

POWSIL™-59170

Hydrophilic Silicone Softener

INTRODUCTION

POWSIL-59170 is a hydrophilic and very stable textile softener based on an anionic system which has excellent compatibility with most of pretreatment and finishing chemicals used. It can be applied in pretreatment process to prevent fabric from being creased and texture damaged during movement in tank. It also can be applied in finishing stage to prevent fabric from oil-spots

BENEFITS

- Extremely stable textile softener;
- Can be used in pretreatment to prevent fabric from being creased & scratched;
- Can be applied in tank after dyeing to impart softness & slickness;
- Excellent silicone softness with virtually no yellowing;
- Can be applied on all types of cotton and synthetic fabrics;
- Delivers a durable hydrophilic performance;
- Amazing pH and shear stability;
- Good durability of softness and wash resistance;
- Easy to dilute in water with minimal stirring;
- Compatible with most finishing additives;
- Compatible with soil release fluorocarbon finishes;
- Can be stripped off fabric readily.

TYPICAL PHYSICAL PROPERTIES

Property	Value
Physical Form	Liquid
Appearance	Yellowish liquid
pH (25°C)	4.0~6.0
Solid Content (%)	48.0~52.0
Flash Point (°C)	>100
Ionic	Weak anionic

APPLICATION

POWSIL-59170 can be applied in pretreatment process to prevent fabric from creases

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and texture damage caused by fabric scratching during fast movement in tank. It is compatible with most scouring agents and hydrogen peroxide (H₂O₂).

POWSIL-59170 can be used as received or pre-diluted with water before applying and the desirable usages are dependent on the required softness of the fabric or yarn.

1. Pretreatment Conditions

TF-4917:	0.5-2.0% (o.w.f)
NaOH(30%):	3-5% (o.w.f)
H ₂ O ₂ (27.5%):	6-8% (o.w.f)
Liquor ratio:	1/10 - 1/20
Temp.:	98°C
Time:	20 - 40 mins

POWSIL-59170 can also be applied in the finishing stages as a stable softener to prevent oil-spots on fabric with both in bath-padding and exhaustion.

2. For Finishing Process

Pad-dry-cure process

Dosage:	5-10 g/L (light fabric) – 10-20 g/L (heavy fabric)
Temp.:	20 - 40°C
Pick-up:	65 - 85%
Drying:	100 – 130°C for 2min
Curing:	100 - 200 °C for 1 - 3 min

Exhaustion process:

Dosage:	0.5 – 2.0% (o.w.f)
Liquor ratio:	1/10 - 1/20
Temp.:	30 - 50 °C
Time:	20 - 30 min
Drying:	100 - 130 °C

3. Garment washing process:

Dosage:	0.5 -2.0% (o.w.f)
Condition:	Same as exhaustion process

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Performance

The data presented below demonstrate excellent softness, good wettability and no yellowing of various fabrics treated with POWSIL-59170.

Table 1 POWSIL-59170 Textile Softener Performance on 100% Cotton Knits			
Add-on (% BOWF)	Softness	Wettability (sec.) (AATCC Test Protocol 79-1995)	Whiteness (AATCC Test Method 110-1995)
0.5	4.1	4	67.8
0.7	4.4	3.5	68.4
1.0	4.5	3	68.4
1.2	4.8	2	67.4
Control	1.8	1	69.0

Table 2 POWSIL-59170 Textile Softener Performance on 100% Cotton Print Cloth			
Add-on (% BOWF)	Softness	Wettability (sec.) (AATCC Test Protocol 79-1995)	Whiteness (AATCC Test Method 110-1995)
0.5	4.0	6	86.0
0.7	4.3	6	86.1
1.0	4.8	3	85.2
1.2	4.9	2	85.3
Control	1	<0.2	86

Note: Handle rating: 5 is the best, 1 is the poorest

Stripping:

1. Formulation for stripping off cotton fabric:
 - 5-10 g/L NaOH
 - 2-3 g/L SDBS (Sodium Dodecyl Benzene Sulfonate, 30%)
 - Water
2. Formulation for stripping off polyester fabric
 - 5-10 g/L Na₂CO₃

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-2-3 g/L Alcohol ethoxylated with 10 EO

3. Procedures for stripping off:
 - Charge fabric and water into machine
 - Add NaOH for Cotton fabric or Na₂CO₃ for polyester fabric
 - Heat to 98-100 °C and continue to boil for 30-60 min
 - Cool down and rinse fabric with water

PACKING AND STORAGE

To ensure that the product quality is maintained, the container should be tightly sealed when not in use. It should be stored at normal room temperature, preventing prolonged exposure to extreme heat and cold conditions, which may cause product separation. POWSIL-59160 tends to be sediment on bottom during storage period. If the product is separated, stir the contents to homogeneous. If the product is frozen, thaw it at warm condition and stir after thawed.

POWSIL-59170 is packaged in net weight 120Kg plastic drum.

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.

We specifically disclaim any other express or implied warranty of fitness for a particular purpose or merchantability. We disclaim liability for any incidental or consequential damages.

Please send all technical questions concerning quality and product safety to: support@SiSiB.com.