



Flexipel SR-80

Overview

- Aqueous, water-soluble polymer used to impart an invisible, durable oily soil, soap scum and hard water deposit barrier on hard surfaces
- Safe for consumer use: it is not a Microplastic under the ECHA proposed Annex XV restriction.
- Imparts a hydrophilic and self cleaning/easy clean surface
- Rapidly adsorbs to hard surfaces including clear coats, paint, glass, aluminum, steel, plastics, composites & ceramics on contact
- Provides spot free drying and anti-fogging in hard surface cleaners and treatments
- Low use levels (0.05 – 1.00% in ready-to-use formulations)
- Compatible with nonionic, anionic, amphoteric, and some cationic materials
- Functions in neutral, acid, alkaline and peroxide environments
- WERCS ID number: WPS1163620
- WERCS Validation number: WPS1163620

Applications

- Hard Surface Cleaners: Tub & Tile, All-Purpose, Multi-Surface, Glass, Bowl, Grout, Floor, Pool & Spa, Wheel, Transportation & Vehicle
- End of hose glass & surface cleaners
- Vehicle Drying & Rinse Aids

Technical Information

- Durability of the mono-molecular layer is dependent on several variables (e.g. surface compositions, UV exposure, use levels, etc.)
- Flexipel SR-80 functions over a broad pH range.
- Dyes & fragrances are compatible with Flexipel SR-80. Be sure to check the stability of the final formula when adding additional components.
- Safe for use on: Glass, Ceramics, Stone, Concrete, Masonry, Stainless

Steel, Acrylics, Painted Surfaces, Polystyrene, ABS and Polycarbonate

- Formulations containing Flexipel SR-80 should not be used on polished limestone/marble as they may dull the finish.
- Recommended use rates vary from 0.05 – 1.00% Flexipel SR-80 by wt. of solution depending on the application, application rate, desired performance, and cost. 0.25% is the most common use rate.
- Depending on the ingredients, formulations containing Flexipel SR-80 sometimes have a slight haze in the RTU or dilution. This is the nature of the polymer. Haze does not reduce effectiveness. If water-clear formulations are desired, contact your ICT representative .
- Flexipel SR-80 can be incorporated into many different applications. ICT welcomes the opportunity to work on specific formulations. Contact your ICT representative for details.

Performance

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

These photographs show the remarkable protection afforded surfaces when treated with Flexipel SR-80. The right half of the tile was treated with a light coating of Flexipel SR-80 at 0.5% 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 demonstrates, the treated half on the right has resisted deposits and remains clean after repeated exposure to hard water and soap scum (Fig 3).

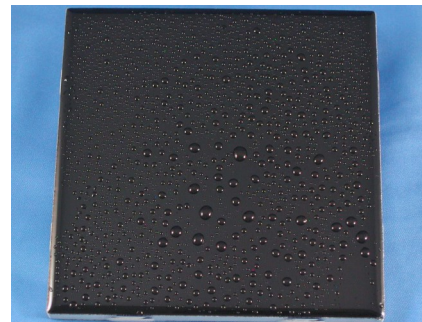


Figure 1: Untreated ceramic tile exhibits hydrophobic nature.



Figure 2: Right half of tile treated with 0.5% Flexipel SR-80 exhibits complete hydrophilization.



Figure 3: After 10 soiling/rinsing cycles, 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 Painted Panel/Clear Coat: Dirty Motor Oil Release

These photographs illustrate the soil release properties imparted to surfaces when treated with Flexipel SR-80. The right half of the panel was treated with a light coating of Flexipel SR-80 at 0.5% then rinsed with cold water (Fig. 2). Blue dye was added to the water to make it easier to see. The tile was wiped dry then soiled with dirty motor oil (Fig. 3). 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 photos demonstrates, the treated half on right readily releases the dirty motor oil allowing it to be rinsed away with tap water (Fig. 4).

Typical Properties

Appearance	Clear, viscous liquid
Density @ 25°C	1.04 +/- 0.02 g/ml (9.7 lbs/gal)
pH	2.2 to 3.0
Water Solubility	Soluble
Boiling Point	Approx 100°C

Packaging and Handling

Flexipel SR-80 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.

Shelf Life: 12 months



Figure 1: Untreated panel exhibits hydrophobic nature.

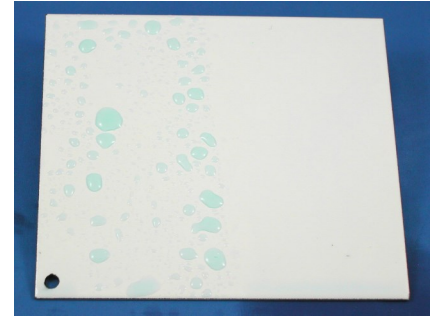


Figure 2: Right half of panel treated with 0.5% Flexipel SR-80 exhibits complete hydrophilization.

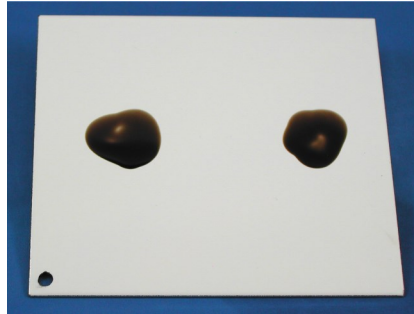


Figure 3: Dirty motor oil is applied to dried panel. Untreated (left) and treated (right).



Figure 4: After rinsing, the hydrophilic right side of the panel readily releases soil.

This information relates only to the specific material referred to herein and not to its use in combination with any other material or in any process, unless explicitly stated herein. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled; however, no warranty, guarantee or other representation is made as to its accuracy, reliability, or completeness, or regarding any liabilities arising from others' patent rights. 20210119