

Serioss[®]: Osteoconductive Silk Protein Bone Void Filler

Superior Bone Regeneration
Powered by Silk Protein!

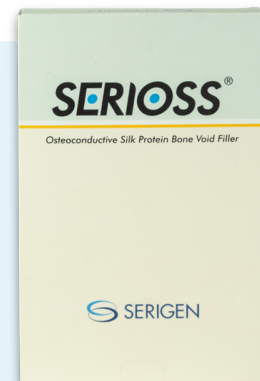


The world's first silk protein bone void filler

Autograft-Like Performance + Convenience of Synthetic Fillers

Overview

Serioss® is a patented, next-generation, silk-protein bone void filler designed for bone regeneration. It is a fully synthetic, biomimetic scaffold made from 100% silk protein, engineered to facilitate predictable bone healing through controlled resorption and superior structural support.



Key advantages

Meeting every critical parameter of bone regeneration

01

Superior osteoconductivity

Interconnected porous architecture supports osteoblast attachment, migration, proliferation and vascular ingrowth.

02

Biocompatibility

Non-cytotoxic, non-immunogenic; tested safe and biocompatible per ISO 10993 standards.

03

Optimal pore architecture

~40% porosity and ~800 µm pore size enable cell infiltration, vascularization and nutrient exchange.

04

Mechanical strength

Mimics cancellous bone with bone-like compressive strength for defect stability under load.

05

Controlled resorption

Resorbs gradually in sync with new bone formation, enabling progressive load transfer.

06

Versatile forms & sizes

Available as granules, pellets, wedges and cylinders to conform to a wide range of defect geometries.



**Award-Winning
Technology**

- 9th National Award for Polymers in Public Healthcare
- Dr K.H. Gharda Industrial Innovation Award (SPSI)
- Poster Pitch winner, ORS 2024 (USA)

Clinical indications

Use cases & applications

Serioss® is designed to fill, support, and promote healing in bone defects resulting from trauma or reconstructive orthopaedic procedures.



01 · LONG-BONE FRACTURES



02 · RECONSTRUCTION SURGERIES



03. REVISION AND NON-UNION SURGERIES



04 · OTHER TRAUMA CONDITIONS

Proven Safety & Efficacy

Serioss® is biocompatible as per ISO 10993 standards, clinically safe, and backed by comprehensive preclinical and clinical evidence.



Manufactured from high-purity silk protein with a long history of clinical use, Serioss® demonstrated excellent biocompatibility through in vitro and in vivo testing in accordance with ISO 10993 standards, confirming it is non-cytotoxic, non-genotoxic, non-sensitizing, non-pyrogenic, and non-irritant.



This strong safety profile was further validated in human clinical studies conducted at a leading orthopedic hospital in India, demonstrating sustained safety and successful bone healing.



Its performance was further validated in a multicenter randomized pivotal clinical study, demonstrating non-inferiority to Tricalcium phosphate across surgical and functional outcomes.



3-Year Follow-Up

Engineered for superior outcomes

Case study 01

Reconstruction of Proximal Humerus Using Serioss®: 3-Year Follow-up



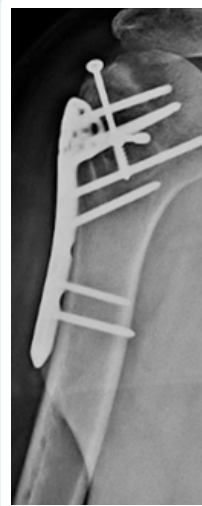
Pre-operative



Post-operative



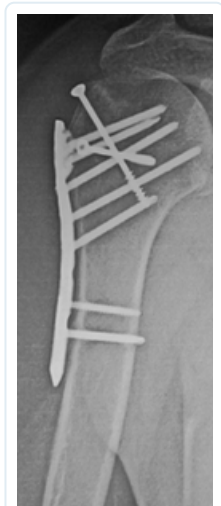
1 month



3 months



6 months



3 years

Clinical outcome

Stable healing with full structural restoration

- Cortical regeneration with successful bridging of the bone defect.
- Anatomical restoration with unrestricted upper limb mobility.

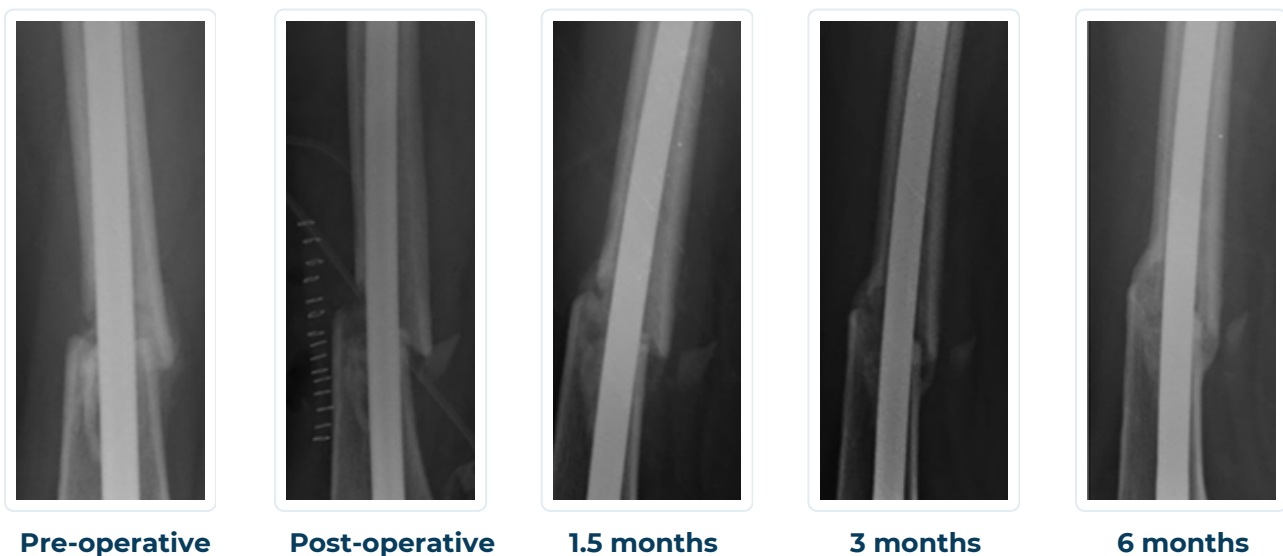


Serioss demonstrated excellent long-term outcomes over a 3-year follow-up study, including a strong safety profile, progressive bone remodeling, complete defect bridging, and optimal anatomical restoration.

Engineered for superior outcomes

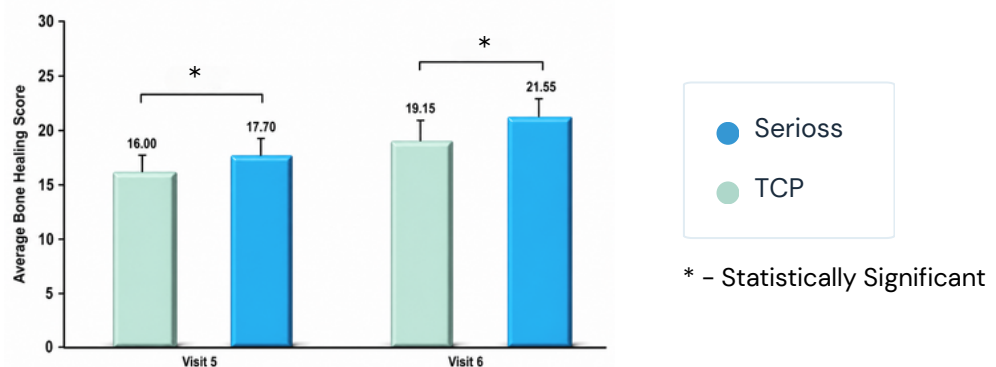
Case study 02

Femur Non-Union: Serioss® Implantation Follow-up Across 6 Months



Superior Performance of Serioss® vs. Tricalcium Phosphate (TCP) in Pivotal Clinical Study

Average Bone Healing Score over Time - Independent Radiologist Assessment



Serioss® demonstrated radiological outcomes comparable to or better than TCP, with statistically significant advantages observed in key bone regeneration assessments

SKUs and Quality

Designed for efficient handling & ease of use

SKUs

Serioss® is available in multiple shapes and sizes, allowing surgeons to easily adapt and conform the scaffold to a wide range of defect geometries.

VARIANT	FORM	SIZE	VOLUME
Serioss® Pellets	Pre-formed pellets	—	5 cc
Serioss® Cylinders	Pre-shaped cylindrical blocks	Ø 14 mm × 8 mm	1.2 cc
Serioss® Cylinders	Pre-shaped cylindrical blocks	Ø 14 mm × 14 mm	2.1 cc
Serioss® Wedge	Pre-shaped wedge	23 mm × 7/2 mm	2.4 cc
Serioss® Putty	Moldable putty	—	1 cc

Global Quality Standards

Serioss® is manufactured in a world-class facility with ISO 13485 certification and ISO Class 7 & 8 cleanrooms.



Get in touch for orders or inquiries

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