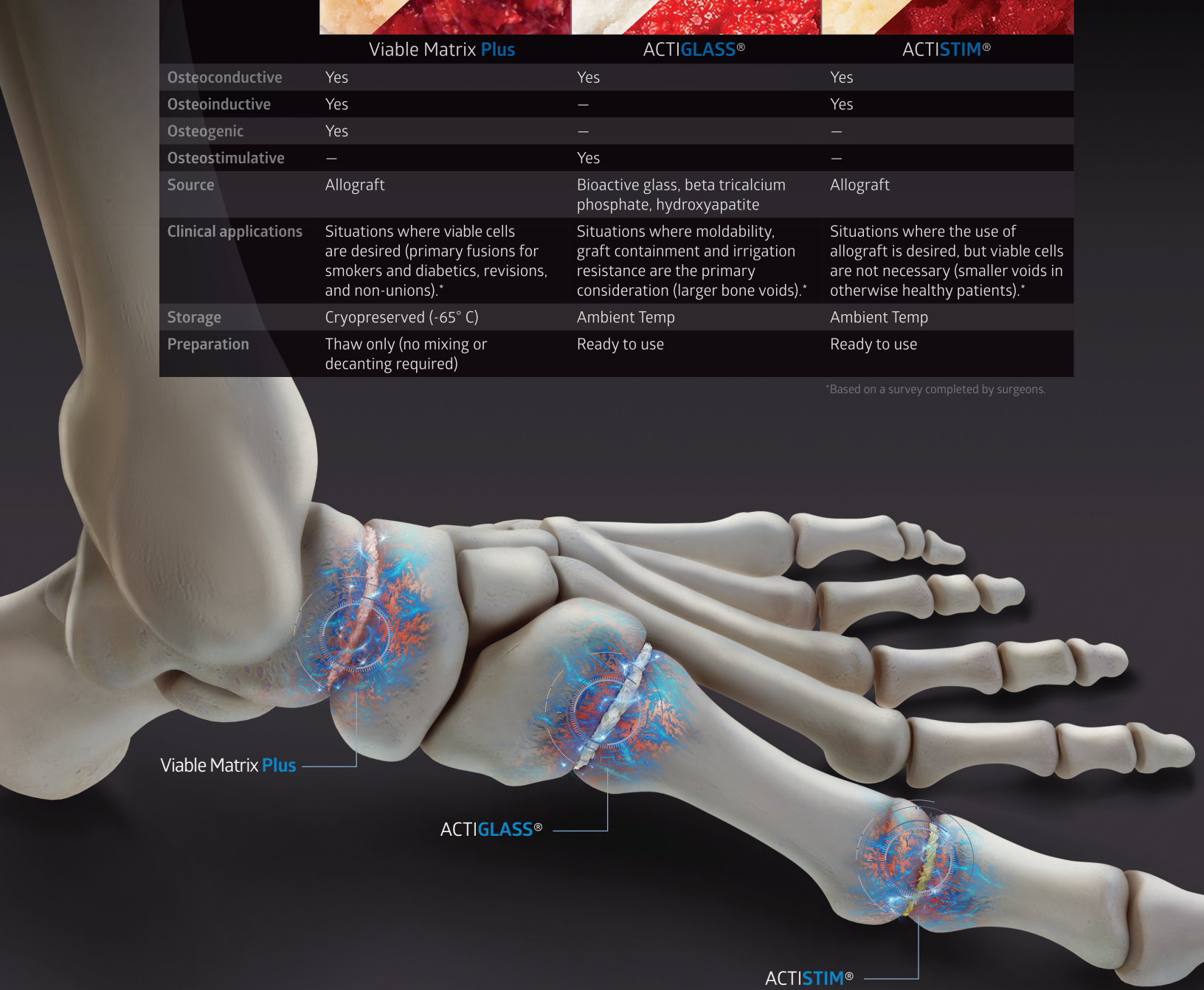
Cells that differentiate and develop into osteoblasts which form new bone

Sources: Cells from autograft bone, bone marrow aspirate (BMA), cryopreserved allograft bone cells

Activate the right bone grafting solution for every case.

	Cellular Bone Graft	Synthetic Bioactive Putty	Demineralized Fiber Putty
Graft texture			
	Viable Matrix Plus	ACTIGLASS®	ACTISTIM®
Osteoconductive	Yes	Yes	Yes
Osteoinductive	Yes	—	Yes
Osteogenic	Yes	—	—
Osteostimulative	—	Yes	—
Source	Allograft	Bioactive glass, beta tricalcium phosphate, hydroxyapatite	Allograft
Clinical applications	Situations where viable cells are desired (primary fusions for smokers and diabetics, revisions, and non-unions).*	Situations where moldability, graft containment and irrigation resistance are the primary consideration (larger bone voids).*	Situations where the use of allograft is desired, but viable cells are not necessary (smaller voids in otherwise healthy patients).*
Storage	Cryopreserved (-65° C)	Ambient Temp	Ambient Temp
Preparation	Thaw only (no mixing or decanting required)	Ready to use	Ready to use

*Based on a survey completed by surgeons.



Viable Matrix Plus

ACTIGLASS®

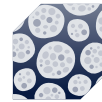
ACTISTIM®

Viable Matrix Plus

Bone Allograft



Packaged in easy-to-use syringe with four-hour working window for implantation once thawed.



VIABLE CELLS



GROWTH FACTORS



FIBER SCAFFOLD



POROUS SCAFFOLD

Next generation solution for bone formation.

Quality and quantity for unparalleled results. Patented and proprietary cryoprotectant is used to preserve 1.5 million viable cells per cc, providing an optimal environment for osteogenesis.⁷ Demineralized cortical fibers are supplemented with cancellous chips to deliver a 100% human-derived product that mimics the particulate structure of native bone.

1.5 MM
viable
cells per cc.

Osteogenic potential including cell viability and progenitor cellular expression verified through multiple assays⁷

Osteoinductive potential from endogenous factors in demineralized cortical bone

Osteoconductive 3D scaffold comprised of mineralized cancellous bone to mimic particulate structure of native bone



Patented processing technology
DMSO-free cryoprotectant eliminates rinsing step and retains over 92% viability post thaw⁷

Improved handling and wicking vs. traditional cellular bone allografts

Viable Bone Allograft

Item No.	Size
MVBG1025	2.5 cc
MVBG1050	5 cc
MVBG1100	10 cc

Manufactured by **VIVEX** BIOLOGICS



VIABLE MATRIX PLUS



PARTIALLY HYDRATED



FULLY HYDRATED



Bioactive glass kickstarts the healing process with an osteostimulative effect.



BIOACTIVE GLASS



POROUS SCAFFOLD

Build bone with a pliable synthetic putty that mimics the power of nature.

Surgery-ready and designed to provide a rapid, bioactive response, optimized resorption profile and unparalleled handling characteristics.

Forms an osteoconductive apatite layer as early as **7 days.**

Optimized combination and ratio of biomaterials to support bone healing at all stages

Bioglass facilitates a rapid biological response and stimulates the formation of an osteoconductive apatite layer

Optimized granule structure and porosity mimics human cancellous bone



Controlled resorption profile with biphasic granules (β -TCP and HA components)

Highly moldable and waxy consistency in a rapidly resorbing Alkylene Oxide Polymer carrier

Synthetic Bioactive Putty

Item No.	Size
MSBG0375	3.75 g
MSBG0750	7.5 g



ACTIGLASS



PARTIALLY HYDRATED



FULLY HYDRATED



ACTISTIM[®]

Demineralized Fiber Putty



Demineralized cortical fibers increase graft surface area to promote osteoconductivity, powered by the presence of bone morphogenetic proteins (BMP-2).



GROWTH FACTORS



FIBER SCAFFOLD



POROUS SCAFFOLD

Actively stimulate bone growth at the source.

100% human allograft fuses ideal biological properties with excellent handling characteristics to help aid in bone healing.

18x greater surface area to volume ratio.*

Versatile graft option for small voids

3D interwoven fiber scaffold offers greater osteoconductive surface area vs. traditional crushed cancellous bone

Improved handling and wicking vs. traditional putties and chips



Carrier-free formulation allows for immediate start to the bone healing process

Demineralized Fiber Putty

Item No.	Size
MDBM1010	1 cc
MDBM1025	2.5 cc
MDBM1050	5 cc
MDBM1100	10 cc



ACTISTIM



PARTIALLY HYDRATED



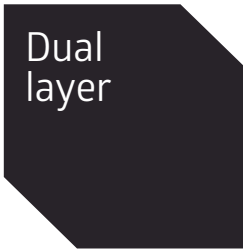
FULLY HYDRATED

*Compared to 1-4mm cancellous chips.



REVITALON is placed in the pouch amnion-side down. A notch is cut in the top left corner of the graft to indicate that the amnion-side is oriented down.

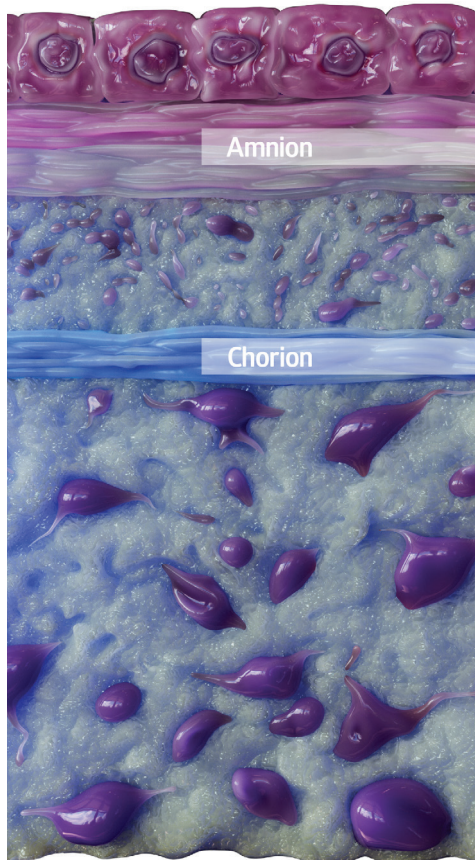
REVITALON has increased thickness to improve suture passing capabilities during implantation and may be anchored by method of choice. The graft's solubility allows for rapid rehydration once in place.



Advanced wound coverage solution.

As a natural layer surrounding the fetus, the amniotic membrane is composed of two layers: the amnion—the layers closest to the fetus, and the chorion—the layers closest to the mother.

Together, these layers provide a barrier adept at remodeling to accommodate the growing fetus. Protective features within these layers make amnion chorion membranes ideal for homologous use as a barrier in a variety of applications.



- Epithelium
- Basement membrane
- Compact layer
- Fibroblast layer
- Intermediate layer
- Reticular layer
- Basement membrane
- Trophoblasts

Amnion Chorion Membrane

Item No.	Size
MA915218	4 x 4 cm
MA915318	4 x 6 cm
MA917918	4 x 8 cm
MA915418	6 x 6 cm
MA918018	7 x 7 cm

AUTOGRAFT SOLUTIONS



Autograft Harvester

Simplified harvesting of autogenous bone

Seamless bone removal with the Autograft Harvester.

- AO/QC for faster assembly
- Built-in scoop feature
- Multiple sizes based on patient anatomy or desired harvest site (calcaneus, proximal or distal tibia, and iliac crest)



Autograft Harvester

Item No.	Size	Qty.
MBGH0007	Ø7 mm	1 ea
MBGH0009	Ø9 mm	1 ea

Restore harvest sites with the ACTIGLASS® Backfill Plug.

- Synthetic backfill plug comprised of hydroxyapatite, tricalcium phosphate and Bioactive Glass in a collagen matrix
- Two pre-shaped sizes to match the voids created by the Autograft Harvester

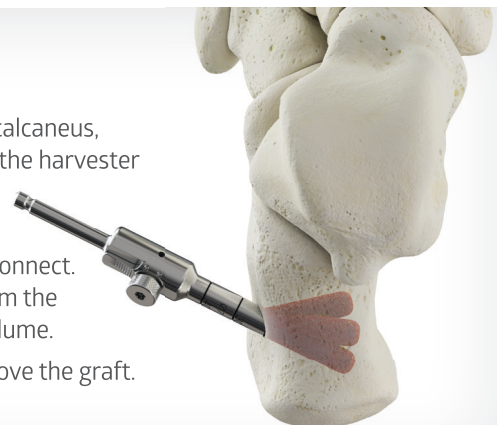


Backfill Plug

Item No.	Size	Qty.
MSBG6540	Ø6.5 x 40 mm	1 ea
MSBG8540	Ø8.5 x 40 mm	1 ea

Autograft Harvester surgical technique

- Step 1: Make a small incision and dissect down to the lateral wall of the calcaneus, If desired, a pilot hole can be created with a drill before inserting the harvester into the bone.
- Step 2: Ensure assembly is secure. If needed, a T15 driver can be used to tighten the screw. Connect the harvester to power via AO quick connect. Advance the harvester to the desired depth and then remove from the bone. Multiple passes may be needed to recover desired graft volume.
- Step 3: Unscrew the Autograft Harvester door and use the scoop to remove the graft.
- Step 4: Place the ACTIGLASS Bioimplant to backfill the harvester site.





Ready when you are.

Pre-Hydrated Reconstructive Bioimplants

Pre-hydrated for speed and strength

Bioimplants are processed, packaged and stored fully hydrated for immediate use.

- Eliminates idle time
- Preserves structural integrity of the graft
- Reduces the likelihood of intra- and post-operative graft crumbling and subsidence

Pre-shaped for stronger performance

Made of dense cancellous bone, each bioimplant is pre-shaped to eliminate the time and waste of cutting a bone block.

- Withstands the physical demands placed on structural grafts
- Full incorporates and resorbs
- Removes easily if needed

Item No.	Description	Size
MWCT0005	Cotton	5 mm
MWCT0006	Cotton	6 mm
MWCT0007	Cotton	7 mm
MWEV0006	Evans	6 mm
MWEV0008	Evans	8 mm
MWEV0010	Evans	10 mm
MWEV0012	Evans	12 mm
MWUT0012	Utility	12 mm
MWMP0011	MTP Revision	11 mm
MWMP0018	MTP Revision	18 mm

Associated instrumentation

Articulating Pin Distractor

Allows you to adjust the correction, while providing unobstructed access to the osteotomy.



Wedge Trials

Allows you to view the correction visually and fluoroscopically before selecting the appropriate size wedge.



MTP Reamers

Cup, Cone and Acorn reamers allow you to match up the graft and the patient's bone for a perfect fit.



Complete ordering information

Viable Matrix Plus Bone Allograft

Item No.	Size	Qty.
MVBG1025	2.5 cc	1 ea
MVBG1050	5.0 cc	1 ea
MVBG1100	10 cc	1 ea

ACTIGLASS® Synthetic Bioactive Putty

Item No.	Size	Qty.
MSBG0375	3.75 g	1 ea
MSBG0750	7.5 g	1 ea

ACTISTIM® Demineralized Fiber Putty

Item No.	Size	Qty.
MDBM1010	1 cc	1 ea
MDBM1025	2.5 cc	1 ea
MDBM1050	5 cc	1 ea
MDBM1100	10 cc	1 ea

Cancellous Chips

Item No.	Size	Qty.
MCAN0100	1-4 mm, 10 cc	1 ea
MCAN0150	1-4 mm, 15 cc	1 ea
MCAN0300	1-4 mm, 30 cc	1 ea
MCAN1100	4-10 mm, 10 cc	1 ea
MCAN1150	4-10 mm, 15 cc	1 ea
MCAN1300	4-10 mm, 30 cc	1 ea

Pre-Hydrated Cotton Wedges

Item No.	Size	Qty.
MWCT0005	5 mm	1 ea
MWCT0006	6 mm	1 ea
MWCT0007	7 mm	1 ea

Pre-Hydrated Evans Wedges

Item No.	Size	Qty.
MWEV0006	6 mm	1 ea
MWEV0008	8 mm	1 ea
MWEV0010	10 mm	1 ea
MWEV0012	12 mm	1 ea

Pre-Hydrated Utility Wedge

Item No.	Size	Qty.
MWUT0012	12 mm	1 ea

Pre-Hydrated MTP Revision Bioimplants

Item No.	Size	Qty.
MWMP0011	11 mm	1 ea
MWMP0018	18 mm	1 ea

REVITALON™ Amnion Chorion Membrane

Item No.	Size	Qty.
MA915218	4 x 4 cm	1 ea
MA915318	4 x 6 cm	1 ea
MA917918	4 x 8 cm	1 ea
MA915418	6 x 6 cm	1 ea
MA918018	7 x 7 cm	1 ea

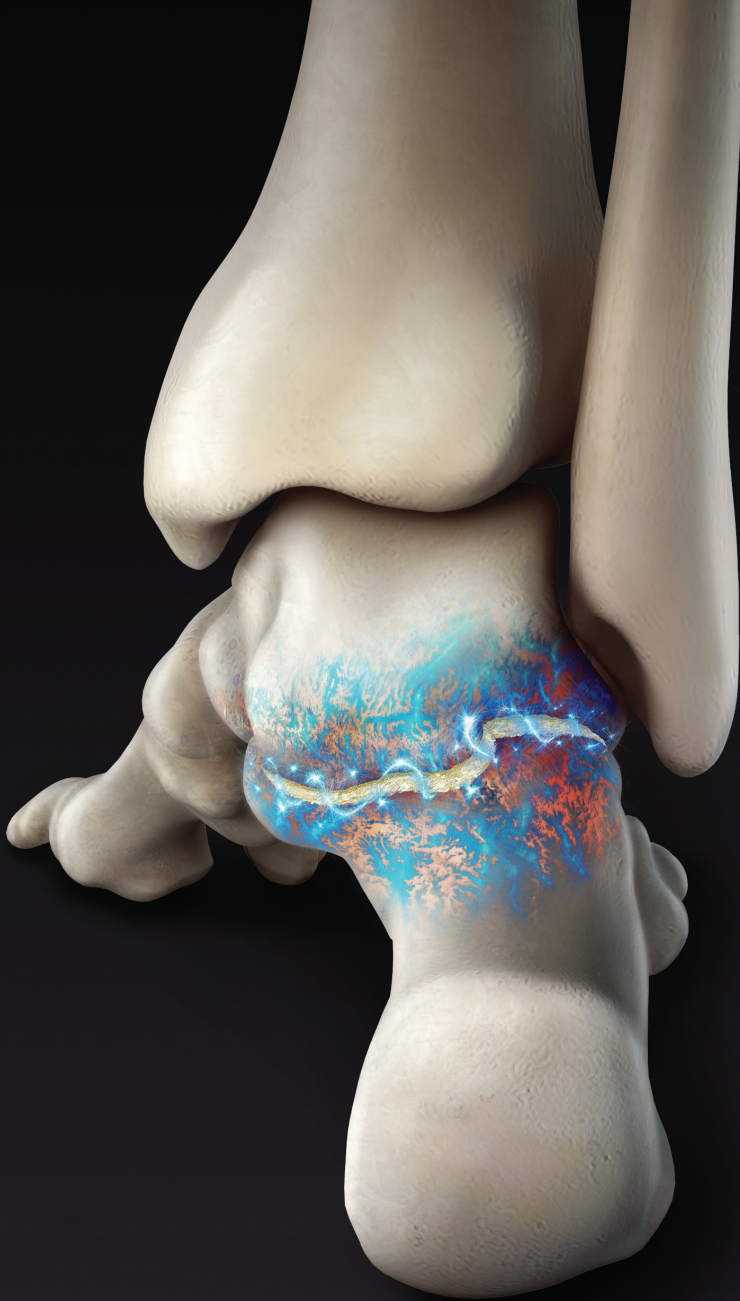
Autograft Harvester

Item No.	Size	Qty.
MBGH0007	Ø7 mm	1 ea
MBGH0009	Ø9 mm	1 ea

ACTIGLASS® Backfill Plug

Item No.	Size	Qty.
MSBG6540	Ø6.5 x 40 mm	1 ea
MSBG8540	Ø8.5 x 40 mm	1 ea





One step ahead.

For more than 50 years, we've been making healthcare run better as the nation's largest privately held manufacturer and distributor of medical products. We're your strategic partner, empowered to innovate and tailor healthcare solutions that flex with your ever-changing needs. So you're always one step ahead.

To learn more or schedule a case, contact your Medline UNITE Representative or visit medlineunite.com.



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