# SIO-9323 Water-Based Fluorine-Free Anti Siphon Waterproofing Agent

## Product Overview

SIO-9323 is a water-based fluorine-free anti siphon waterproofing agent based on a star-linked structured silicone polymer, offering exceptional water repellency and anti siphoning properties. It is specifically designed for waterproof finishing of all types of textile fabrics, particularly for hydrophilic microfiber shoe materials requiring anti siphoning treatment. In static anti siphoning tests, SIO-9323 demonstrates outstanding performance, with liquid climbing heights of ≤4mm for blended fabrics and ≤2mm for fiber-based fabrics after 48 hours, significantly surpassing the industry standard of 10mm, making it a market-leading product.

## Typical Physical Data

| Property | Value |
|---|---|
| Appearance | Milky white translucent liquid |
| Solid Content | 14±2% |
| System | Cationic |
| pH Value | 4-6 |
| Solubility | Easily soluble in water |

## Application Scope

1. Waterproof finishing for various textiles, especially hydrophilic microfiber shoe materials requiring anti-wicking treatment.
2. Suitable for outdoor apparel, home textiles, and industrial fabrics.

## Key Features & Benefits

### 1 Outstanding Waterproof & Anti-Wicking Performance

- Provides excellent waterproof and anti-wicking properties for ultra-hydrophilic fabrics.
- Achieves ≤4mm liquid climbing height for blended fabrics and ≤2mm for fiber-based fabrics after 24 hours.
- Effectively prevents capillary action from causing liquid penetration, ideal for shoes, webbings, microfiber fabrics, and other high-performance applications.

**2 Eco-Friendly & Safe**

- Water-based formula, free from substances restricted by REACH and RoHS, meeting international environmental standards.
- Non-toxic and safe, easy to handle and apply.

**3 Improved Fabric Performance**

- Soft hand feel with minimal color change after treatment.
- Excellent wash durability, maintaining waterproof and anti-wicking performance after multiple washes and abrasion.

**4 Easy Application**

- Compatible with various application methods, including padding and spraying.
- Curing for 4-6 hours post-drying can enhance the effect by over 2 times.

## Recommended Application Methods

SIO-9323 can be applied using various techniques. Below are three recommended application methods to suit different needs:

**Method 1: Direct Padding with Undiluted Solution (Best Performance)**

- **Process**: Use SIO-9323 directly without dilution for padding.
- **Drying**: 120-150℃ for 1-2 minutes.
- **Features**:
    - No dilution required, making it easy to use.
    - Best waterproof and anti-wicking performance.
    - Ideal for applications requiring high-performance treatment.

**Method 2: Diluted Padding (Cost-Effective Option)**

- **Process**: Dilute SIO-9323 with water in a ratio of 100:50 (100 parts SIO-9323 + 50 parts water).
- **Drying**: 120-150℃ for 1-2 minutes.
- **Features**:
    - Lower cost while maintaining excellent waterproofing and anti-wicking effects.
    - Suitable for most standard applications.

**Method 3: High Dilution + Cationic Crosslinker (Budget-Friendly Option)**

- **Process**: Further dilute SIO-9323 (e.g., 100:100 or higher) and add a cationic crosslinker (dosage to be adjusted according to the crosslinker instructions).
- **Drying**: 120-150℃ for 1-2 minutes.
- **Features**:
    - Significantly reduces costs, ideal for cost-sensitive applications.
    - With cationic crosslinkers, maintains good waterproof and anti-wicking performance.

## Important Notes

- Curing Recommendation: After drying, curing for 4-6 hours can enhance performance by over 2 times.
- Process Optimization: Adjust padding solution concentration, pickup rate (recommended 70%-80%), and drying conditions based on fabric type and performance requirements.

## Packaging

Available in 120KG or 1000KG non-recyclable plastic drums.

**Storage & Shelf Life**

- Store in a cool, dry place, avoiding direct sunlight. Storage temperature: 5-30℃.
- Keep packaging sealed and avoid freezing.
- Shelf life: 6 months from the production date. For expired products, performance evaluation is recommended before use.
- Use immediately after opening for best results.