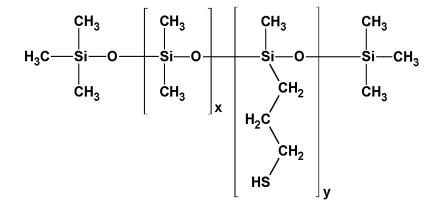


# **GP-710 MERCAPTO FUNCTIONAL SILICONE FLUID**

Genesee Polymers' *GP-710 MERCAPTO FUNCTIONAL SILICONE FLUID* is a high viscosity dimethyl silicone copolymer fluid, containing mercaptopropyl sidechains in addition to the conventional methyl group substituents. The structure of *GP-710* is as follows:



x = 933 (Approximately) y = 6 (Approximately)

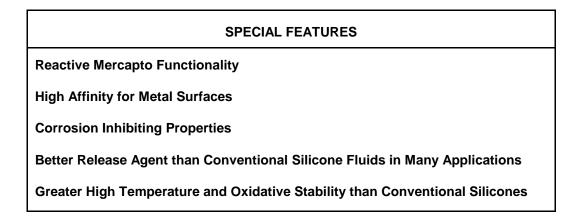
Molecular Weight = Approximately 70,000

## **INNOVATIVE POLYMER TECHNOLOGY**

	TYPICAL PROPERTIES
Appearance	Colorless, Light Straw Liquid
Specific Gravity	0.98
Flash Point	>450° F
Refractive Index	1.4080
Weight/Gallon	8.0 lbs.
Molecular Weight	70,000 (Approximately)
% Active	100%
% Solvents	None
% SH	0.28%
Viscosity, 25° C	30,000 cSt
Solubility	Aliphatic and Aromatic Solvents, Chlorinated Solvents

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	





#### **Reactions of Mercapto Silicone**

The most useful reaction of the mercapto functionality of *GP-710* involves addition to double bond compounds:

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

This reaction has been applied to the addition of a wide 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-710 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-710* 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-710 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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