

Dural Suturing Needle

Description

A **Dural Suturing Needle** is a specialised neurosurgical needle designed for precise suturing of the dura mater — the tough, outermost membrane covering the brain and spinal cord. It features a fine, curved, or semicircular profile that enables delicate manipulation in restricted surgical spaces. Manufactured with high-strength stainless steel, the needle ensures smooth tissue penetration without tearing or causing unnecessary trauma. It is primarily used in neurosurgery, spinal surgery, and micro-suturing procedures where precision and safety are critical.

Specifications

- Fine, atraumatic design
- Highly polished surface for smooth penetration
- Curved or semicircular shape for deep surgical access
- Compatible with micro-sutures (e.g., 4-0, 5-0, 6-0)
- Made with hardened stainless steel
- Available in different radii and curvatures (1/2 circle, 3/8 circle)
- Single-use sterile or reusable variants
- Controlled flexibility and strength to prevent bending

Sizes

- Length: 20–40 mm (depending on curvature)
- Common curvature: 3/8 circle, 1/2 circle
- Gauge: micro-fine neurosurgical needle sizes

Shapes

- Semicircular curved needle
- 3/8 circle fine curved needle
- Atraumatic, fine-tapered tip
- Smooth body with gradual taper

Types

- 3/8 circle dural suturing needle
- 1/2 circle dural suturing needle
- Taper-point dural needle
- Micro-neurosurgical suturing needle
- Single-use sterile or reusable versions

Material

- High-grade surgical stainless steel
- Hardened for durability and resistance
- Polished atraumatic finish

Category

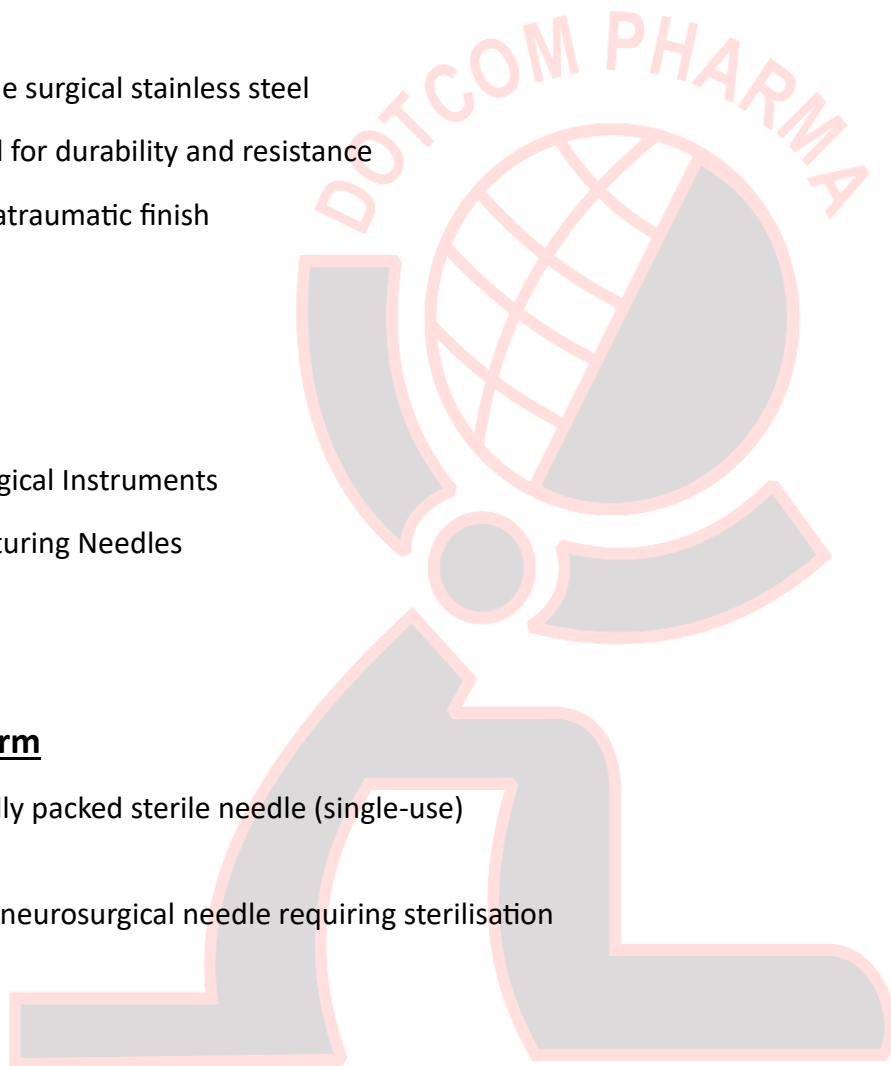
- Neurosurgical Instruments
- Micro-Suturing Needles

Product Form

- Individually packed sterile needle (single-use)
OR
- Reusable neurosurgical needle requiring sterilisation

Usage

- Suturing the dura mater in brain surgery
- Repairing dural tears in spinal procedures
- Micro-suturing delicate membranes
- Neurosurgical closure following craniotomy or laminectomy



Advantages

- High precision for microsurgery
- Smooth tissue penetration
- Minimised trauma to delicate dura mater
- Available in various curvatures to suit surgical depth
- Compatible with ultra-fine sutures

Disadvantages

- Requires a skilled neurosurgeon
- Extremely delicate work — risk of tissue tear if misused
- Reusable types demand strict sterilisation
- Not suitable for general-purpose suturing

Precautions

- Ensure proper needle curvature for surgical site
- Avoid excessive force — needle is fine and delicate
- Use with compatible micro-sutures only
- Maintain sterility at all times
- Inspect for bends or defects before use

HS & HSN Code

- **HS Code:** 9018
- **HSN Code:** 90189029 (Surgical needles including micro-suturing needles)

Handling

- Hold with micro-needle holder
- Ensure correct angle during dura penetration
- Perform slow, precise movements
- Avoid twisting force that may snap the needle
- Dispose or sterilise immediately after procedure

Sterilisation Details

- Single-use needles are EO (Ethylene Oxide) sterilised
- Reusable types compatible with:
 - Steam Autoclave
 - Plasma Sterilisation
 - High-level chemical disinfectants
- Dry fully to prevent corrosion

Human Applications

- Dural repair in neurosurgery
- Closure during craniotomy
- Repair of dural tears in spine surgery
- Micro neurosurgical suturing procedures
- Repair of cerebrospinal fluid (CSF) leaks

Veterinary Applications

- Neurosurgical dural suturing in dogs and cats
- Repairing traumatic dural injuries in animals
- Spinal surgery closure in veterinary neurology
- Micro-suturing procedures in small and exotic animals

FAQs (Frequently Asked Questions)

Q1. What is a Dural Suturing Needle?

A **Dural Suturing Needle (DSN)** is a micro-surgical needle used for suturing the dura mater in neurosurgical procedures.

Q2. What curvatures are commonly used?

3/8 Circle (3/8C) and **1/2 Circle (1/2C)** are the most common.

Q3. Can it be reused?

Both **Single-Use (SU)** and **Reusable (RU)** types exist depending on the model.

Q4. Which sutures are compatible?

Typically **Micro-Sutures (MS)** such as 4-0, 5-0, or 6-0.

Q5. Is it used in veterinary neurology?

Yes — it is widely used in **Veterinary Neurosurgery (VNS)** for dural repair.