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TECHNICAL BULLETIN

Siltech® Leather Treatments

DESCRIPTION

Siltech has a broad portfolio of products for use in the finishing or processing of natural or synthetic leather goods.

The product type used for leather varies from dispersions of high molecular weight silicones and/or resins to silicone surfactants. These additives are multi-functional so that the material used to increase wetting is likely to also impact feel.

These materials can provide softness, feel, lubricity, anti-blocking, wetting, leveling, or repellency to the final product. They can also be used as processing aids to improve lubricity and release.

Comparison of Products

Product	Water Reducible	Reactive with PU	Gloss	Softness	Flow & Leveling	Wetting	Slip	Anti-blocking	Water Repellent	Stain Repellent
Siltech C-4775	yes	no	matte	very high	none	none	very high	very high	high	low
Siltech C-4445	yes	no	matte	very high	none	none	very high	very high	high	low
Siltech E-4135	yes	yes	moderate	very high	none	none	low	low	very high	moderate
Siltech E-4155	yes	yes	moderate	very high	none	none	low	low	low	moderate
Silamine® DG-50	no	yes	some	high	none	none	low	moderate	high	low
Siltech L-25	yes	yes	high	high	moderate	none	moderate	high	moderate	moderate
Silube® CS-Di-25	yes	yes	matte	moderate	high	none	low	high	high	moderate
Siltech E-2150NT	yes	yes	some	moderate	none	none	low	moderate	moderate	low
Siltech T-12	yes	no	low	moderate	moderate	none	moderate	high	low	none
Siltech L-10	yes	yes	moderate	moderate	high	none	moderate	moderate	low	none
Siltech T-15	yes	no	moderate	moderate	moderate	none	high	moderate	none	none
Siltech C-20	yes	yes	low	moderate	high	high	moderate	low	none	moderate
Siltech C-442	yes	yes	low	moderate	moderate	none	moderate	high	none	none
Siltech E-2199	yes	no	some	low	none	none	low	Low	very high	high
Silsurf® A008-UP	yes	yes	low	none	very high	very high	low	none	none	none

TYPICAL PROPERTIES

Silamine DG-50 is 50% solution of an aminosilicone in mineral spirits. It is primarily used as a softener in solvent based natural or synthetic leather and provides a characteristic feel. It also provides gloss, anti-blocking and water repellence

Siltech C-4445 and **Siltech C-4775** are a water reducible dispersions of high molecular weight silicone polymers designed to give a characteristic feel mainly to natural leather. They also often provide a matting affect as well as abrasion resistance, anti-blocking and water repellence. **Siltech C-4775** is an ultra low volatiles version.

Siltech E-2150 NT, **Siltech E-4155** and **Siltech E-4135** are film-forming emulsions of silicone. They are designed to be used in water-based synthetic leather and gives a barrier coating resulting in a very soft, powdery feel as well as some stain resistance, gloss, anti-blocking and abrasion resistance.

Siltech E-2199 is a film forming emulsion containing high efficiency Q resins for cross-linking. Developed for maximum water repellency.

Siltech C-20 and **Siltech C-442** are water and solvent soluble wetting and leveling agents for natural and synthetic leathers. They will often give moderate softness, lubricity and abrasion resistance as well.

Siltech L-10 and **Siltech L-25** are water and solvent reducible PU reactive materials designed as wetting agents for synthetic leather. The **Siltech L-25** gives a much higher amount of softness, lubricity, stain repellence, anti-blocking and abrasion resistance.

Silsurf A008-UP is a super-wetting agent and is designed for usage in water based systems at about 0.2% actives, but can also be used in solvent-based systems. This agent lowers surface tension and provides increased penetration and maximum wetting and leveling.

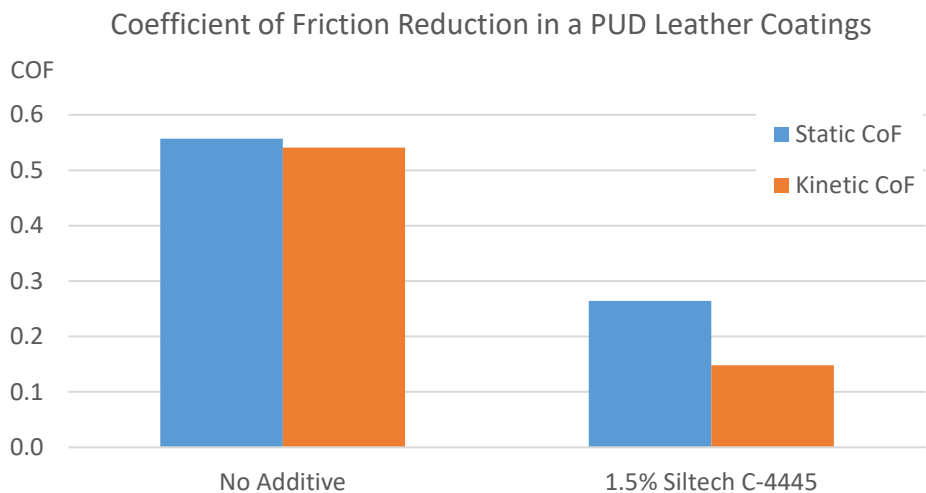
Siltech T-15 and **Siltech T-12** are water and solvent reducible modified silicones designed to provide lubricity, abrasion resistance and anti-blocking to natural and synthetic leather products. **Siltech T-12** is especially effective on synthetic leather. These are non-reactive with PU.

Silube CS Di-25 is an anionic functional silicone surfactant. It provides excellent softness, anti-block, stain resistance and lubricity to leather, PU leather and other surfaces. It has been used for hydrophobic treatment of natural leather.

USES AND APPLICATION

These products are generally added at 0.05-1% when used as a surface coatings additive and 2-5% use level when used as a pre-polymer. These can normally be added at any point in the process. Pre-dilution of the as received product will lower the viscosity and facilitate dissolution and so is often desired.

Below is COF data on synthetic PU leather. The products were taken up in water or IDD, Sprayed on, dried overnight and evaluated.



SAFETY

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

PACKAGING

Siltech products 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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