



## **Veterinary Adhesives**

Fast, Safe & Effective Bone Solution



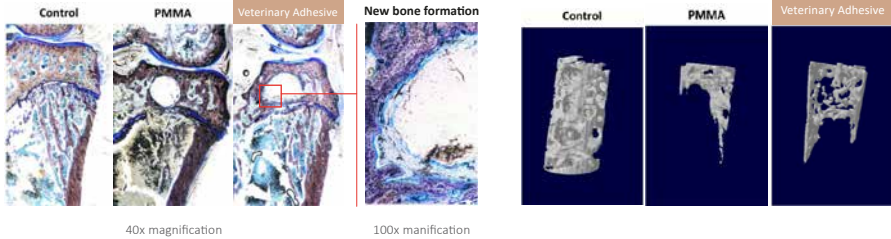
## Bioactive Nano-composite For Bone Repair

- Hydroxyapatite-PMMA based copolymer adhesive
- Designed for **fast, precise and no-mess** application
- **Rapid-setting** for efficient surgery
- **EO sterilized pack** available to reduce risk of infection
- **Animal safe** - ISO 10993 biocompatible
- **Superior load bearing capacity** for excellent surface and fixators adherence

# Clinically Proven

## Promote bone healing with instant support

Our hydroxyapatite-PMMA based Veterinary Adhesives mimic the chemical composition of natural bone to enhance healing and provide immediate stability.

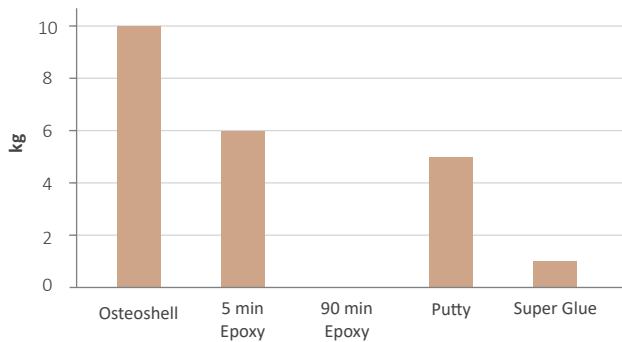


## More bone formation compared to conventional PMMA

Histology analysis with Giemsa staining (left) and micro-CT analysis (right) of injured sites at left tibia subchondral bone in guinea pigs after 8 weeks.

## Excellent adherence

Our Veterinary Adhesive series present comparable mechanical properties to natural bones, making them suitable for wide range of applications.



Following the application of adhesives on a sanded metal bar **after 30 minutes**, the adhesives were subjected to a load bearing test varying from 0 to 10 kg for 10 seconds.

# Osteoshell

Hard tissue adhesive for external fixation

Osteoshell is a biocompatible, 2-component adhesive ideal for repairing external fractures in aves and chelonian. Once cured, the material exhibits tenacious adhesion and tensile strength to hold the bone fragments in place.

- **Superior load bearing capacity** for excellent surface and fixators adherence
- Applicator nozzles and fixators are available for different indications
- **Water resistance** - Aquatic species with minor to moderate injuries can be released back to water within 48 hours
- Leaves no adhesive residue after removal



## TECHNICAL DATA

Load bearing capacity	10 N
Radiopacity	Nil
Working time	10 min (at 23°C)
Setting time	12.5 min (at 23°C)

## APPLICATION TIPS



Scan the QR code to watch demo video.

<https://bit.ly/3iXp09x>



Simply mix the provided power and liquid component. Then apply the mixture to desired site and wait 5- 10 minutes for hardening.

## CLINICAL CASES

### Case 1



Turtle with crack at carapace.



Osteoshell is applied directly over edges of bone flap.

### Case 2

Source: Ocean Park, Hong Kong



Turtle with a cracked carapace after a boat strike.



Fragments are hold in placed with fixators and covered with Osteoshell.

# VetHesive

Radiopaque bone adhesive for internal fixation

VetHesive is a bioactive and radiopaque bone adhesive for orthopedic surgery in small animals. VetHesive consists of a two component system, a powder and a liquid. Mixing the two components initially produces a liquid, which gradually turns into a paste, and ultimately solidifies into a hard, cement-like complex. The hardened complex allows stable fixation of bone defects.

- **Visible on X-rays**
- Available with or without **gentamicin**, which has broad spectrum covering gram-positive and gram-negative bacteria
- **Injectable through applicator or needle I.D. down to 0.8 mm (18G)**

## TECHNICAL DATA

Radiopacity	Yes
Working time	10 min (at 23°C)
Setting time	12.5 min (at 23°C)



## Adhesive Products

Novus offers a variety of bone adhesives in order to satisfy the needs of every veterinary practitioner and indication.

	External Use		Internal Use	
	Osteoshell	Osteoshell EFK	VetHesive	VetHesive G
Chemistry	Hydroxyapatite-PMMA based copolymer			
Working time	10 minutes			
Setting time	12.5 minutes			
Visible under X ray			✓	✓
Antibiotics				✓
Recommended Indications	Hard tissue fixation	External fixation	Fracture fixation	Fracture fixation
Recommended Species	Turtles, birds	Dogs, cats, exotics	Dogs, cats, exotics	Dogs, cats, exotics

## Ordering Information



OSTS	Osteoshell Hard tissue adhesive, Sterile (3 g / 6 ml)
OSTN	Osteoshell Hard tissue adhesive, Non-sterile (3 g / 6 ml)
EFKS	Osteoshell External fixation kit, Sterile (3g / 6 ml)
EFKN	Osteoshell External fixation kit, Non-sterile (3g / 6 ml)
AZS16	Applicator nozzle 1.6 mm (1/16"), Sterile, 1 pc
AZS24	Applicator nozzle 2.4 mm (3/32"), Sterile, 1 pc
AZS32	Applicator nozzle 3.2 mm (1/8"), Sterile, 1 pc
AZS40	Applicator nozzle 4.0 mm (5/32"), Sterile, 1 pc
AZS48	Applicator nozzle 4.8 mm (3/16"), Sterile, 1 pc
AZS64	Applicator nozzle 6.4 mm (1/4"), Sterile, 1 pc
VH	VetHesive Radiopaque bone adhesive, Sterile
VHG	VetHesive G Radiopaque bone adhesive with Gentamicin, Sterile

## Why Novus

Novus is a Hong Kong-based biotechnology startup specialized in developing biomaterials for medical applications. Under Novus group, we offer a comprehensive solution for orthopaedics from bone adhesive to 3D-printed surgical products.



**Contact us for a free product demonstration!**

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LIFE SCIENCES

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