

## Specifications

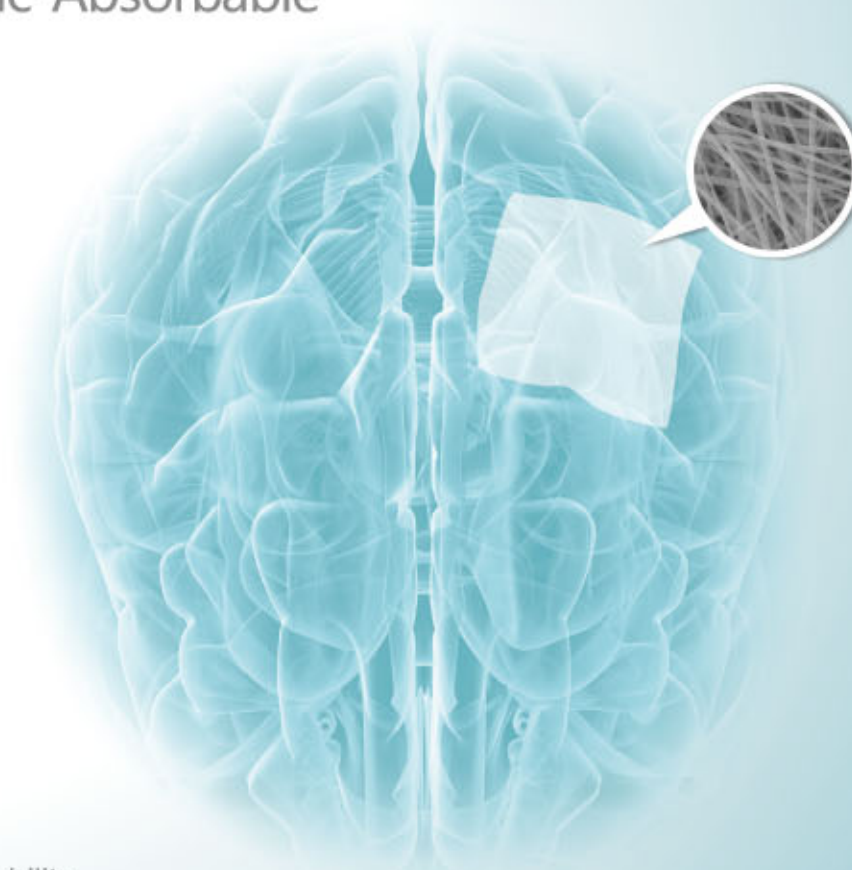
Specification	Metric Dimensions	Thickness
RDS-1	15mmX20mm	0.1~0.5mm
RDS-2	20mmX30mm	
RDS-3	30mmX40mm	
RDS-4	40mmX60mm	
RDS-5	60mmX60mm	
RDS-6	60mmX80mm	
RDS-7	60mmX140mm	
RDS-8	80mmX80mm	
RDS-9	80mmX120mm	
RDS-10	100mmX150mm	
RDS-11	150mmX150mm	

## REFERENCES

- A Novel Synthetic Absorbable Dural Substitute Fabricated by Emerging Nanotechnology. Conjoint Congress of 5<sup>th</sup> World Intracerebral Haemorrhage (ICH) Conference , 2013.
- Novel Regenerative Nanofibrous Bio-device for Dural Defect Repair. Congress of Neurological Surgeons Annual Meeting, Washington DC, USA, 2011.
- Development of Novel Nanofibrous Dural Substitute for Dural Defect Repair. The 14<sup>th</sup> World Federation of Neurosurgical Societies Interim Meeting, Pernambuco, Brazil, 2011.
- In-vitro and Clinical Study on a Novel Synthetic Absorbable Biomimetic Dural Substitute. European Society for Pediatric Neurosurgery (ESPN) Congress, Rome, Italy, 2014.
- Electrospun Fibrous Mats with High Porosity as Potential Scaffolds for Skin Tissue Engineering. Biomacromolecules, 2008, 9(7):1795-1801.

# ReDura™

Biomimetic-Synthetic-Absorbable  
Dural Substitute



- Rapid Repair & Regeneration
- Long Term Safety
- Excellent Handling & Conformability
- High Strength & No-swelling

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**ReDura™** is manufactured with FDA approved degradable material poly-L-lactic acid which has been extensively tested to prove the biocompatibility and non toxicity. The product exhibits excellent prevention of CSF leakage and tissue adhesion, regenerating the dural defect in the process. ReDura™ is fully degradable and absorbable 1 year post implantation, leaving no foreign body in-situ and is replaced by regenerated dura tissue. ReDura™ has been widely used in clinical practice and demonstrates outstanding efficacy and safety for the repair of the dural defect.

### CSF Impermeability

ReDura™ is hydrophobic with more than 90 contact angle which acts as a watertight barrier for the prevention of cerebrospinal fluid (CSF) leakage. It attains a favourable dural closure. Preventing common complications associated with CSF leakage.



ReDura™ of > 90° contact angle with hydrophobic surface property



No liquid leakage using ReDura™

### High Strength and No-swelling

Redura™ achieves excellent tensile strength, strong enough for positioning or repositioning of the product during operative handling. The biomaterial does not swell and can be easily unfolded after hydration without tearing.



Excellent Strength of ReDura™



Before hydration (0.215mm)



No-swelling after hydration (0.205mm)

### Excellent Conformity

ReDura™ is flexible and conforms to the contours of the brain very well after hydration, without foreign body sensation to the patient.



Good conformity of ReDura™



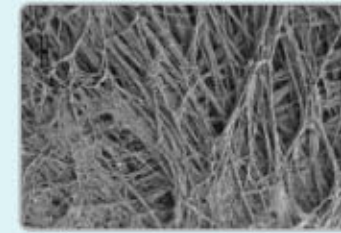
Native dura



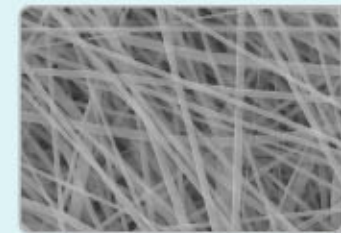
ReDura™ resembles to the native dura

### Rapid Repair and Regeneration

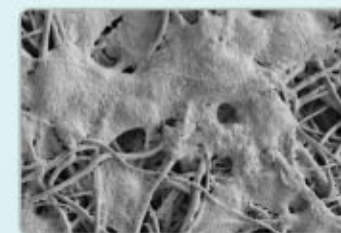
The biomimetic structure of ReDura™ resembles to the microstructure of native dural matrix, providing an appropriate environment for dural cell growth, proliferation and migration. With such a unique feature, ReDura™ is able to repair and regenerate defective dura efficiently.



Microstructure of native dura



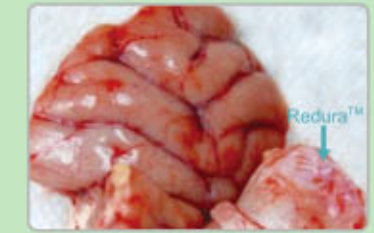
Microstructure of ReDura™



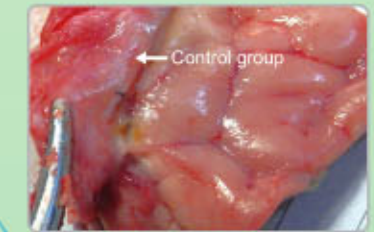
Cells tightly adhere to the nanofibers of Redura™

### Superior Anti-adhesion Ability

The unique material property of ReDura™ endows the product favourable anti-adhesion ability to the surrounding tissues, which has been proved by low adhesion risk in tens of thousands of clinical application cases.



Redura™; smooth surface of brain tissue with no adhesion to implanted material.



Control group: adhesion of native dura to brain tissue.

### Flexible Surgical Application

With the advantage of thinness, softness and high strength, Redura™ is easy and simple to apply with flexibility.



ReDura™ (4x6cm) was sutured onto the dural defect.



ReDura™ (4x6cm) was applied on the dural defect flexibly.



ReDura™ was applied in the repair of spinal dural defect.