DAIKIN

TECHNICAL DATA SHEET

UNIDYNE XF-5005

Water Repellent, Non-Fluorinated

Daikin's Value Creation

Clothing is a part of everyone's life.
As a global manufacturer of water-repellent clothing, Daikin is providing with clothing that is both comfortable and water-repellent. Our aim is to develop products which are eco-friendly and to provide functionality by utilizing the technology and know-how which we have accumulated over many years, in order to help to create a world which is comfortable and rich in lifestyle.

1. Features

- XF-5005 is newly developed high durable water repellent.
- XF-5005 is a non-fluorinated product.
- XF-5005 provides excellent water repellency to all types of fabric substrates, especially for synthetic fiber.
- Excellent process ability.
- Enhanced environmental performance.

2. Physical Properties

Appearance	Off white or pale yellow emulsion
Ionic characteristics	Weak cationic
pH	1.5 - 5.0
Specific gravity at 25°C (77°F)	1.0
Solubility	Readily miscible in cold water

Recommended storage conditions between -5°C and 40°C (23°F and 104°F).

3. Application Guide

Standard Recipe

Fabric Type	WPU %	Chemical	Dilution(g/L)	Dry/Cure Conditions
Nylon, Polyester	30 - 80	XF-5005	20 - 80	Dry&Cure:
		Cross-linker*	3 - 15	150 - 180°C for 1 - 3 min

* Recommended cross-linker are blocked isocyanate and melamine resin.

Note:

- When an auxiliary agent is used,
  it must be thoroughly dissolved and diluted before XF-5005 is added.
- To obtain maximum water repellency, maintain a bath pH 4.0-5.0.

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4. Application Example

Performance result of XF-5005

Test method	Fabric type	Test condition	Result
Spray test	Polyester 75d	HL0	100
		HL20	95
	Nylon 70d	HL0	100
		HL20	95
Bundesmann (HL0)	Polyester 75d	1min	90
		5min	90
		10min	90
		Leaking(g)	<0.1
		Absorbency(%)	1%
Bundesmann Low temp cure (120℃x2min) (HL0)	Polyester 75d	1min	90
		5min	90
		10min	90
		Leaking(g)	0.5
		Absorbency(%)	2%

Factors such as fabric structure, fiber content, chemical additives, treating conditions, etc. will effect the performance. Please confirm with lab work before production run.

Recipe: XF-5005 30g/L, Blocked Isocyanate 5g/L
Treating Conditions:
Bath pH 5.0
1dip-1nip
WPU: Polyester 48%, Nylon 54%
Dry&Cure 170℃x1min
Washing Method: JIS L0217 103, tumble dry
Watter Repellency:
AATCC 22: Spray test
ISO 9865: Bundesmann rain shower test

5. Safety Precautions

Reference the Safety Data Sheet (SDS) for details regarding the safe use and disposal of this product.

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