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TECHNICAL BULLETIN

Siltech® Film Formers

DESCRIPTION

Siltech Film Formers are designed to coalesce and in many cases react on hard surfaces such as concrete, porcelain, countertops, or rubber; flexible surfaces such as fabric, paper or leather; or biologic surfaces such as skin or hair creating a thin coating. This film provides protective properties such as release, slip, anti-squeak, or anti-stain; feel properties such as softness or conditioning; and optical properties such as gloss or light scattering.

Silicone-based film formers are highly flexible providing durability in real life situations. They can be particularly good at repelling water or water-based stains, retaining a wet look or shine and what is perceived as an ultimate softness.

Comparison of Siltech Film Formers

Product	Actives	Degree of film forming	Unique family properties	Individual differentiation
Siltech E-2150	30%	High	Amine groups for anchoring to surfaces and providing durability	Most durable
Siltech E-2151	30%	Medium		Durable and flexible
Siltech E-2155	30%	Lower		Most flexible
Siltech E-2178	40%	High	More water repellence, more rubbery feel, neutral, non-yellowing	Some paint-ability and water repellent
Siltech E-2152	50%	Medium		
Siltech E-2158	50%	Medium		Less oil miscible
Siltech E-2154	50%	Medium	High gloss and paintable	
Siltech E-2156	40%	Medium	Anchored and durable with gloss and paintable	

Siltech® E-2150, E-2151 and E-2155 Film Formers are aminoalkyl functional which provides anchoring for durability, increased softness and lubrication, and enhanced deposition onto negatively charged or reactive surfaces. These products are available in different degrees of cross-linking which provides the film formation.

Siltech E-2152, Siltech® E-2178 and Siltech E-2158 use non-reactive cross-linkers and so leave films which tend to provide a more organic feel, better water repellence and a neutral surface. These also do not yellow with time as the amino functional products sometimes do. Siltech E-2178 has been shown to be very effective as concrete or stucco water-proofing agent.

Siltech E-2154 uses an aromatic cross-linker providing higher gloss and increased organic nature. This is often overcoatable or paintable due to the aryl moieties present in the film.

Siltech E-2156 combines the anchored, durable films of the aminoalkyl products with the higher gloss and overcoatable nature of **Siltech® E-2154.**

TYPICAL PROPERTIES

Emulsifier Package	APEO free nonionic emulsifiers
Appearance	Milky Liquid
Viscosity, cSt	10-50
Active Content %	30-50%
Water solubility	Dispersible, dilutable

USES AND APPLICATION

Typically these materials are diluted with water and used at low use levels.

Applications include roofing, mold release, fabric care, protective coatings, car care, kitchen and bath cleaners, polishes,

The higher cross-linked materials tend to be more rigid and more durable, they give more protection and more release. Gloss is sometimes, but not always compromised with higher cross link densities. Lubrication and softness are generally better with less cross linking.

Counter intuitively, too much material on the surface can negatively impact performance. Your screening experimental design is best done at two use levels, one high and the other low with several silicone materials.

SAFETY

Before handling, read the specific Material Safety Data Sheet and container label for safe use, physical and health hazard information.

STORAGE AND SHELF LIFE

Check the individual data sheets and MSDSs for specific products, but generally when stored in the original, unopened containers between 10 and 40^0C, **Siltech® Film Formers** have a shelf life of 12 months from date of manufacture.

PACKAGING

Siltech Film Formers are available in 20kg and 200kg containers.

LEGAL DISCLAIMER

Siltech Corporation believes that the information in this technical data sheet is an accurate description of the typical uses of the product. Siltech Corporation, however, disclaims any liability for incidental or consequential damages, which may result from the use of the product that are beyond its control. Therefore, it is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficacy and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe any patent or any other intellectual property right.

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