



TF 90 POLYASPARTIC

TF 90 Polyaspartic Concrete Coating

Two component, solvent-borne, zero VOC, high solids, concrete coating.

Description

TF 90 Polyaspartic is a fast curing, interior/exterior two-component polyaspartic coating. It has excellent adhesion properties to concrete and has superior mechanical properties. This coating is formulated at 90% solids, designed as a base coat for decorative flooring, or as a standalone top coat. TF 90 is designed with UV stability, chemical and abrasion resistance, hardness, and flexibility.

Where to Use

TF 90 is a versatile, high solids, polyaspartic coating, designed for use on properly prepared concrete substrates. TF 90 has a low level of solvent, and is more suited for indoor use, or areas with poor ventilation. While not limited to specific applications, the following list gives a general guideline for where TF 90 is typically installed.

- Concrete surfaces requiring protection or decoration.
- Garage and warehouse floors
- Retail Stores
- Aircraft Hangars
- Automobile Dealerships
- Loading docks

Features

- Very fast cure times. Various cure speeds available.
- UV Stable
- Easy 1:1 mixing ratios.
- Zero VOCs.
- Extended pot life.
- No primer required.
- Excellent long term wear resistance with a high-build application.
- Easy to apply on horizontal and vertical surfaces.
- High chemical resistance. See chemical resistance chart.
- Interior and exterior applications
- Excellent bond strength to properly prepared concrete. See surface preparation section.

Packaging

Part A - 5 gallon, 2.5 gallon, 1 gallon pails

Part B - 5 gallon, 2.5 gallon, 1 gallon pails

Yield

Approx. 150-250 ft²/gallon

(These figures do not allow for surface porosity, profile or wastage)
Do not apply at a thickness which yields a rate below 100 ft²/gallon.

Shelf Life

Keep lids tightly sealed. This product is very sensitive to moisture, and will eventually harden if the lid is left off for extended periods, or if there is any moisture contamination.

Components A+B: 12 months in original unopened packaging.

Store dry between 38- 86°F.

Protect from freezing. Avoid storing in humid conditions.

Application Temperature

14°F min. / 95°F max.

(For temperatures outside this range, contact Terrafuse USA Inc.)

Product will take longer to cure at low temperatures. High humidity will decrease working time.

Cure Time

Usable pot life 10 - 25 min at 68°F, longer in colder environments.

Cure to light foot traffic 3-5 hrs at 68°F

Cure to full traffic 24-48 hrs at 68°F

Recoat window, maximum 16 hours between coats for proper adhesion.

ASTM Specifications

ASTM D7234	>300 psi
Adhesion to concrete	Concrete Failure
ASTM D7234	447 psi
Adhesion to TF Structural	TF Structural Failure
ASTM D4060	22.5mg loss
Taber Abrasion C17 Wheel; 1000 cycles	
ASTM D412 28 Day Elongation	69%
ASTM D412 28 Day Tensile Stress	2335 psi
ASTM 522 Flexibility Mandrel Bend	Zero failure Highest Flexibility
ASTM 3359 Cross-hatch Adhesion	5B rating Highest Adhesion Rating
ASTM 4366 König Hardness	128
ASTM D4752 MEK 100 double rub	no change
ASTM D202 Slip Coefficient	0.4-0.5
ASTM D202 Slip Coefficient with TF Non Slip Additive	0.9-1
ASTM D523 Gloss 60°	90+

Chemical Resistance

The following testing provides constant exposure of the coating to the chemical, for a period of either 1 or 14 days, at 70°F. For specific applications, the product should be tested under the service conditions. Recommended Conditional means there will be swelling, loss of gloss or discoloration. To avoid negative effects, wash the coating within one hour, being sure to remove the chemical contamination.

R= Recommended

RC= Recommended Conditional

NR= Not recommended

Acetone	RC
Sodium Hydroxide 50%	R
Brake Fluid	R
Sulfuric Acid 40%	RC
Motor Oil	R
Sulfuric Acid 80%	NR
D-limonene	R
Skydrol	RC
Glycol	R
Methanol	R
Mineral Spirits	R
Ethanol	R
30% HCl Acid	NR
NaCl 10%	R
10% HCl Acid	RC
Bleach	RC

Surface Preparation

Concrete surfaces must be clean and sound. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residues frost or any other contaminants which may prohibit a proper bond.

Prepare the surface by using a diamond grinder, shot blaster, or by any other appropriate mechanical means in order to achieve a porous clean surface with a recommended CSP surface profile of 2 or greater, as per ICRI technical guidelines No.03732. Acid washing is not a recommended preparation method. All existing sealers must be removed to allow even penetration and appearance of the coating. It is not recommended to apply TF 90 over a previously coated surface. TF 90 relies on a highly porous surface to ensure adhesion. Most existing coatings are very dense, and will prevent proper adhesion of the TF 90. It is always recommended to apply TF 90 to bare concrete substrates.

Ensure the concrete has a vapor pressure that is at or less than 2 lbs./1000 ft²/24hr. Newly poured concrete may exceed this level, so the user must wait the full 28 days before coating. For information on performing this simple test, and where to obtain the testing equipment, please contact Terrafuse Inc directly.

High vapor pressure can lead to loss of adhesion over time, and it is always recommended to ensure the vapor pressure is within limits.

Mixing

Do not thin with solvents or water. Vigorously shake product before measuring. Measure 1 part A with 1 part B by volume. Avoid any contamination with water.

Working times will be affected by temperature. Try and ensure product is at room temperature before use. Do not store product in hot, or cold environments before using, as this will greatly alter the curing times.

Warmer temperatures and high humidity will give shorter working times.

Measure 1 part A and 1 part B by volume, and add to mix container. Use a low speed hand drill (300-450 rpm) and small mixing paddle suited to the size of mixing container. Avoid high speed mixing. Once mixed, remove from pail and use as soon as practical. Do not mix more than can be applied within 10 -20 minutes.

Do not use any metal oxides for non-slip (i.e., Aluminum Oxide). They will cause the reaction to proceed much faster.

Color Tint Additions

Only add tint supplied by Terrafuse Inc., to ensure compatibility and proper reactivity of the final film. Shake tint before use. When using more than 1 container of tint, it is recommended to mix all containers together prior to use in order to achieve a consistent color. Add 200-250mL of tint to every mixed gallon of product. Do not exceed 300mL of tint per mixed gallon. Never pre-tint any of the components. This will alter the critical 1:1 mix ratios of the Part A and Part B. Always be sure to measure the clear A and B components 1:1 by volume first, then add the tint.

Non-Slip Additive

Only add non-slip additives provided by Terrafuse Inc. to ensure compatibility and proper reactivity of the final film. Add 8 ounces (1 cup) of non-slip additive to 1 gallon of mixed material. More or less additive can be used to achieve desired affect.

Application

TF 90 can be applied with most standard painting equipment, such as squeegees, rollers, and brushes. Be sure to use solvent resistant products when working with TF 90. Ensure adequate ventilation when applying the product.

If overcoating Terrafuse products, make sure to apply within the recoat window (16 hrs). If outside the recoat window or completing repairs, you must mechanically abrade the surface using a diamond grind or abrasive blasting. If extensive mechanical preparation is not done, there is a risk of poor adhesion and delamination of the coating.

Safety

TF 90 contains chemical ingredients that are considered hazardous. Do not get the product on your skin or eyes, and always ensure adequate ventilation. It is not recommended to spray this product without proper training of the safety techniques required. Always read the container label warning and Safety Data Sheet prior to use.

Clean Up

Clean all tools and equipment with acetone, Xylene or other organic solvent. Do not use alcohols. Wash soiled hands and skin thoroughly in hot soapy water. Once hardened, product can only be removed mechanically. Do not get product on skin, eyes, or clothes.

Disclaimer

This Technical Data Sheet was created as a guide for using and installing TF Polyaspartics. While we attempted to address most major areas, this sheet cannot cover the entire scope of installation methods and techniques, and all the beneficial properties of our TF Polyaspartics. Terrafuse USA Inc. encourages you to contact us directly for any clarifications or specific questions about using this product, or any training requirements you may have.

Warranty

Terrafuse USA Inc. warrants that all products are free from manufacturing defects within the specified shelf life. The data provided is believed to be reliable and is offered solely for evaluation. Datasheets are updated on a continuous basis and subject to change. Please ensure you have the most recent datasheet by contacting Terrafuse USA Inc. There is no warranty expressed or implied as related to any issue which is deemed to be a direct result of improper surface preparation or cleaning, application over surfaces which have not reached full cure out, those having excessive rising moisture/vapor or hydrostatic pressure, workmanship or application, or any other cause and effect which is not related to defective material. This warranty is limited to replacement of any Terrafuse USA Inc. product determined to be defective.

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