

# DOXYDOT-N

## Doxycycline 100 mg & Neomycin 100 mg Veterinary Oral Powder

### Description

This formulation is a synergistic broad-spectrum antibiotic veterinary oral powder combining **Doxycycline Hydrochloride I.P.** and **Neomycin Sulphate I.P.**, each equivalent to 100 mg of their respective active forms per gram of powder. Doxycycline is a long-acting tetracycline antibiotic with high tissue penetration and a broad antibacterial spectrum, while Neomycin is an aminoglycoside effective against many Gram-negative and some Gram-positive bacteria.

### Specification

- **Appearance:** Free-flowing, fine, light yellow to off-white powder
- **Identification:** Conforms to I.P. standards for Doxycycline and Neomycin by HPLC and UV spectrophotometry
- **Assay:**
  - Doxycycline HCl I.P.: Equivalent to 100 mg Doxycycline per gram
  - Neomycin Sulphate I.P.: Equivalent to 100 mg Neomycin per gram
- **Loss on Drying:** Not more than 5.0%
- **pH (1% w/v solution):** Between 3.5 and 5.5
- **Microbial Limits:** Conforms to veterinary I.P. microbiological standards
- **Heavy Metals:** Within acceptable limits
- **Uniformity:** Consistent drug distribution throughout the bulk powder
- **Shelf Life:** Minimum 24 months under recommended storage conditions

### Indications

Indicated for the treatment, prevention, and control of bacterial infections in poultry and livestock, particularly:

- Gastrointestinal infections
- Respiratory tract infections
- Secondary bacterial complications of viral infections
- Mixed infections caused by Doxycycline- and Neomycin-sensitive organisms such as *E. coli*, *Mycoplasma*, *Salmonella*, *Pasteurella*, and *Staphylococcus* spp.

## Dosage and Route of Administration

- **Route:** Oral, through feed or drinking water
- **General Dosage:**
  - **Poultry:** 1 gm per litre of drinking water or 1 kg feed for 3–5 days
  - **Livestock** (Cattle, Sheep, Goats, Pigs): 10–20 mg per kg body weight per day, divided into two doses for 3–5 days
- Dosage may vary depending on the species, severity of infection, and veterinarian's discretion

## Product Form

- Veterinary Oral Powder
- Available pack sizes: **100 gm, 250 gm, 500 gm, 1 kg**
- Fine, palatable, easy-mixing powder for use in feed or water

## Usage and Advantages

- Broad-spectrum antibacterial coverage from two synergistic antibiotics
- Highly effective against both systemic and enteric bacterial infections
- Excellent bioavailability and deep tissue penetration (Doxycycline)
- Minimal resistance development when used as directed
- Easy administration via feed or water
- Enhances animal health, growth, and production outcomes
- Reduces mortality and morbidity due to bacterial infections in poultry and livestock

## Adverse Effects

- Rare gastrointestinal disturbances may occur, such as nausea or diarrhoea
- Prolonged use may alter gut microflora and lead to superinfection
- Neomycin may have nephrotoxic effects at very high doses or prolonged exposure
- Hypersensitivity reactions are rare but possible
- Do not use in animals with known hypersensitivity to tetracyclines or aminoglycosides

## **Withdrawal Period**

- **Meat:** Minimum 7 days from last treatment
- **Milk:** Minimum 3 days (if used in lactating animals)
- Eggs (for laying hens): Minimum 7 days
- Observe exact withdrawal periods as per regulatory guidelines to prevent antibiotic residues in animal products

## **Storage and Handling**

- Store in a dry, cool place below 30°C
- Protect from sunlight, moisture, and excessive heat
- Seal container tightly after use
- Use personal protective equipment when handling the powder
- Keep out of reach of children, pets, and unauthorized personnel
- Dispose of packaging responsibly and do not reuse containers

## **HS and HSN Code**

- **HS Code:** 2941.90 — Other antibiotics and their derivatives
- **HSN Code (India):** 2941 — Antibiotics and other antibacterial veterinary formulations

## **Precautions and Special Instructions**

- Use only under the supervision of a registered veterinarian
- Not to be used in animals with impaired liver or kidney function unless advised by a veterinarian
- Avoid use in animals intended for breeding without veterinary advice
- Rotate antibiotics periodically to reduce resistance development
- Do not mix with other veterinary drugs without professional guidance
- Ensure animals have access to adequate hydration during treatment
- Follow manufacturer's label instructions strictly for dosage and withdrawal

## Details of Human and Veterinary Application

- **Veterinary Use Only**
- Not for human consumption or use
- Antibiotics such as Doxycycline and Neomycin are classified for veterinary application with specific residue and withdrawal guidelines to protect human health
- Ensure that treated animals do not enter the human food chain before completion of the specified withdrawal period
- Accidental human exposure (inhalation or ingestion) should be avoided. Seek immediate medical attention in case of exposure

## Frequently Asked Questions (FAQs)

### **Q: What is Doxycycline Hydrochloride (DCHC)?**

A: Doxycycline Hydrochloride (DCHC) is a tetracycline-class antibiotic effective against many Gram-positive and Gram-negative bacteria. It works by inhibiting bacterial protein synthesis.

### **Q: What is Neomycin Sulphate (NS)?**

A: Neomycin Sulphate (NS) is an aminoglycoside antibiotic effective mainly against Gram-negative bacteria. It acts by binding to bacterial ribosomes and preventing protein formation.

### **Q: Can this powder be given to poultry and livestock?**

A: Yes, it is suitable for poultry (broilers, layers) and livestock such as cattle, goats, sheep, and pigs.

### **Q: How do I administer the powder to animals?**

A: Mix the powder with feed or dissolve in drinking water according to the dosage instructions provided by a veterinarian.

### **Q: Is there a withdrawal period?**

A: Yes, meat and egg withdrawal is at least 7 days, and for milk, it is 3 days. Always follow label and regulatory instructions.

### **Q: Can I use this in pregnant animals?**

A: Use only if prescribed by a veterinarian. Avoid in the first trimester unless clearly needed.

### **Q: How should the product be stored?**

A: Store below 30°C in a dry, cool place, away from sunlight and moisture. Keep sealed tightly after use.