Competitor Fact Sheet: **Quickset™**

Biocomposites®

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Feature	genex®	Quickset™ Arthrex® (Manufactured by Graftys®)
Composition	Powder: 50% β-tricalcium phosphate, 50% $CaSO_4$ hemihydrate Mixing solution: Sterile water[1]	Powder: Calcium phosphate salts with polysaccharide polymer Mixing solution: Sodium phosphate solution[4-7]
Scaffold type	Osteoconductive with negative surface charge for accelerated bone restoration[2]	Osteoconductive[5]
Available sizes	5cc, 10cc	5cc, 8cc, 16cc[4]
Setting time	15 minutes[1]	• Initial setting at 8 minutes[4,6,7] • Complete hardening at 24 hours[4]
Temperature sensitive setting	No[1]	Yes[4,7]
Drillable when fully set	Yes[1]	Not marketed for this purpose
Versatility	Moldable, packable, injectable[1]	Injectable[4,6,7]
Injection flexibility	• Luer Lock syringe with narrow plastic cannula included for hard-to-reach defects • OsteoPrecision™ Graft Delivery Device available to withstand insertion pressure	• Cannula and delivering gun included[4,5]
Impurities	No[1]	Unknown

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Claimed absorption rate	Up to 12 months[3]	Not specified. Expected to occur in ≥8 months[1,4]
Fully absorbs	Yes[1]	May not fully absorb[1]
Dry compressive strength	15MPa[1]	24MPa[4]
Radiopaque	Yes[1]	Yes[4,6]
Key selling points and weaknesses	(+) Precisely balanced β-tricalcium phosphate/calcium sulfate hemihydrate[1] (+) Contains no Hydroxyapatite (HA) or insoluble impurities[1] (+) Fully absorbed within 12 months[3] (+) Indicated to fill bone voids in long bones, extremities, spine and pelvis[1] (+) Not temperature sensitive[1] (+) Provides flexibility with options for molding, packing and injecting (+) Drillable when fully set[1] (+) Radiopaque[1] (+) Negatively charged surface chemistry accelerates bone growth up to 5x normal levels[2] (+) Restores bone to normal trabecular structure in 36 weeks[3] (+) Comprehensive support network for our customers and hospitals	(+) Also sold as QuickPack™ (OrthoPediatrics®)[7] (+) Closed mixing system[4] (+) Radiopaque[4,6] (-) Calcium phosphate converts to calcium-deficient apatite after crystallization (similar to HA)[1,4] (-) HA has a slow and incomplete absorption rate[1] (-) HA can cause a long-term nidus for infection[1] (-) Contraindicated for infected sites[6] (-) Not indicated for use in the spine[6] (-) Temperature sensitive - injection, working and setting times are strongly temperature dependent[4,7]

* (+) = competitor selling points
(-) = competitor weaknesses

References:

1. Biocomposites, Data on file.
2. Cooper, J.J., J.A. Hunt, and F. Pu, Enchancing the Osteogenic Potential of Bioabsorbable Implants through Control of Surface Charge. Presented at the Society for Biomaterials 2007 Annual Meeting. 2007: Chicago, Illinois, USA.
3. Yang HL et al. Bone healing response to a synthetic calcium sulfate/beta-tricalcium phosphate graft material in a sheep vertebral body defect model. J Biomed Mater Res B Appl Biomater 2012;100B(7):1911-21.
4. Arthrex® Quickset™ Injectable Macroporous Calcium Phosphate Brochure. 2014. LB1-0840-EN_B.
5. Arthrex® Quickset™ Physician Presentation. https://www.arthrex.com/resources/presentation-slides/3Z0n_Qqz80CRUAE4TTkk6A/arthrex-quickset-physician-presentation
6. Arthrex® Quickset™ Injectable Macroporous Calcium Phosphate Instructions for Use. N/ARQSKIT/1111A.
7. OtrthoPediatrics® Corp. QuickPack™ Bone Void Filler Technique Guide. 2019. ST-1800-01-01 Rev B (12/2019).

For indications, contraindications, warnings and precautions see Instructions for Use.

Patents granted: EP 1390086 BI, US 8632796, CN ZL02809194.9, US 8496955

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