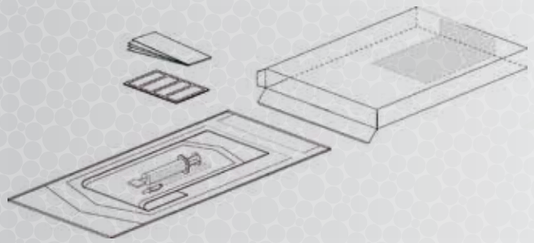
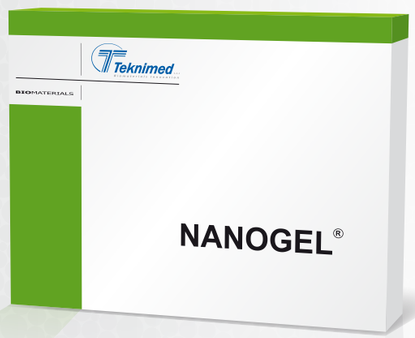
# NANO**GEL**®

## Storage

NANOGEL® is supplied sterile, ready to use in operating rooms.
It must be kept in its original unopened packaging, in a dry clean place away from light, and at a temperature between + 2°C and + 25°C.






## Products

Each dose of NANOGEL® is packaged in a pre-filled sterile syringe.
NANOGEL® is sterilized by radiation at a minimum dose of 25 kGy.
Single use. Do not re-sterilize.
For any further information, please refer to the IFU.

| DESIGNATION | REFERENCE |
|---|---|
| NANOGEL® 0,5ml Syringe | T860005 |
| NANOGEL® 1ml Syringe | T860010 |
| NANOGEL® 2,5ml Syringe | T860025 |
| NANOGEL® 5ml Syringe | T860050 |

bsi. ISO 13485 Medical Devices Quality Management

Classe III

CE 0086

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Distributed by

Manufactured by

Teknimed S.A.S
Biomaterials Innovation




Synthetic
Bone Substitute

Teknimed S.A.S
Biomaterials Innovation

# NANOGEL®

Thanks to its nano composition and structure, NANOGEL® is a synthetic bone substitute which is the most similar to bone tissue.

This innovative product is an absorbable bone void filler which gives a rapid bone ingrowth for a bone reconstruction.

NANOGEL® offers to surgeon wide possibilities of use; open or percutaneous surgery to fill closed bone defects.

BIOCOMPATIBLE

OSTEOCONDUCTIVE

SYNTHETIC

RESORBABLE

**BONE VOID FILLER**

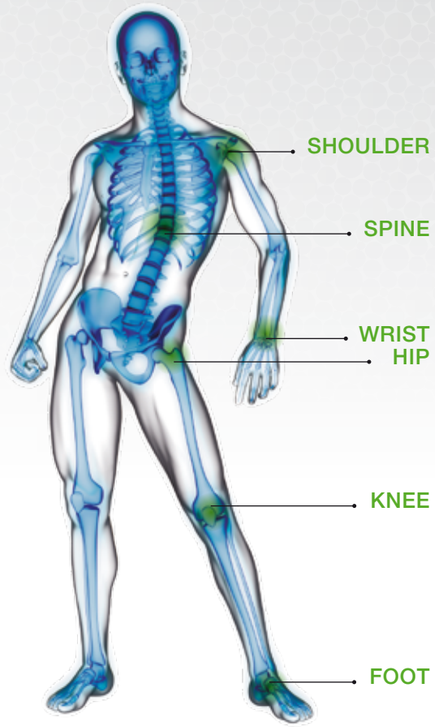
**PERCUTANEOUS USE**

## Indications

**NANOGEL® is a bone void filler which can be applied by percutaneous way in closed defects, or directly implanted in the surgical site.**

**Orthopeadic surgery:**
- Treatment of bone defects like benign tumors or cysts
- Bone defects caused by traumatic lesions
- Arthrodesis (foot, ankle, spine, wrist, etc.)

**Spine surgery:**
- Spine fusion
- Interbody cage filling




## In vivo study & clinical cases :

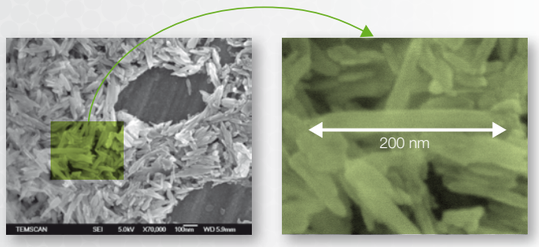
## Properties

**COMPOSITION**
- Hydroxyapatite, $H_2O$ sterile
- Nanoparticles between 100 nm to 200 nm
- Specific surface around 80 $m^2/g$

**SYNTHETIC**
Free from organic phase

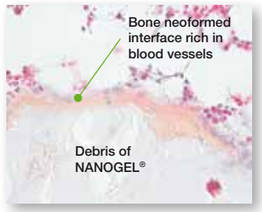
**INJECTABLE**
Syringe ready to use

**STABLE**
Pasty gel which keeps its stability *in situ*, even with blood cellular flow

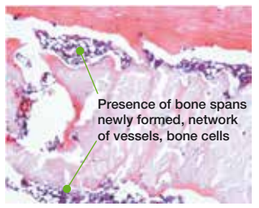



NANOGEL® STRUCTURE
(x70 000 SEM)

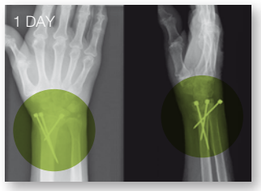
100 nm to 200 nm



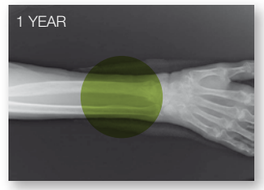

2 WEEKS
(MAGNIFICATION x40)




4 WEEKS
(MAGNIFICATION x40)




AFTER STABILISATION




AFTER PIN ABLATION

**RESORBABLE**
Nano crystals of HA easily resorb. *In vivo* studies have shown a quick cellular invasion and high bone ingrowth within a short time, after implantations

**BIOCOMPATIBLE**
No adverse reaction observed

**OSTEOCONDUCTIVE**
NANOGEL® promotes high bone ingrowth