

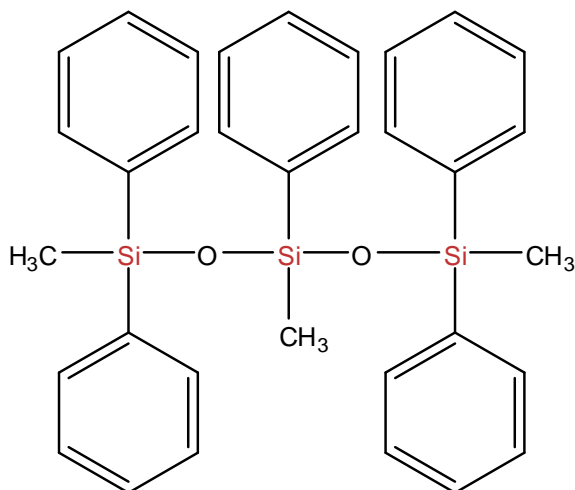
# SiSiB<sup>®</sup> PF8705

*Diffusion Pump Fluid*

## CHEMICAL NAME

1,1,3,5,5-Pentaphenyl-1,3,5-trimethyltrisiloxane

## CHEMICAL STRUCTURE



## INTRODUCTION

SiSiB<sup>®</sup> PF8705 Silicone Diffusion Pump Fluid is a single component fluid designed for ultrahigh vacuum applications in the range of  $10^{-9}$  to  $10^{-10}$  torr (untrapped) and  $10^{-11}$  torr (trapped). The low vapor pressure, low back-streaming rate and the high resistance to oxidation and radiation make this diffusion pump fluid ideal for many ultrahigh vacuum applications such as those in mass spectrometers and electron microscopes.

It has the highest phenyl content of all silicone diffusion pump fluids and the best resistance to radiation. High spontaneous ignition temperature makes this fluid ideal for use in human-rated space simulation chambers.

SiSiB<sup>®</sup> PF8705 is equal to DowCorning's DC-705, Shin-Etsu's HIVACF-5.

## TYPICAL PHYSICAL PROPERTIES

CAS No.	3390-61-2
EINECS No.	222-222-9
Formula	$C_{33}H_{34}O_2Si_3$

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# SiSiB® PF8705

## Diffusion Pump Fluid

Molecular Weight	546.88
Chemical Name	Pentaphenyltrimethyltrisiloxane
Color and Appearance	Colorless to straw-colored fluid
Ultimate Vacuum, torr	10 <sup>-9</sup> to 10 <sup>-10</sup> untrapped 10 <sup>-11</sup> trapped
Extrapolated Vapor Pressure, torr, 25°C	3 x 10 <sup>-10</sup>
Specific Gravity at 25°C	1.09
Viscosity at 25°C	175cSt
Flash Point, open cup	243°C,
Boiling Point, 0.5 torr	245°C,
Typical Boiler Temperature	250-270°C,
Surface Tension, dynes/cm	36.5
Heat of Vaporization, kcal/g mol	28.5/250°C,

### APPLICATIONS

SiSiB® PF8705 Diffusion Pump Fluid can be used in a variety of applications including: Aerospace, Electronics, Metallurgy, Vacuum Coatings, and Atomic Energy etc.

### PACKING AND STORAGE

SiSiB® PF8705 is supplied in 1Kg bottles, 5Kg 25Kg pails, and 200Kg steel drums.

In the original unopened packaging, SiSiB® PF8705 has a shelf life of 60 months.

### NOTES

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

We specifically disclaim any other express or implied warranty of fitness for a particular purpose or merchantability. We disclaim liability for any incidental or consequential damages.

Please send all technical questions concerning quality and product safety to: [support@SiSiB.com](mailto:support@SiSiB.com).