REF: TT/ Nov.09/WK4

SILICONE PRODUCT REQUIREMENTS

I. Silicones for Denim Garments

Purpose: Softening of cotton denim garments. Softness level similar to organic-fatty amido amine softeners

Critical success factors are-

1. High Softness level
2. Handle of organic softner (typical of amido amines)
3. Anti-ozonate
4. Low yellowing
5. Dispersion (if softener is in the powder form)

Additional benefits expected-

1. Brightening of denims (good contrast)
2. Reduction in back staining
3. Low foaming
4. Good performance in hard water
5. Compatibility with cationic powder softeners
6. Product preferred in the powder form

II. Silicones for Terry Towel

Purpose: Softening of Cotton (100%), Terry towels & Cotton (100%) Knits.

Critical success factors are:

1. High softness level
2. Hydrophilic; Good water holding performance for towels
3. Handle typical of Non-ionic organic softeners, epoxy –amino silicone
4. Non yellowing
5. Luster and brightness
6. Durability of handle

Additional benefits expected

- Terry piles should stand up and give a fluffy appearance
- Good performance in hardwater
- Low foaming
- Bath compatibility
- Good wicking

III. Silicones for Jet, soft flow knit application

Purpose: softening of cotton (100%) knits and 100% polyester fabric.

Critical success factors are-
- High Softness level
- Shear stability
- pH stability in the range of 3-14
- Stability to salts used in dyeing and hydrolysed dyes
- No shade change (yellowing allowed to the extent that there is no shade change)

Additional benefits expected
- Stability to bath temperatures up to 70 deg C
- Hydrophilic
- Good performance in hard water
- Durability
- No change of above properties on storage for 6 months

IV. Silicones for whites

Purpose: Softening of cotton (100%) woven fabrics, polyester cotton blends and 100% cotton knit fabrics.

Critical success factors are-
- High softness level
- Non yellowing on 100% whites
- Dry/ wet crease recovery, Iron-aid
- Compatibility with optical brightening agents
- Durability
- Phenolic yellowing –packing yellowing

Additional benefits expected
- Moderate hydrophilic
- Good luster
- Moderate antistatic action
- Good performance in hard water

V. Continuous finishing range (CFR/CBR)

Purpose: softening of 100% polyester, mill fabrics, 100% cotton knits, bed linen.

Critical success factors are-
- High surface softness level
- Compatibility with Resins/ PE/fillers/ binders/ salts

- pH stability in the range of 3-14
- Stability to salts used in dyeing and hydrolysed dyes
- No shade change (yellowing allowed to the extent there is no shade change)
- No roller build up

Additional benefits expected-
- Stability to bath temperatures upto 70 degree C.
- Hydrophilic
- Good performance in hard water
- Durability
- No change of above properties on storage

VI. Water dilutable silicone fluid

Purpose: softening of 100% cotton garments, 100% polyester, mill fabrics, 100% cotton knits, self-emulsifying amino modified silicone fluid- Water-soluble.

Critical success factors are-
- High surface softness level
- Stable to all type dilutions
- Easy dispersible
- Low yellowing
- No shade variation

Additional benefits expected-

- Moderate hydrophilic
- Hard water stable
- Process stability
- Stable to wide pH range (5.0 –9.0)
- Stable to low shear conditions
- No odour in the bath and on fabric
- Low foaming in the bath
- Iron aid

VII. Yarn lubricant

Purpose: softening and lubrication of 100% cotton hosiery yarns and shirting yarns

Critical success factors are-
- High surface softness level
- Lubrication to avoid breakages
- Non yellowing
- Hydrophilic
- No strength loss
- No shade/ tone variation