POWSIL™-59900

Silicone Softener

INTRODUCTION

POWSIL™-59900 is a linear block copolymer consisting of polyether and quaternary functional silicone copolymer. It can deeply and uniformly penetrate into the interior of natural fibers, providing hydrophilic, bulk, silky and natural hand feel to most types of fabrics.

BENEFITS

- ☐ Imparts natural bulk and silky softness
- ☐ Provides excellent dispersion/spreading and penetration properties on fibers
- ☐ Excellent fiber elasticity and shape recovery
- ☐ Superiorly durable softness to laundering
- ☐ Easy to make micro-emulsions
- ☐ Good hydrophilic and excellent affinity on textile
- ☐ Outstandingly exhaustible to natural fibers
- ☐ Suitable for padding and exhaustion finish process
- ☐ Non or less oil spots when applying emulsions on fabric
- ☐ Re-dyeable & over dyeable
- ☐ Less fabric yellowing

TYPICAL PHYSICAL PROPERTIES

Appearance	Yellowish transparent liquid
Solid content (wt%)	~92.0
Viscosity (25°C, cps)	4000-12000
pH (25°C)	5.0-7.0
Diluents	Emulsifiers and Water
Ionic	Slightly cationic

APPLICATIONS

POWSIL™-59900 is a silicone oil that requires emulsification before application in the textile finishing process, rather than being applied directly to fabrics. Emulsifying POWSIL™-59900 is notably easier than emulsifying other silicone oil typically used in textile softeners.

Formulation

Composition	% wt
POWSIL™-59900	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 required	~

TDE-6 : Tridecyl Alcohol 6 EO ethoxylated

AEO-6: Fatty alcohol ethoxylated with 6 EO

2) Procedures:

1) Stir POWSIL™-59900 content in container to make it homogeneous before taking out for use;

2) Charge POWSIL™-59900 and emulsifiers into a mixer, and then stir the contents at moderate speed for max.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 add acidic water into above content. 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™-59900:

23.5% POWSIL™-59900 can be used as received or pre-diluted with water before application. The optimal treatment depends on the desired softness of the fabric and yarn after dyeing and finishing.

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1. Pad-dry-cure process

Dosage	10-20g/l for light fabric or 25-40g/l for heavy fabric
pH	5.0-7.0
Temperature	Ambient temperature
Dry/Cure	120-170°C for 1-3 min

2. Exhaustion process

Dosage	1.0-3.0% on the weight of fabric
Liquor ratio	1/10-1/20
pH	5.0-7.0
Temperature	Ambient temperature
Time	10-30 min
Drying	100-130°C for 3-5 min

3. Garment washing process

Dosage	1.0-3.0% on the weight of garment
pH	Ambient temperature
Temperature	10-30 min
Drying	100-130ºC for 3-5 min

Packing and Storage

POWSIL™-59900 is packaged in net weight 120Kg Drum or 1000Kg IBC tote.

In the original unopened packaging, POWSIL™-59900 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: silanes@SiSiB.com.

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