



Flexipel SR-95HF

Overview

- Functionalized Dispersant Polymer Used to Impart an Invisible, Durable Oily Soil, Soap Scum and Hard Water Deposit Barrier to Hard Surfaces
- Provides Cleaning Properties without Additional Surfactants or can be Combined with Flexiwet WBD to Boost Cleaning Performance without Impacting Barrier Effect
- Imparts a Hydrophilic and Self Cleaning/Easy Cleaning Surface
- Makes Foam Cling to Vertical Surfaces Increasing Hang Time
- Rapidly Adsorbs onto Hard Surfaces Including Clear Coats, Paint, Glass, Aluminum, Steel, Plastics, Composites and Ceramics on Contact
- Provides Spot Free Drying and Anti-Fogging in Hard Surface Cleaners and Treatments
- Functions in Acid, Neutral, Alkaline and Peroxide Environments

Applications

- Hard Surface Cleaners: Tub and Tile, All-Purpose, Multi-Surface, Glass, Bowl, Grout, Floor, Pool and Spa, Wheel, Transportation and Vehicle
- Daily/Weekly/Monthly Shower Cleaners
- End of Hose Glass and Surface Cleaners
- Pre-Moistened Wipe Cleaners

Technical Information

- Creates a durable monomolecular layer. Durability depends on several variables (e.g. surface composition, UV exposure, use levels, etc.)
- Flexipel SR-95HF is stable and functional over a broad pH range, including acid, alkaline and neutral environments.
- Dyes & fragrances are compatible with Flexipel SR-95HF. Be sure to check the stability of the final formula when adding additional components.
- Recommended use rates vary from 0.25 – 10.0% Flexipel SR-95HF by weight of solution depending on the application, application rate, desired performance and cost parameters. 1.0% is the most common use rate.
- Safe for use on: Glass, Ceramics, Stone, Concrete, Masonry, Stainless Steel, Acrylics, Painted Surfaces, Polystyrene, ABS and Polycarbonate
- Formulations containing Flexipel SR-95HF should not be used on polished limestone/marble as they may dull the finish.
- Depending on the ingredients, formulations containing Flexipel SR-95HF sometimes have a slight blue hue either in the RTU or concentrate. This is the nature of the polymer. Haziness does not reduce effectiveness. If completely clear formulations are desired, contact your ICT representative for formulation details.
- Flexipel SR-95HF can be incorporated into many different applications. ICT welcomes the opportunity to work on specific formulations. Contact your ICT representative for details.

Ready-to-Use Daily Shower Spray

Flexipel SR-95HF	1.0%
Fragrance	0.02%
Water (tap)	98.48%
Citric Acid	0.5%
Preservative	as required

pH 2.7

Add in order listed

Use as is.

Ready-to-Use Neutral Cleaner

Water (tap)	92.45%
Sodium Citrate	1.0%
Sodium Gluconate	0.25%
Flexipel SR-95HF	1.0%
Flexiwet WBD	1.5%
SXS 40%	3.7%*
Preservative	0.10%**

pH 6.5 +/- 0.5

Add in order listed

Use as it

Alkaline Wheel Cleaner Concentrate

Water (tap)	81.98%
Sodium Metasilicate	1.5%
EDTA Liquid	8.0%
KOH 45%	0.5%
Flexipel SR-95HF	2.0%
Flexiwet WBD	6.0%
Fragrance	0.02%

pH 12.9 +/- 0.5

Add in order listed

Use up to 1:4

Ready-to-Use Glass Cleaner with Antifog

Water (tap)	98.45
Flexipel SR-95HF	1.0%
Flexiwet WBD	0.5%
Preservative	0.05%**

pH 3.0 +/- 0.3

Add in order listed

Use as is

FORMULARY

NOTE: When adding fragrance to formulations, combine the fragrance and Flexipel SR-95HF in the mixing vessel and mix for several minutes prior to adding ALL other components. When adding powders, charge the vessel with water, add ALL powders and mix until fully dissolved. Add the premixed Flexipel SR-95HF and fragrance to the predissolved water and powder(s).

*SXS 40% = Sodium Xylene Sulfonate
40% Liquid

**Typical Use Level Preservative

Performance

Hydrophilic Modification of Ceramic Tile : Soap Scum and Hard Water Deposit Resistant Barrier

The photographs to the right show the remarkable protection afforded surfaces when treated with formulations containing Flexipel SR-95HF. The right half of the tile was treated with an alkaline cleaning formulation containing Flexipel SR-95HF at 1.0% then rinsed under cold water (Fig. 2). The tile was then allowed to dry. Once dry, the tile was soiled repeatedly with a standard soap scum and hard water solution then rinsed with cold water (Fig. 3). As the photo below demonstrates, the treated half on the right has resisted deposits and remains clean after repeated exposure to hard water and soap scum (Fig 3).

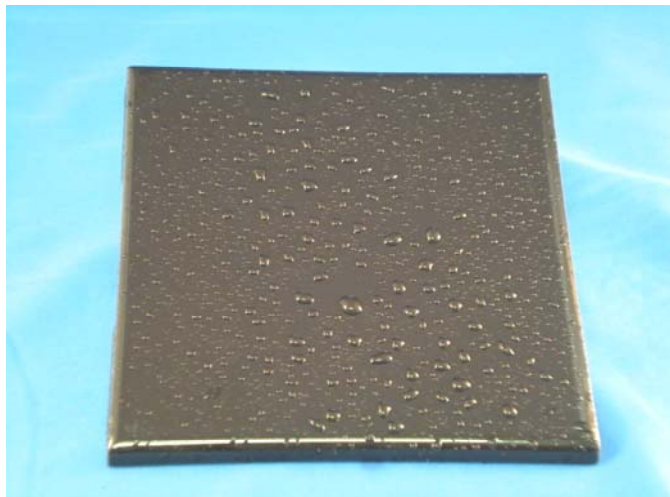


Figure 1: Untreated ceramic tile exhibits hydrophobic nature.



Figure 2: Right half of tile treated with a formulation containing 1.0% Flexipel SR-95HF exhibits hydrophilic barrier properties.

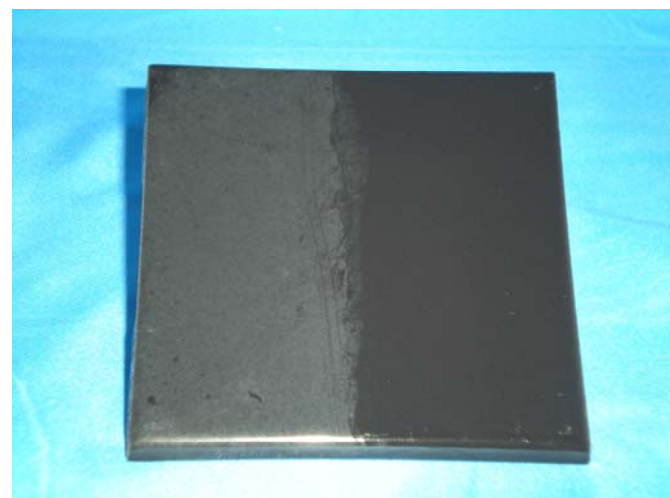


Figure 3: After 10 soiling/rinsing cycles and time to dry, the right side of the tile is still hydrophilic and is a barrier to soap scum buildup and hard water spotting. The untreated left side allows soap scum buildup and hard water spotting.

Hydrophilic Modification of Glass : Soap Scum and Hard Water Deposit Resistant Barrier

The photographs to the right show the remarkable protection afforded surfaces when cleaned with formulations containing Flexipel SR-95HF. A glass panel was soiled uniformly with a standard soap scum and hard water solution (Fig. 1). The underside of the glass panel is painted black so that the soiling is easier to see. The right half of the panel was treated with an alkaline cleaning formulation containing Flexipel SR-95HF at 1.0% then rinsed under cold water (Fig. 2). The tile was then allowed to dry. Once dry, the tile was soiled repeatedly with a standard soap scum and hard water solution then rinsed with cold water (Fig. 3). As the photo below demonstrates, the treated half on the right has resisted deposits and remains clean after repeated exposure to hard water and soap scum; the hydrophilic barrier is durable after repeated soiling and rinsing (Fig 3).



Figure 1: A glass panel is painted black on its underside. The unpainted side is soiled uniformly with a standard soap scum and hard water solution.

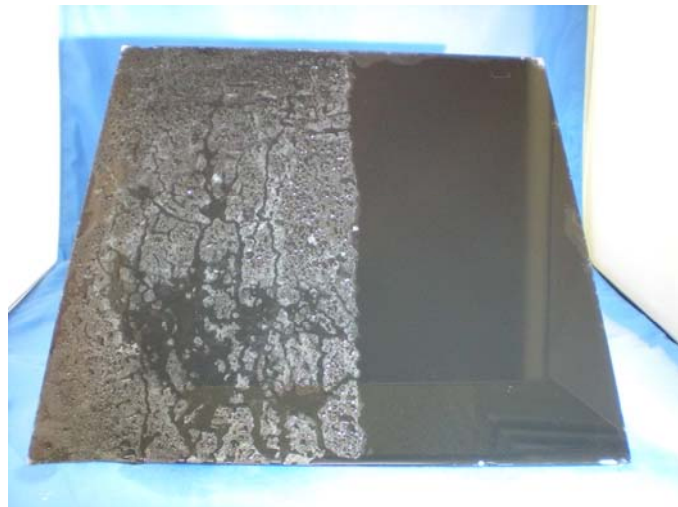


Figure 2: The right half of the glass panel is cleaned with a formulation containing 1.0% Flexipel SR-95HF and exhibits complete hydrophilic barrier properties when rinsed.



Figure 3: After 10 soiling/rinsing cycles and time to dry, the right half of the glass panel is still hydrophilic and resists soap scum buildup and hard water spotting. The untreated left side allows soap scum buildup and water to spot.

Hydrophilic Modification of Painted Panel/Clear Coat : Dirty Motor Oil Release

The photographs to the right illustrate the oily soil release properties imparted to surfaces when treated with Flexipel SR-95HF. The left half of the panel was treated with an alkaline wheel cleaner formulation containing Flexipel SR-95HF at 2.0% then rinsed with cold water and allowed to dry. The tile was then uniformly soiled with a thin film of dirty motor oil (Fig. 1). The soiled panel was held under low pressure, cold tap water for 30 seconds. The stream of cold tap water was positioned at the top of the panel so that the water cascaded uniformly over the panel. As the photo below demonstrates, the treated half on left readily releases the dirty motor oil allowing it to be rinsed away with tap water (Fig. 2).



Figure 1: A uniform film of dirty motor oil is applied to treated and dried panel. Untreated (right) and treated (left).

Typical Properties

Appearance	Clear to Slightly Hazy, Light Amber Liquid
Density	1.04 +/- 0.02 g/mL
pH	3.0 +/- 1.0
Water Solubility	Soluble
Boiling Point	Approx 100°C

Packaging and Handling

Flexipel SR-95HF is available in totes (Net Wt. 2300 lbs), 55 gallon drums (Net Wt. 460 lbs) and 5 gallon pails (Net Wt. 40 lbs).

DOT Classification is Non Regulated.

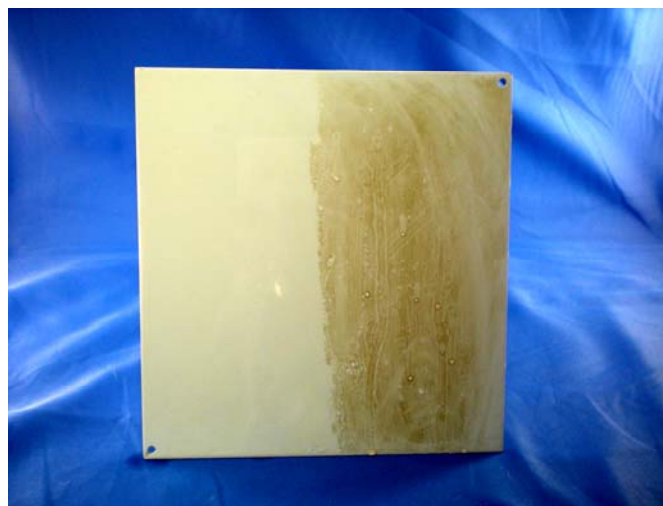


Figure 4: After rinsing for 30 seconds, the hydrophilic left side of the panel readily releases soil.

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