

STIMULAN[®]

POWER TO TRANSFORM OUTCOMES[™]

Uniquely
engineered
for the
precision and
control you
demand
every time

Control and performance at your fingertips

STIMULAN is a truly absorbable, calcium sulfate antibiotic carrier - precision engineered to be mixed with antibiotics to treat bacterial infection and proactively manage dead space.¹

- ✓ The only calcium matrix approved for mixing with antibiotics to treat bacterial infection¹
- ✓ Approved for mixing with vancomycin, gentamicin and tobramycin¹
- ✓ No hydroxyapatite, insoluble impurities or PMMA debris
 - Does not cause third body damage^{2,3}
 - Does not prevent use in articulating surfaces^{2,3}
 - Does not act as a nidus for infection⁴⁻⁹

STIMULAN®

Consistency is hard earned and uniquely achieved

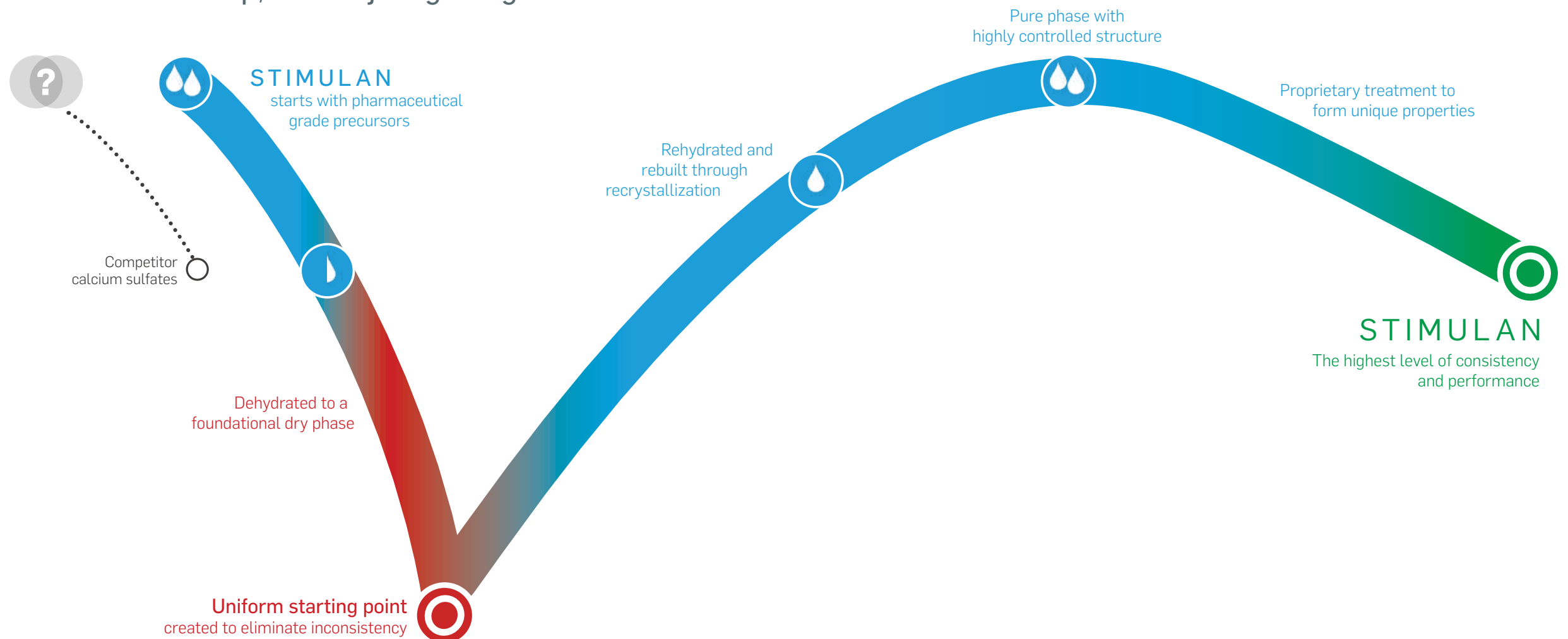
There is no shortcut to perfection. Which is why we go the extra mile to bring you the exceptional performance characteristics of STIMULAN – all made possible through our proprietary DRy26™ methodology.

Each and every synthesis of STIMULAN undergoes a 26 step process that starts with pharmaceutical-grade precursors and takes over 6 weeks to reach maturity.

Our unique DRy26™ recrystallization method dehydrates then rehydrates to precisely restructure the calcium sulfate. This ensures a uniform starting point from which the material is rebuilt under strictly controlled conditions for the highest level of consistency.

The result is as you would expect from the world's leading expert in innovative calcium technologies.

Where others stop, we are just getting started



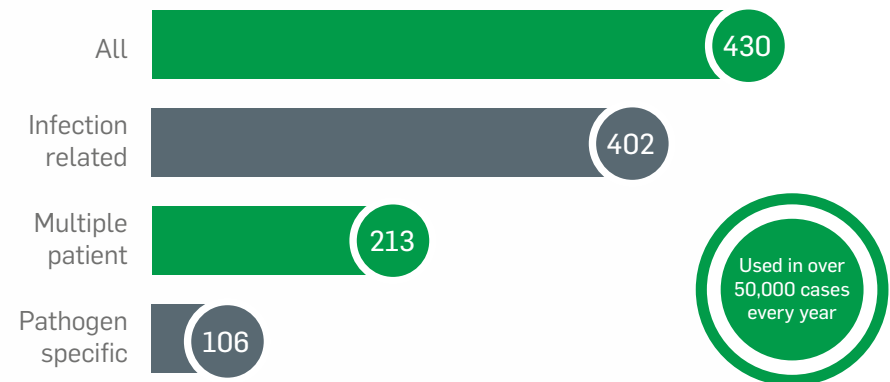
Case-by-case flexibility and success

Every part of STIMULAN has been designed to provide simplicity, intra-operative flexibility and optimum results. A variety of formats are available, all convenient to prepare and fast to set.

Unrivalled evidence and expertise brings confidence

With our industry-leading knowledge, dedication and experience, you can be sure that the high level of consistency you demand in your cases will be met.

Peer reviewed papers, presentations and posters to date



Support as reliable as our outcomes

To ensure that you achieve the consistent results you expect, our comprehensive network of regional calcium sulfate specialists, expert sales representatives and surgeons already using STIMULAN are ready to support your use.

Properties that drive performance

The unique crystal configuration and construction of STIMULAN brings its own set of qualities to fully support your infected cases.¹⁰

- Easily mixed with liquid and powder antibiotics¹
- Physiological pH
- Controlled purity (no insoluble impurities)
- No hydroxyapatite

See the STIMULAN difference in your cases

- ✓ Completely absorbs at an optimal rate¹
- ✓ Predictable, supra-therapeutic elution profile¹¹
- ✓ Proven action against biofilms¹²
- ✓ Flexibility to tailor antibiotic to clinical need¹³
- ✓ Physiological compatibility with the body^{4,9,14}
- ✓ No third body damage^{2,3}

STIMULAN®

When you need it – STIMULAN delivers every time

- ✓ Approved for mixing with antibiotics to treat bacterial infection¹
- ✓ Approved for mixing with vancomycin, gentamicin and tobramycin¹
- ✓ Uniquely engineered through our DRy26™ recrystallization method¹⁰
- ✓ Optimal absorption profile⁴⁻⁹
- ✓ No hydroxyapatite, insoluble impurities or PMMA debris⁴⁻⁹
- ✓ Does not cause third body damage^{2,3}
- ✓ Does not prevent use in articulating surfaces^{2,3}
- ✓ Does not act as a nidus for infection⁴⁻⁹

Find out more at biocomposites.com

References: **1.** Biocomposites, STIMULAN Instructions for Use. **2.** Analysis of the Wear Effect 3rd Body Particulate (Bone Cement) has on UHMWPE, Accutek Testing Laboratory, Fairfield OH, K13107732-1, 2014. **3.** Cowie, R.M., et al., The influence of a calcium sulphate bone void filler on the third-body damage and polyethylene wear of total knee arthroplasty. *Bone Joint Res*, 2019. 8(2): p. 65-72. **4.** Somasundaram, K., Huber, C.P., Babu, V., et al., Proximal humeral fractures: the role of calcium sulphate augmentation and extended deltoid splitting approach in internal fixation using locking plates. *Injury*, 2013. 44(4): p. 481-7. **5.** Lei D., Zhazhong, M., Huaikuo, Y., et al., Treatment of Distal Radius Bone Defects with Injectable Calcium Sulphate Cement. In: *Bone Grafting*, A., Zorzi, Editor. 2012, InTech. p. 125-134. **6.** Lei, D., Jing, L., Yang-yong, S., Calcium sulfate versus calcium phosphate in treating traumatic fractures. *Journal of Clinical Rehabilitative Tissue Engineering Research*, 2008. **7.** Lei, D., Ma, Z., Jing, X., Treatment of bone defect with injectable calcium sulfate powder in distal fractures of radius. *Chinese Journal of Bone Tumor and Bone Disease*, 2007. **8.** Aiken, S.S., Cooper, J.J., Zhou, S., Osseointegration of a calcium sulphate bone substitute in a large animal model, in *The 5th International Congress of Chinese Orthopaedic Association*, 2010: Chengdu, China. **9.** Lazarou, S.A., Contodimos, G.B., Gkegkes, I.D., Correction of alveolar cleft with calcium-based bone substitutes. *J Craniofac Surg*, 2011. 22(3): p. 854-7. **10.** Cooper, J.J. Method of producing surgical grade calcium sulphate. Patent, 1999. **11.** Cooper, J.J., et al., Antibiotic stability in a synthetic calcium sulphate carrier for local delivery. Poster presented at European Bone and Joint Infection Society Annual Meeting, Prague, Czech Republic, 2013. **12.** Delury, C., Aiken, S., Thomas, H., et al., Determining the Efficacy of Antibiotic-loaded Calcium Sulfate Beads against Pre-Formed Biofilms: An In Vitro Study. Poster presented at ASM Microbe 2019, 20-24 June 2019, Moscone Center, San Francisco, CA, USA. **13.** Laycock, P., et al., In Vitro Efficacy of Antibiotics Released from Calcium Sulfate Bone Void Filler Beads. *Materials*, 2018. 11(11): p. 2265. **14.** Biocomposites, Data on file.

For indications, contraindications, warnings and precautions see Instructions for Use. The treating physician is responsible for deciding the type and quantity of antibiotic used. Concurrent use of locally administered antibiotics may affect setting time. The mixing of antibiotics with the STIMULAN Kit/STIMULAN Rapid Cure device is considered off-label usage of the medicinal product. To do so is at the professional risk of the surgeon/healthcare professional. This brochure may include the use of STIMULAN or techniques that go beyond the current clearance/approval granted by the relevant regulatory authority. Please contact your local representative for further information.

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Patents granted: GB2367552, EP 1204599 B1, US 6780391, EP 2594231 B1, US 8883063, CN ZL201210466117.X, GB2496710, EP 3058899 B1, US 10390954, US 10,588,748, CN ZL201610089710.5

Patents pending: GB1502655.2, GB1704688.9, EP 18275044.8, US 15/933936, CN 108619579A