

POWSIL™-59670

Textile Softener

INTRODUCTION

POWSIL™ 59670 is an innovative copolymer textile softener. It is different from traditional silicone softeners used extensively in textile finishing which when applied to synthetics tend to encounter issues such as thermal migration, oiling/greasy feel & color change, particularly on polyester or its blends.

POWSIL™ 59670 is effective at very low concentrations in the finishing bath and stable under most processing conditions. It is a textile enhancer and delivers a natural silky hand feel.

BENEFITS

- Linear block copolymer architecture
- High penetration to fibers leading to internal feel
- Can be diluted to a clear emulsion with a combination of water, solvents and emulsifiers
- Polymer with High MW that delivers properties similar to those molecular weight of reactive elastomeric finishes, such as durability and resistance
- Hindered amine functionality. Less or no yellowing
- Does not interfere soil release properties of fabric treated with fluorocarbon soil release agents
- Excellent stability under most finishing conditions, including jet/overflow
- Be co-applied with crease (durable press) resist resins, their catalysts and optionally OBA's
- Excellent fiber elasticity and shape recovery
- Redyeable & over dyeable

TYPICAL PHYSICAL PROPERTIES

Property	Value
Physical Form	Fluid
Appearance	Clear Straw
Active Contents (wt%)	80.0
Viscosity (25°C, cps)	4000-6000
pH (25°C)	4.0-6.0
Gravity (25°C)	0.9385
Ionic	Slightly cationic to nonionic

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APPLICATIONS

POWSIL™ 59670 is 80% silicone oil, so it's needed to be emulsified.

POWSIL™ 59670 usually contains 10-20% silicone active when it appeared into an emulsion. The formulation and procedures would be provided separately.

A typical Formulation

Ingredients	Wt%
POWSIL™ 59670	20
Tridecyl alcohol exthoxylate-3EO (TDA-3)	2-3
Tridecyl alcohol ethoxylate-12EO (TDA-12)	2-3
Butyl carbitol	4-6
Acidic acid	0.5
DI water	Top up to 100

Procedure for preparation of 20% of POWSIL™ 59670

1. Charge POWSIL™ 59670, TDA+EO emulsifiers and butyl carbitol into a mixing tank. Mix well till fully homogeneous;
2. Pre-dissolve Acetic acid in water and then add the water solution slowly to silicone/emulsifiers; then blend while mixing. Avoid stirring too much air into the mixture;
3. Filter into the containers

Conditions used for treating fabric with above diluted emulsion.

Pad-dry-cure process

Dosage: 5-15g/l for light fabric or 15-30g/l for heavy fabric
pH: 5.0 - 7.0
Temperature: Ambient temperature
Dry/Cure: 120 -170°C for 1-3 min

Exhaustion process

Dosage: 0.5 - 1.5% (o. w.f.) on light fabric or 1.5-3.0% on heavy fabric

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Liquor ratio:	1/10 - 1/20
pH:	5.0 - 7.0nt
Temperature:	Ambient
Time:	10 - 30 min
Spinning & Drying:	120 - 170°C for 1~3 min

Garment washing process

Dosage	1.0-3.0% on the eight of garment
Temp.:	Ambient temperature
Time:	30 - 60 min
Spinning & Drying:	100 - 130°C for 3~5 min

Guides of Stripping:

POWSIL™ 59670 can be stripped off fabric. The stripping formulation is as follows:

Na ₂ CO ₃ :	5g/l
Detergent:	2-5%

Add water and Na₂CO₃ onto fabric tank and then heat to 100°C for 60 min. Then rinse fabric with acidic water and water.

PACKING AND STORAGE

POWSIL™ 59670 is supplied 120Kg plastic drum.

In the original unopened packaging, it has a shelf life of 12 months at normal room temperature.

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:

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