POWSIL™-99900

Hydrophilic Silicone Softener

Introduction

POWSIL™-99900 is a new hydrophilic silicone fluid based on new linear block-copolymer platform comprising polyether & quaternary functional silicone copolymer. It can use lower dosage than traditional silicone softeners to deliver a hydrophilic, voluminous and silky natural hand feel.

Benefits

- ☐ Provides excellent dispersion & penetration properties for fibers;
- ☐ Imparts natural voluminous and silky natural hand feel;
- ☐ Deeply penetrates into fibers to impart internal softness;
- ☐ Durable softness to laundering;
- ☐ Good hydrophilicity;
- ☐ Less yellowing;
- ☐ Stable formulations;
- ☐ Suitable for both padding and exhaustion finish process;
- ☐ Non or less oil spots while applying emulsions on fabric;
- ☐ Excellent affinity on all types of textile.

Typical Physical Properties

Appearance	Yellowish Viscous Liquid
Solid Contents (wt%)	94
Viscosity (25°C, cP)	3000-10000
pH (25°C)	5.0-7.0
Density (25°C, g/ml)	0.82
Ionic	Slightly Cationic
D4	<1000 ppm
D5	<1000 ppm
D6	<1000 ppm

Application

POWSIL™-99900 cannot be applied directly on fabrics. It should be emulsified before applying in the textile finish process.

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Formulation

Composition	% wt
POWSIL™-99900	23.5
TDE-6 or AEO-6	6.0
TDE-9 or AEO-9	6.0
Acetic Acid	0.3
Water-1	30.0
Water-2	34.2
Preservative if necessary	~

- TDE-6: Tridecyl Alcohol Ethoxylated with 6 EO.
- AEO-6: Fatty alcohol Ethoxylated with 6 EO.
- TDE-9: Tridecyl Alcohol Ethoxylated with 9 EO.
- AEO-9: Fatty alcohol Ethoxylated with 9 EO.

Procedures

1) Stir POWSIL™-99900 in container to make it homogeneous before taking out for use.
2) Charge POWSIL™-99900 and emulsifiers into a mixer, then stir the mixture at moderate speed for about 10 min till fully homogeneous.
3) Charge water-1 once and continue to stir at 300-600 rpm for 30 min (Water-1 must be added once to avoid forming hard gel).
4) Add water-2 at moderate speed and then acidic water into above mixture. Continue to stir at 300-500 rpm for 20 min.
5) Clear micro-emulsion with some foam should be obtained at end of this procedure.
6) Filter before packing, if necessary.

The Example of Application of 23.5% POWSIL™-99900 Microemulsion

23.5% of POWSIL™-99900 can be used as received or pre-diluted with water before applying. Optimum treatments are dependent on the required softness of the fabric and yarn after dyeing and finishing.

1. Pad-dry-cure process

Dosage	10~20g/l for light fabric or 25-40g/l for heavy fabric
pH	5.0 ~ 7.0
Dry/Cure	120 ºC~170 ºC for 1-3min
Temp.	Ambient temperature

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2. Exhaustion process

Dosage	1.0-3.0% (o.w.f)
Liquor ratio	1/10-1/20
pH	5.0 ~ 7.0
Temp.	Ambient temperature
Time	10-30 min
Drying	100~130ºC for 3-5 min

3. Garment washing process

Dosage	1.0-3.0% (o.w.f)
Temp.	Ambient temperature
Time	10-30 min
Drying	100~130 ºC for 3-5 min

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™-99900 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.

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.

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