



## TERACURE® M-111 MDI Polyisocyanate

Aromatic Polyisocyanate for 3-Component Polyurethane Polymer Concrete With Extended Working Time

### TYPICAL CHARACTERISTICS

Appearance	Dark Brown Liquid
Odor	Earthy, Musty Odor
NCO Content, Wt %	29.5
Density @25°C	1.22
Vapor Pressure @25°C., 5 mm Hg	190
Flash Point, °C. (COC)	199
Equivalent Weight	142
Viscosity @25°C, Cps	100

### COMPATIBILITY

Teracure® M-111 is an aromatic polyisocyanate based on diphenylmethane diisocyanate. The product is designed for use with 3K polyurethane polymer concrete, as Part B, along with Tallicin E-27 as part A.

### APPLICATIONS

Polyurethane polymer concrete based on Teracure® M-111 is designed for application as a topping onto concrete floors where cleanliness and durability are critical. Urethane polymer concrete flooring systems formulated with Teracure® M-111 provide performance characteristics which include resistance to impact, abrasion, aggressive chemicals, acid, and thermal shock.

Teracure® M-111 provides a unique combination of a long pot life and a fast-cure schedule. Applications include primers, base coats, adhesives, sealants, foams, and molding compounds. The additional working time for Teracure® M-111 allows more opportunity for self-leveling and deaeration. Surface defects are reduced. And the formulation can be applied with pin rake followed with a spiny roller. The polymer concrete topping can be built up with sand broadcasting, sweeping up excess sand, then applying a top coat.

Teracure® M-111 is capable of being used at application temperatures up to 44°C. Urethane polymer concrete formulated with Teracure® M-111 is odorless, non-toxic and designed for use in food plant operations making it a perfect solution for food and beverage facilities with extreme hygienic conditions. These conditions require frequent and intensive, steam or hot water and chemically aggressive cleaning which can be tolerated by polymer concrete based on Teracure® M-111.

Polyurethane polymer concrete based on Teracure® M-111 provides the following advantages:

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- For Concrete Floor Surfacing up to 1/2-inch Thick
- One-step Application – No Top Coat Required
- Offers Performance Improvements Compared with Epoxies

Trowel grade heavy duty, solid color cementitious urethane floor mortar (1/4" to 3/8" or thicker) based on Teracure® M-111 can be applied with slightly textured non-slip finish for medium to heavy-duty use. Advantages include a temperature range of 40°F to live steam above 240°F, bond strength in excess of concrete. Urethane polymer concrete has a similar coefficient of thermal expansion as traditional concrete allowing movement of the substrate through normal thermal cycling.

Teracure® M-111 can also be used in joint sealants featuring relatively quick cure and return-to-service. In addition, the product is recommended for hybrid primer formulations for direct application to concrete and with excellent penetration and inter-coat adhesion. Pflaumer offers a unique line of colorants for urethane polymer concrete that can also be used in epoxies, urethanes, and on-site polyaspartics. Terachem® 53-colorants provide standard bases of color as well as more than two dozen tints for the formulator to choose from.

As another option, Teraflex® Pre-Dispersed Pigments for Polyurethane Polymer Concrete is available in the following colors:

- Tile Red
- Light Grey
- Medium Grey
- Tan
- White
- Dark Grey
- Green
- Blue
- Brown
- Burnt Orange

## FEATURES

One-step Installation

Water-based

3-component System

Green Chemistry

Zero VOC

No Odor

Up to 1/2 -inch Thick

Can Be Applied at <5°C

Can Be Applied up to 44°C

Can Be Steam Cleaned

Wide Range of Colors

Easy to Clean with Solvents or Detergents

## PROUDCT USES (For professional use only. Not intended for retail sales.)

Polyurethane Polymer Concrete based on Teracure® M-111 MDI Polyisocyanate must be tested in advance in both laboratory and in field trials before use to determine the best formulation and suitability for use and application. Recommended starter formulations are available upon request for specific applications.

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## **SAFETY, STORAGE, AND HANDLING**

Store Teracure® M-111 in tightly sealed containers. Keep storage temperatures above freezing in a range of 15-35°C. Higher temperatures may cause an increase in viscosity. Crystallization may occur below 0°C. Shelf life of product is 6 months from date product is received in original closed containers and stored at room temperature without moisture contamination. The product reacts easily with moisture causing an undesirable increase in viscosity. Consult SDS before use.

## **CONTAINER SIZES**

5 gallon pails (Net Wt. 50 Lb/22.7 Kg)

55 gallon drums (Net Wt 551 Lb/250 Kg)

275 gallon totes (Net Wt. 2,755.8 Lb/1,250 Kg)

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