

GP-800 MERCAPTO FUNCTIONAL SILICONE FLUID

Genesee Polymers' *GP-800 MERCAPTO FUNCTIONAL SILICONE FLUID* is a dimethyl silicone copolymer fluid, containing mercaptopropyl side chains in addition to the conventional methyl group substituents.

The structure of *GP-800* is as follows where x = 108 (Approx.) and y = 5.4 (Approx.):

INNOVATIVE POLYMER TECHNOLOGY

Product Code: C-9008 Version: 3.0 Revision Date: November 20, 2018

TYPICAL PROPERTIES	
Appearance (25° C)	Clear, Colorless to Light Straw Liquid
Specific Gravity	0.98
Flash Point (P.M.C.C.)	>450° F
Refractive Index	1.413
Weight/Gallon	8.0 lbs.
Molecular Weight	9,000 (Calculated)
% Active	100%
% Solvents	None
% SH	2.0%

Solubility Aliphatic and Aromatic Solvents, Chlorinated Solvents

Viscosity, 77° F 200 cSt

APPLICATIONS

Plastic and Rubber Release Agent

Internal Lubricant and Release Agent for Sulfur and Peroxide Cure Rubber

Co-reactant in Vinyl Polymerizations

Corrosion Inhibitor Coatings

Synthesis of Organic - Silicone Copolymers

Ingredient in UV and EB Cure Inks and Coatings

Heat Stabilizer Additive for use in Dimethyl MERCAPTO FUNCTIONAL SILICONE FLUIDs

SPECIAL FEATURES

Reactive Mercapto Functionality

High Affinity for Metal Surfaces

Corrosion Inhibiting Properties

Better Release Agent than Conventional MERCAPTO FUNCTIONAL SILICONE FLUIDs in many Applications

Greater High Temperature and Oxidative Stability than Conventional Silicones

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Reactions of Mercapto Silicone

The most useful reaction of the mercapto functionality of *GP-800* involves addition to double bond compounds:

$$\mathsf{R} - \mathsf{CH} = \mathsf{CH}_2 \quad + \quad \mathsf{HS} \stackrel{\mathsf{CH}_2}{\longrightarrow} \mathsf{CH}_2 \stackrel{\mathsf{CH}_2 - \mathsf{R'}}{\longrightarrow} \quad \overset{\mathsf{R}}{\longrightarrow} \quad \mathsf{CH}_2 \stackrel{\mathsf{CH}_2}{\longrightarrow} \overset{\mathsf{CH}_2}{\longrightarrow} \overset{\mathsf{CH}_2 - \mathsf{R'}}{\longrightarrow} \quad \mathsf{CH}_2 \stackrel{\mathsf{CH}_2 - \mathsf{R'}}{\longrightarrow} \quad \mathsf{$$

This reaction has been applied to the addition of a variety of olefins, including styrene, 1-alkenes, acrylic and methacrylic acids, along with unsaturated compounds. Catalysts include basic materials and peroxides.

Mercapto groups also have shown reactivity with isocyanates, epoxies and in sulfur cure or peroxide cure rubber elastomers.

PROCESSING AND SAFETY GUIDELINES

GP-800 MERCAPTO FUNCTIONAL SILICONE FLUID may be easily mixed with aliphatic or aromatic hydrocarbon solvents. The fluid is also fully compatible with dimethyl silicone fluids.

GP-800 should be handled with all of the precautions required in handling any industrial chemical product. Consult Safety Data Sheet for additional details.

PACKAGING/HANDLING/STORAGE

GP-800 MERCAPTO FUNCTIONAL SILICONE FLUID is supplied in 5-gallon (40 lbs.) pails, 55-gallon (440 lbs.) drums and 330-gallon (2640 lbs.) totes. No special storage requirements are necessary.



www.gpcsilicones.com

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