



MONDUR PF

Aromatic Polyisocyanate Prepolymer

Description

Mondur PF is a modified 4,4'-diphenylmethane-diisocyanate (MDI) prepolymer.

Application

Mondur PF prepolymer is used primarily in the formulation of integral-skin and semi-flexible urethane foams. Mondur PF can also be considered as a candidate for the formulation of the high-property polyurethane coatings and sealants. As with any product, use of Mondur PF in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.

Product Specifications

Property	Value
NCO content, %	22.6-23.1
Color @ 25°C	200 maximum
Viscosity @ 25°C, mPa•s	550-800

Typical Properties*

Property	Value
Appearance	colorless to light yellow liquid
Solids, wt. %	100
Equivalent wt., avg. (as supplied)	184
Specific gravity @ 25°C	1.21
Flash point (Cleveland Closed Cup)	415°F (213°C)
Freezing Point	59°-68°F (15°-20°C)
Weight per gallon, lb. @ 25°C	10.1

Storage

Mondur PF prepolymer must be stored in tightly closed containers and protected from contamination with moisture and other foreign substances, which can adversely affect processing. It will react with water to form ureas and CO₂ gas, which may cause sealed containers to expand and rupture. Partially filled containers should be blanketed with dry nitrogen.

Storage temperatures should be maintained between 25° and 35°C (77° and 95°F). Under these conditions, Mondur PF prepolymer will remain clear for up to six months. Within this range, lower storage temperatures will maximize the storage life of the product.

Mondur PF prepolymer must not be allowed to freeze. Exposure to temperatures less than 25°C (77°F), even for short periods of time, can result in the formation of solid material. During the winter months, appropriate precautions must be taken during shipment and storage.

Prolonged storage of solid or partially solid Mondur PF prepolymer may result in the formation of MDI dimer in amounts that exceed its solubility in the prepolymer at normal storage temperatures. This can make the product unusable.

* These items are provided as general information only. They are approximate values and are not part of the product specifications.

If solids form because of exposure of Mondur PF prepolymer to low temperatures, it may be possible to reliquify the product by heating. Use a well-ventilated oven for the minimum time necessary to render it clear. The temperature of the product should not exceed 60°C (140°F). Agitation or drum rollers are recommended to avoid excessive local heating, which will degrade the prepolymer. As a result, the re-melted prepolymer may be cloudy, and the processing behavior and/or properties of the final product may be affected.

The use of drum heaters is not recommended since the excessive heating causes dimerization, loss of NCO, and increase in viscosity.

Health and Safety Information

Appropriate literature has been assembled which provides information pertaining to the health and safety concerns that must be observed when handling Mondur PF prepolymer. For materials mentioned that are not Bayer products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer should be followed. Before working with any product mentioned in this publication, you must read and become familiar with available information concerning its hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms such as material safety data sheets and product labels. For further information contact your Bayer MaterialScience representative or the Product Safety and Regulatory Affairs Department in Pittsburgh, Pa.

Note: The information contained in this bulletin is current as of June 2002. Please contact Bayer MaterialScience to determine whether this publication has been revised.

Bayer MaterialScience LLC

100 Bayer Road • Pittsburgh, PA 15205-9741 • Phone: 1-800-662-2927 • www.BayerMaterialScienceNAFTA.com

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Sales Offices

17320 Redhill Avenue, Suite 175, Irvine, CA 92614-5660 • 1-949-833-2351 • Fax: 1-949-752-1306
1000 Route 9 North, Suite 103, Woodbridge, NJ 07095-1200 • 1-732-726-8988 • Fax: 1-732-726-1672
2401 Walton Boulevard, Auburn Hills, MI 48326-1957 • Phone: 1-248-475-7700 • Fax: 1-248-475-7701
