

# SiSiB<sup>®</sup> WR9001

## Perfluoro Water Repellents

### INTRODUCTION

SiSiB<sup>®</sup> WR9001 is a water-based nano-perfluoro polymer emulsion.

### BENEFITS

Environmental friendly, APEO free, PFOS free, PFOA free (PFOA content is below the detection limit), non-combustible, no flash point, without volatile organic solvents

Excellent water repellency, oil resistance and antifouling property with durability on the surface of stone, wood, paper, etc.

Good laundry-resistant and dry-clean resistant, good hand feeling and breathability, no change in appearance when being applied to fabric.

### TYPICAL PHYSICAL PROPERTIES

Color and Appearance	White to light brown liquid
Ionicity	Weak cationic
pH	3-5
Solubility	Soluble in water
Chemical composition	Perfluoro Polymer Emulsion (C6)

### APPLICATIONS

SiSiB<sup>®</sup> WR9001 can be used in natural stone, artificial stone, cement-based surfaces, ceramic, paper, wood, cellulose, synthetic fibers, blended fabrics, leather and etc. for waterproofing, oil repellency, and antifouling finishing.

SiSiB<sup>®</sup> WR9001 can be used in yarns, ribbons, jackets, sportswear, casual wear, and etc.

SiSiB<sup>®</sup> WR9001 can be applied by spraying, foaming, scraping, wet rolling, padding, and sucking.

### DILUTION AND PROCESSING

#### Fabric auxiliaries

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To achieve the best results, all residual auxiliaries on the pre-treated fabric must be removed, such as wetting agents, dyeing assistants, sizing residues, softeners, and other surfactants.

The fiber loss rate should be less than 1.5%, and it is recommended to test through AATCC97. In addition, fabric should be weakly acidic, alkali content should be less than 0.05%, and it is recommended to test through AATCC 144.

Raising and sand grinding processes should be carried out before finishing. Mechanical finishing such as calendaring, electro-brightening, brushing and etc., can be carried out after drying and before baking; steaming and steaming processes can be carried out after baking to improve the finishing effect.

### **Treatment of stone, ceramic, wood, and other basic material surfaces**

Brushing or spraying should be carried out after dust removal and drying of the basic material surface.

### **Preparation of the operating fluids**

First, add an appropriate amount of water in advance to a clean barrel (reference: dilute with 5~9 times of water), then add the required amount of SiSiB<sup>®</sup> WR9001 finishing agent, and add the rest required amount of water slowly. Acetic acid can be added to adjust the pH value of the solution if necessary. Finally, stir at low speed for 5~10 minutes until the solution is evenly mixed, avoiding bringing a large amount of foam.

In the fabric treatment process, when used along with crosslinking agents, penetrating agents, wrinkle-resistant resins, and other auxiliaries, please pre-test the compatibility and stability between these auxiliaries and SiSiB<sup>®</sup> WR9001 in advance. and it is required to dilute these products separately first, avoid mixing the original liquids.

### **Recommended dosage**

The dosage varies depending on the type, the structure, cleanliness, acidity/alkalinity, fiber loss rate of fabric, and the desired protective effect and washing resistance property. The suggested dosage is as below:

- Polyester fabric: 20~50g/l
- Nylon fabric: 20~50g/l
- Polyester/cotton fabric: 30~60g/l

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- Pure cotton fabric: 30~80g/l

Before mass application on the surfaces of stone, wood, paper and etc., please take a small test first to determine the effect and dosage.

### Application method

- Padding method: one dip, one roll

- Solution pH value: 5.0~7.0

- Pick-up rate: 30~80%

- Solution temperature: ~20°C

- Pre-drying: 110~130°C

- Baking (setting): It is recommended to do segment baking on a setting machine at 170°C (fabric surface temperature) for 45~90sec., bake on a baking machine at 150°C for 3~5 minutes (fabric surface temperature).

Surfaces of stone, wood and etc., can be air-dried naturally without heating.

### Precautions for use

- Baking must be sufficient to maximize the protective performance.

- Use the prepared solution within 12 hours.

- Don't suggest roller drying since resin residue is easy to adhere and accumulate on the roller.

### Recommended formula:

1. Paper waterproof treatment

SiSiB<sup>®</sup> WR9001: 2~5%

Paper dye

2. Yarn, ribbon waterproof treatment

SiSiB<sup>®</sup> WR9001: 30~80 g/l

60% acetic acid: 1 g/l

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3. Finishing for pure cotton heavy fabrics and leather

SiSiB<sup>®</sup> WR9001: 30~60 g/l

4. Finishing for polyester, nylon, and other chemical fiber fabrics

SiSiB<sup>®</sup> WR9001: 20~50 g/l

60% acetic acid: 1 g/l

### PACKING AND STORAGE

SiSiB<sup>®</sup> WR9001 is supplied in 25KG pail or 180KG plastic drum.

In the unopened container SiSiB<sup>®</sup> WR9001 has a shelf life of 12 months. And SiSiB<sup>®</sup> WR9001 is sensitive to temperatures above 40°C and below 0°C.

### NOTES

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

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Please send all technical questions concerning quality and product safety to: [support@SiSiB.com](mailto:support@SiSiB.com).