

## SIL MHX-1107 FLUIDS POLYMETHYLHYDROGENSILOXANE

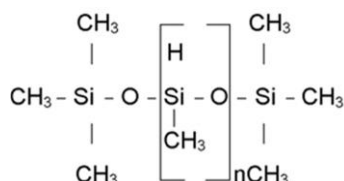
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### Product Description

SIL MHX-1107 fluid is colorless, non-toxic in nature and cures to give a durable film. It can also be diluted in solvents in order to improve dispersion.

The fluid should be stored at or below 60°C (140°F) in original and unopened containers.

Chemically it has the formula of Polymethylhydrogensiloxane,



On heat curing, the polymers crosslink at the sites of hydrogen atoms, to form a resinous release coating.

### Applications

SIL MHX-1107 is used in Hydrophobing treatment of plasterboard and plaster blocks. It is also used in the treatment for powders and granular materials to make them water repellent and free flowing and to reduce caking.

### Benefits

- Non-toxic in nature.
- Can be diluted in solvents in order to improve dispersion.
- Cures to give a durable film.
- Cure times and temperatures can be controlled.
- Effective at addition rates down to 0.2%
- The fluid is Colorless.

## Usage

SIL-MHX1107 Fluid is usually applied from dilute solution. Solutions are prepared by diluting SIL MHX-1107 Fluid with hydrocarbon solvents, acetone or methyl ethyl ketone and stirring the mixture gently until uniform. The extent of dilution will depend on the surface to be treated and surface properties desired.

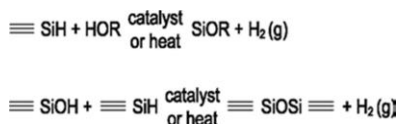
## Curing

- Coatings of SIL MHX-1107 Fluid are usually heat cured to develop release properties or water repellency.
- Curing temperatures range from 120°C to 175°C. Curing times are much shorter at higher curing temperatures.
- Catalysts are often used to accelerate cure. Four suitable catalysts in order of increasing activity include zinc octoate (22% zinc), iron octoate (6% iron), dibutyl tin dilaurate, and tin octoates (28% tin). A typical catalyst concentration is one part catalyst, as supplied, to 10 parts of SIL MHX-1107 Fluid. Concentrations of the more active catalyst must not be increased to the point that bath life becomes too short.
- The actual curing time will vary with the surface being treated as well as with the catalyst. In a typical application, uncatalyzed films of SIL MHX-1107 Fluid can be cured in 3 to 4 hours at 120°C or in 10 to 15 minutes at 150°C.
- Films applied from dilute solutions catalyzed with one part iron octoate (6% iron) to 10 parts of SIL MHX-1107 Fluid will cure in 3 minutes at 120°C, 1.5 minutes at 150°C, or 50 seconds at 175°C.

SIL-MHX-1107 Fluid and systems containing SIL-MHX-1107 Fluid, **may evolve hydrogen gas** under certain conditions. Hence, when using solvents **avoid heat, sparks and open flame** and always provide **adequate ventilation**.

Follow all the necessary handling precautions from the solvent supplier.

Reactions Leading to the formation of Hydrogen gas is,



Where R= alkyl, aryl, H, metal.

Catalysts: Bases, acids, heavy metal salts, polar ionic salts, certain transition metal salts.

## Typical Properties

Test	Unit	SIL MHX- 1107 20 cSt	SIL MHX- 1107 30 cSt
Color		Water white	Water white
Specific gravity at 25°C/15.6°C		1.002	1.002
Active ingredient	%	100	100
Viscosity at 25°C	mm <sup>2</sup> /s	18-24	20-40
Flash point - open cup	°C	>= 150	93
SIH AS H	%	1.55-1.66	1.40-1.75
Acid number		<=0.01	<=0.01

**Available Packs: 20, 50, 210 Ltr**

**Shelf Life - 36 Months from the Manufacturing month.**

### Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical applications.

\*Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly. The Material Safety Data Sheet (MSDS) are available upon request through our sales office. All related specifications are met or exceed.

**PETRELPLUS INC.**

One World Center, Tower One, 9<sup>th</sup> Floor, SenapatiBapatMarg, Lower Parel, Mumbai-400013  
[mail-marketing@petrelplus.com](mailto:mail-marketing@petrelplus.com), [www.petrelplus.com](http://www.petrelplus.com)

☎ +91 93522 25457    📞 +91 95098 25457