Technical Data Sheet

XIAMETER™ MHX-1107 Fluid 20 cSt and 30 cSt

Polymethylhydrogensiloxane

Features & Benefits

- Colorless
- Essentially non-toxic
- Cures to give a durable film
- Cure times and temperatures can be controlled
- Effective at addition rates down to 0.2%
- Can be diluted in solvents in order to improve dispersion

Applications

- Hydrophobing treatment of plasterboard and plaster blocks
- Treatment for powders and granular materials to make them water repellent and free flowing, and to reduce caking

Typical Properties

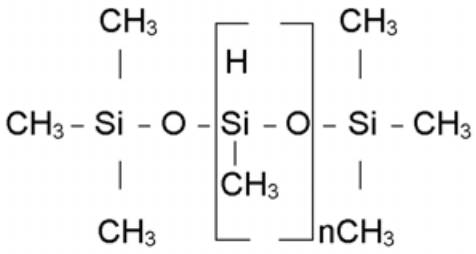
Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Value of XIAMETER™ MHX- 1107 20 cSt	Value of XIAMETER™ MHX- 1107 30 cSt
Active ingredient	%	100	100
Specific gravity at 25°C/15.6°C		1.002	1.002
Viscosity at 25°C	mm^2/s	18–24	20–40
Acid number		≤ 0.01	≤ 0.01
SIH AS H	%	1.55–1.66	1.40–1.75

Description

Chemically, XIAMETER™ MHX-1107 Fluid has the formula:

Polymethylhydrogensiloxane



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

How to Use

XIAMETER™ MHX-1107 Fluid is usually applied from dilute solution. Solutions are prepared by diluting XIAMETER™ MHX-1107 Fluid with hydrocarbon solvents, acetone or methyl ethyl ketone (see Product Safety Information), 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 XIAMETER™ 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 XIAMETER™ 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 XIAMETER™ 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 XIAMETER™ MHX-1107 Fluid will cure in 3 minutes at 120°C, 1.5 minutes at 150°C, or 50 seconds at 175°C.

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

XIAMETER™ MHX-1107 Fluid and systems containing XIAMETER™ MHX-1107 Fluid may evolve hydrogen gas under certain conditions.

Reactions Leading to the Formation of Hydrogen Gas Include:

$$\equiv SiH + HOR \xrightarrow[\text{or heat}]{\text{catalyst}} SiOR + H_2(g)$$

$$\equiv SiOH + \equiv SiH \xrightarrow[\text{or heat}]{\text{catalyst}} \equiv SiOSi \equiv + H_2(g)$$

Where R= alkyl, aryl, H, metal. Catalysts: Bases, acids, heavy metal salts, polar ionic salts, certain transition metal salts. When using solvents avoid heat, sparks and open flame. Always provide adequate ventilation. Obtain and follow handling precautions from the solvent supplier.

Usable Life and Storage

Product should be stored at or below 60°C (140°F) in original, unopened containers.

Limitations

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

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, dow.com or consult your local Dow representative.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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