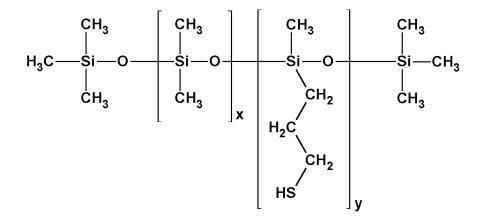


GP-71-SS SILICONE FLUID

Genesee Polymers' *GP-71-SS SILICONE FLUID* is a dimethyl silicone copolymer fluid, containing mercaptopropyl side chains in addition to the conventional methyl group substituents. The structure of *GP-71-SS* is as follows where x = 83 and y = 2:



INNOVATIVE POLYMER TECHNOLOGY

Version: 3.0

TYPICAL PROPERTIES	
Appearance (25º C)	Clear, Colorless to Light Straw Liquid
Specific Gravity	0.97
Flash Point (P.M.C.C.)	>450° F
Weight/Gallon	8.0 lbs.
Refractive Index	1.4103
Molecular Weight	6,600 (Calculated)
% Active	100%
% Solvents	None
% SH	1.0%
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 Silicone Fluids

SPECIAL FEATURES

Reactive Mercapto Functionality

High Affinity for Metal Surfaces

Corrosion Inhibiting Properties

Better Release Agent than Conventional Silicone Fluids in many Applications

Greater High Temperature and Oxidative Stability than Conventional Silicones



Reactions of Mercapto Silicone

The most useful reaction of the mercapto functionality of *GP-71-SS* involves addition to double bond compounds:

$$\mathsf{R}-\mathsf{C}\mathsf{H}=\mathsf{C}\mathsf{H}_2 + \mathsf{H}_{\mathsf{S}} \xrightarrow{\mathsf{C}\mathsf{H}_2} \mathsf{C}\mathsf{H}_2 \xrightarrow{\mathsf{C}\mathsf{H}_2-\mathsf{R}'} \longrightarrow \operatorname{R}_{\mathsf{C}\mathsf{H}_2} \xrightarrow{\mathsf{C}\mathsf{H}_2} \operatorname{C}\mathsf{H}_2 \xrightarrow{\mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2 \xrightarrow{\mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2 \xrightarrow{\mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2 \xrightarrow{\mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2 \xrightarrow{\mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}' \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}' \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}' \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}'} \mathsf{C}\mathsf{H}_2-\mathsf{R}' \mathsf{C}\mathsf{R}' \mathsf{C}\mathsf{R}'} \mathsf{C}\mathsf{R}' \mathsf{C}\mathsf{R}' \mathsf{C}\mathsf{R}'} \mathsf{C}\mathsf{R}' \mathsf{C}\mathsf{R}' \mathsf{C}\mathsf{R}'} \mathsf{C}\mathsf{R}' \mathsf{C}\mathsf{R}' \mathsf{C}\mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}'} \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}'} \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{C} \mathsf{R}' \mathsf{R}'$$

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 sulfur cure or peroxide cure rubber elastomers.

PROCESSING AND SAFETY GUIDELINES

GP-71-SS SILICONE FLUID may be easily mixed with aliphatic or aromatic hydrocarbon solvents. The fluid is also fully compatible with dimethyl Silicone Fluids.

GP-71-SS 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-71-SS 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

This information is based on tests believed to be reliable. It is given only for your information and no warranty, express or implied, is made as we cannot guarantee the test conditions not under our direct control. This data is not intended as authorization or recommendation to practice a patented invention without knowledge or permission of the patent owner.