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TALLICIN® E-27

Castor Oil Polyol Emulsion for 3-Component Polyurethane Polymer Concrete

TYPICAL CHARACTERISTICS

Appearance	Creamy Liquid Emulsion
Odor	Low Odor, Characteristic
Weight Per Gallon, Lbs @25°C	8.07
Solubility in Water	Miscible
Hydroxyl Content (% by Weight, As Supplied)	2.1 - 2.7
Flash Point (P-M)	>100°C
Water, % by Weight	30±1

COMPATIBILITY

Tallicin® E-27, a special formulated emulsion of castor oil, is an example of the technology developed by Pflaumer R&D especially for polyurethane polymer concrete. The product can be used by itself as Part A, or can be modified with various additives to achieve special performance characteristics.

Pflaumer has developed unique technology, based on Tallicin® E-27 as Part A, for urethane polymer concrete floor coatings that provide exceptional flow and leveling. Pflaumer chemists have applied urethane polymer concrete formulated with Tallicin® E-27 through trained applicators around the country with excellent results. In addition, we have used our own chemical manufacturing facility as a test site with excellent results in appearance, durability, and maintenance.

Tallicin® E-27 is suitable as a starting point for the formulation of coatings and polymer mortars for a variety of applications. Pflaumer does not recommend modification of Tallicin® E-27 with other polyols. In addition, functional additives should be used in formulating only after thorough testing, including field trials, for compatibility and performance. In the preparation of urethane polymer concrete formulations, Tallicin® E-27 should be used only with Teracure® M-65 as the hardener. Do not dilute with solvents or water.

APPLICATIONS

Polyurethane polymer concrete based on Tallicin® E-27 has excellent flow and leveling characteristics and extended working time for easy application. Urethane polymer concrete flooring systems formulated with Tallicin® E-27 provide excellent performance characteristics including durability and resistance to impact, abrasion, aggressive chemicals, acid attack, and thermal shock.

Urethane polymer concrete based on Tallicin® E-27 is also odorless, non-porous, relatively non-toxic, essentially zero-VOC, and USDA accepted for use in food plant operations making it a perfect solution for food and beverage facilities, chemical plants, and health care centers with extreme hygienic requirements. These conditions require frequent and intensive steam, or hot

water, and chemically aggressive cleaning which can be tolerated by polymer concrete based on Tallicin® E-27.
Urethane polymer concrete coatings based on Tallicin® E-27 provide the following advantages:
· Extraordinary Flow and Leveling for Ease of Application
· Chemical-Resistant Non-Porous Concrete Floor Surfacing up to 1-inch Thick
· One-step Application – No Top Coat Required
· Offers Extended Working Time
· No BPA Compared with Epoxies
Trowel grade heavy duty, solid color cementitious urethane floor mortar (1/4" to 3/8" or thicker) prepared with Tallicin® E-27 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 will not wear smooth in normal wear, becoming a slip hazard. Urethane polymer concrete has a similar coefficient of thermal expansion as traditional concrete allowing movement of the substrate through normal thermal cycling.
Pflaumer has developed a full range of colors for Polyurethane Polymer Concrete, including light to medium to dark grey, tile red, and safety yellow, to name a few.
Urethane Polymer Concrete formulated with Tallicin® E-27 and Teracure® M-65 resists a wide range of organic and inorganic acids, alkalis, amines, salts, and solvents. Freshly applied Urethane Polymer Concrete formulated with Pflaumer Part A and Part B can be open for foot traffic in 10-12 hours, cutting downtime to a minimum. A minimum of 5 days is required for curing to achieve a solvent/chemical-resistant floor. A cove base can be added to protect vertical surfaces for ease of maintenance. The surface is relatively pore-free, non-absorbent, and easy to clean.
Areas of use for Urethane Polymer Concrete include:

Commercial & Institutional

- Cafeterias/restaurants
- Schools/education facilities

Health Care

- Animal holding facilities
- Veterinary clinics
- Health care facilities

Industrial & Manufacturing

- Beverage processing
- Manufacturing, heavy
- Manufacturing, light
- Pharmaceutical production
- Chemical processing
- Food processing

Common Areas

- Aisle ways/corridors
- Kitchens
- Laboratories
- Chemical areas
- Clean rooms
- Cold storage
- Warehouse/distribution

FEATURES

Outstanding Flow and Leveling
Extended Working Time
Built-in Gloss – 85 - 98° – is available
One-Step Installation
Water-Based
3-Component System
Green Chemistry
Zero VOC
No Odor
Up to One-inch Thick
Can Be Applied at <40°F
Can Be Steam Cleaned
Wide Range of Colors
Easy to Clean with Solvents or Detergents

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

Tallicin® E-27 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.

SAFETY, STORAGE, AND HANDLING

Store Tallicin® E-27 in tightly sealed containers. Mix before use to eliminate or reduce separation of the emulsion. Keep storage temperatures above freezing.
Shelf life of product is 6 months from date product is received in original closed containers and stored at room temperature. Consult MSDS before use.

CONTAINER SIZES

5 gallon pails, 55 gallon drums, and 275 gallon totes