



DOW

®

DOWSIL™ IE-8749 Emulsion

Concentrate for durable water repellency

What is DOWSIL™ IE-8749 Emulsion?



New, high-performance, durable water repellent for textiles



Actives: all-silicone polymers designed for maximum water-repellency with good durability



High solids concentrate, easy to dilute and combine with other ingredients to tailor performance to application requirements



Effective across a range of fabrics including synthetic, natural, and blended fiber fabrics*



Provides softness and non-marking character expected of silicones + enables stable sewn seams (minimal seam slippage)



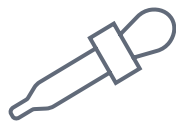
* Performance must be confirmed on each type and source of fabric

Typical properties of DOWSIL™ IE-8749 Emulsion

Property	Unit	Result
Appearance		Milky, white liquid
Non-volatile (actives) content	%	69.0 – 73.0
pH (non-diluted)		10.0 – 11.5
Surfactants		Non-ionic

Note: These values are not intended for use in preparing specifications





Optimum use amount is 2 to 3% of silicone actives

- Adjust actives for individual fabric pick-up on chosen process equipment and settings
- Some increase in add-on weight may improve robustness of performance



1 to 3 minutes curing at 150°C minimum temperature

- 2-stage curing has not been shown to be necessary
- The effectiveness of each curing range must be understood to ensure adequate curing
- Adjust as needed to suit available equipment



Best performance with blocked isocyanate crosslinker + glycol penetrant

- Use crosslinker at a ratio with silicone of 1:4 to 1:10 (crosslinker actives to silicone DWR actives)
- Use penetrant at 1% owf actives



Adjust pH with acetic or citric acid to be slightly acidic (pH 5-6)

- Application by padding is recommended

Base formulation

Ingredient	Trade name / supplier	Wt %*
Silicone DWR	DOWSIL™ IE-8749 Emulsion	2.9
Water		94.5
Crosslinker (blocked isocyanate)		1.7
Glycol Penetrant		1.0

*2% owf silicone DWR, Based on 100% wet pick-up of finishing bath onto fabric

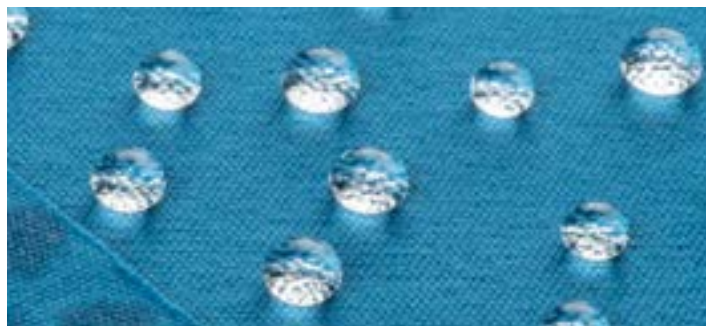
Procedure

1. Add penetrant to water and mix to clarity.
2. Add DOWSIL™ IE-8749 Emulsion and mix to uniformity (do not use high shear process).
3. Add crosslinker and mix.
4. Add additional water if needed.
5. Adjust pH to ~6 using acetic or citric acid.
6. Apply using suitable process (padding has shown to be effective).
7. Dry/Cure for at least 1 to 2 mins at 160°C.

Good water repellency of DOWSIL™ IE-8749 Emulsion



Untreated



Treated by DOWSIL™ IE-8749 Emulsion

Images: dow_81888869747, dow_81888871951

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