

Tennant Wall DF

Broadcast Decorative Flake



DESCRIPTION - High build broadcast wall system consisting of high solids, UV-resistant epoxy binder, colored vinyl flake chips and a high solids, three component, aliphatic urethane topcoat.

RECOMMENDED SYSTEM			
Application Steps	Tennant Product	Application Thickness mils [mm]	Coverage Rate ft ² /gal [m ² /3.78 L]
Patching	Eco-MPE™ with Fumed Silica	Varies	Varies
Primer	Eco-MPE	4 [0.10]	400 [37.2]
1 st Broadcast Coat	Eco-PT™ Topcoat	6 [0.15]	267 [24.81]
Decorative Flake	Flake	0.2 lbs [0.09 kg]	1 [0.09]
2 nd Broadcast Coat	Eco-URE™ with Fumed Silica	6 [0.15]	267 [24.81]
Decorative Flake	Flake	0.2 lbs [0.09 kg]	1 [0.09]
Grout Coat	Eco-URE with Fumed Silica	6 [0.15]	267 [24.81]
Topcoat	Eco-HTS™ 100	2.7 [0.07]	600 [55.74]

Other Tennant products may be used for the application steps; contact your Tennant Coatings Specialist. See appropriate product bulletin for application instructions or contact Tennant Technical Support. The alternate system below uses different products only for topcoat.

ALTERNATE SYSTEM			
Application Steps	Tennant Product	Application Thickness mils [mm]	Coverage Rate ft ² /gal [m ² /3.78 L]
Patching	Eco-MPE with Fumed Silica	Varies	Varies
Primer	Eco-MPE	4 [0.10]	400 [37.2]
1 st Broadcast Coat	Eco-PT Topcoat	6 [0.15]	267 [24.81]
Decorative Flake	Flake	0.2 lbs [0.09 kg]	1 [0.09]
2 nd Broadcast Coat	Eco-URE with Fumed Silica	6 [0.15]	267 [24.81]
Decorative Flake	Flake	0.2 lbs [0.09 kg]	1 [0.09]
Grout Coat	Eco-URE with Fumed Silica	6 [0.15]	267 [24.81]
Topcoat	Eco-URE with Fumed Silica	6 [0.15]	267 [24.81]

- **LEED® v4** – Indoor Air Quality credits available.
 - Meets requirements per CDPH-CA Section 01350 Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental chambers Version 1.2.
- **DECORATIVE** – UV-resistant epoxy combined with a variety of flake color blends to yield endless options.
- **DURABLE** – Eco-HTS 100 lasts up to twice as long as standard urethanes; up to four times as long as standard epoxies. It has a satin sheen which maintains a fresh look even in traffic aisles.

ENVIRONMENTALLY & USER FRIENDLY

- Reduced solvent means less evaporation and less waste.
- Low Odor. Can be applied during normal business hours.
- Complies with SCAQMD VOC regulations--<100 g/L.

PRIMARY APPLICATIONS

Schools / Universities	Pharmaceutical Facilities
Laboratories	Healthcare Facilities
Locker Rooms & Showers	Clean Rooms / Labs

TENNANT COATINGS

For First Impressions That Last™

SYSTEM PROPERTIES

Property	Test Method	Results
Abrasion Resistance Taber Abraser CS-17 Taber Abrasion Wheel, 1,000 gram load, 1,000 revolutions.	ASTM D4060	18 mg/loss Result based on independent lab testing of Eco-HTS™.
Adhesion to Substrate / Bond Strength Tested on CMU block, drywall and cement board	ASTM D4541	Substrate failure
Flammability / Rate of Burn, mm/minute	ASTM D635	182
Flexural Strength Test span 1", 0.04 in/min., Specimen size 0.5" x 5"	ASTM D790	4015 psi, 2.00% strain at yield, modulus 192 ksi
Impact Resistance Tested on steel panel	ASTM D2794	Minimum 28 in-lbs with an average of 35.6 in-lbs
Resistance to Yellowing As measured using ASTM D2244 after 1000 consecutive hours UV exposure in QUV.	ASTM G154	<10 increase to yellow units (CIE Δb)
Shore D Hardness	ASTM D2240	80-85 @ 0 sec, 70-85 @ 15 sec
Tensile Strength and Elongation Type 1 die, 0.2 in/min test speed with elongation based on crosshead movement	ASTM D638	2895 psi, 3.07% elongation, modulus 192 ksi
Thermal Shock Resistance 15-thermal shock cycles with system on CMU block, surface chilled with ice water followed by immediate shock with boiling water	Internal Test	No cracking, blistering or loss of adhesion to substrate
Thermal Stability / Heat Resistance Tested on steel panel (5 hours at 158°F)	MIL-D-3134J, Section 4.6.3	No slip/flow, no softening, or change in appearance
Volatile Organic Compound, VOC, lb/gal [g/L]	ASTM D3960	Eco-MPE A+B = 0.41 [49] Eco-PT Topcoat A+B = 0.44 [53] Eco-HTS 100 A+B+C = 0.05 [6] Eco-URE with Fumed Silica A=B = 0.80 [96]
Water Absorption (24-hour immersion)	ASTM D570	1.73%

Results are based on conditions at 77°F [25°C].

CHEMICAL RESISTANCE PROPERTIES (with Eco-HTS 100 Topcoat)

	1 Day	7 Days		1 Day	7 Days
Acids, Inorganic			Solvents (Chlorinated)		
10% Hydrochloric Acid	E	E	Methylene Chloride	P	P
30% Hydrochloric Acid (Muriatic)	E	E	Solvents (Ketones & Esters)		
10% Nitric Acid	E	E	Methyl Ethyl Ketone (MEK)	E	E
50% Phosphoric Acid	E	G	Propylene Glycol Methyl Ether Acetate (PMA)	E	E
37% Sulfuric Acid (Battery Acid)	E	E	Miscellaneous Chemicals		
Acids, Organic			20% Ammonium Nitrate	E	E
10% Acetic Acid	E	E	Brake Fluid	E	E
10% Citric Acid	E	E	Bleach	E	E
Oleic Acid	E	E	Motor Oil (SAE 30)	E	E
Alkalies			Skydrol® 500B	E	E
10% Ammonium Hydroxide	E	E	Skydrol® LD4	E	E
50% Sodium Hydroxide	E	E	20% Sodium Chloride	E	E
Solvents (Alcohols)			1% Tide® Laundry Soap	E	E
Ethylene Glycol (Antifreeze)	E	E	10% Trisodium Phosphate	E	E
Isopropyl Alcohol	E	E	Coffee	E	E
Methanol	E	E	Coke®	E	E
Solvents (Aliphatic)			Ketchup	E	E
d-Limonene	E	E	Mustard	G*	G*
Jet Fuel - JP-4	E	E	Red Wine	E	G*
Gasoline	E	E	3M™ DuraPrep™	G*	F
Mineral Spirits	E	E	Purdue Betadine Solution	G*	G*
Solvents (Aromatic)			Registered trademarks: Tide® of Proctor and Gamble, Skydrol® of Solutia, Inc., Coke® of Coca-Cola Company and 3M™ DuraPrep™.		
Xylene	E	E			

Results are based on 1-day and 7-day spot testing. Coating cured 2 weeks prior to testing.

Legend:

E - Excellent (No Adverse Effect) - Recommended.

F - Fair (Moderate Adverse Effect) - Not recommended.

G - Good (Limited Adverse Effect) - Use for short-term exposure only.

P - Poor (Unsatisfactory) - Little or no resistance to chemical.

*Only adverse effect was staining.

NOTE: Reduced chemical resistance and staining is possible in pigmented versions of the system.

GENERAL PRODUCT INFORMATION

STORAGE:	Materials should be stored indoors between 65°F [18°C] and 90°F [32°C].			
SHELF LIFE:	One year from date of manufacture.			
PACKAGING OPTIONS / PART NUMBERS:	Eco-MPE 3.0 gallons / 370503 15.0 gallons / 370650	Eco-PT Topcoat 3.0 gallons / 370516	Eco-URE 15.0 gallons / 9003322 Fumed Silica (Cab-O-Sil®) 10 lbs. / 370405	Eco-HTS 100 1.09 gallons / 9002617 5.5 gallons / 9002621
STANDARD FLAKE BLENDS / SOLIDS 50# BOX:	For part numbers, refer to Coatings Price List or contact Tennant Customer Service for assistance. Custom blends are also available.			
OPTIONS:	Cove: A seamless, smooth transition can be created between the flooring and wall. Call Technical Support for assistance or see bulletin on Cove Installation.			
LIMITATIONS:	Contamination (Fisheyes): Product may fisheye if oil, silicones, mold release agents or other contaminants are present.			

IMPORTANT: READ AND FOLLOW ALL PRECAUTIONS AND INSTRUCTIONS BEFORE PROCEEDING.

**PLEASE SEE SAFETY DATA SHEET (SDS) FOR HANDLING PROCEDURES.
USE PRODUCT AS DIRECTED.
KEEP OUT OF THE REACH OF CHILDREN.**

PRELIMINARY WALL INSPECTIONS

SUITABLE SUBSTRATES: Concrete walls, concrete masonry units (CMU), drywall and cement board. **NOTE:** For other substrates, contact Tennant Technical Support.

CHECK THE SUBSTRATE: Substrate must be structurally sound and free of paint, dust or other sealer. If you suspect that the wall has been previously sealed, it must be removed prior to application.

CHECK FOR MOISTURE: Concrete must be dry before application of this coating system. **NOTE:** Do not coat any walls that have chronic moisture issues which may void the warranty.

CHECK THE TEMPERATURE AND HUMIDITY: Wall temperature and materials should be between 65°F (18°C) and 90°F (32°C). Humidity must be less than 80%. **DO NOT** coat unless wall temperature is more than five degrees over the current, local dew point.

APPLICATION EQUIPMENT

• Protective clothing	• 6" Flat squeegee (window)
• Jiffy® mixer blade [Tennant Part No. 08643-1 (1 gal) or 08643-5 (5 gal)]	• Putty knife
• Slow speed drill (500 rpm or less)	• Roller assembly (9")
• Application roller tray	• Medium (3/8") nap roller
• Step ladder	

ASSEMBLE EQUIPMENT: Due to the limited pot life of the material, all application equipment, etc. should be ready for immediate use. (Clean roller with tape to remove any residual lint.)

PREPARATION

Substrate finish will affect final appearance of wall coating. (A pre-construction meeting is recommended to determine surface finish.) Ensure wall is free of surface dirt, grease, oil and contaminants.

CONCRETE WALLS: Grind to level any rough areas or remove paint/sealers on the wall. Alternate prep for bare walls: Etch, rinse and allow to dry.

CONCRETE MASONRY UNITS (CMU): Grind to level any rough areas or remove paint/sealers on the wall.

DRYWALL AND CEMENT BOARD: Finished to a level #4 - #5 finish and free of paint.

APPLICATION – PATCHING – ECO-MPE WITH FUMED SILICA

NOTE: Patch all depressions, divots and stress cracks in substrate with thickened epoxy to reduce the ability to see the defect.

ALL CRACKS, HOLES AND TOOL JOINTS MAY BE FILLED prior to base coat application. Use Eco-MPE with a thickening agent such as fumed silica to a self-supporting consistency.

PREMIX PART A. ADD ONE PART ECO-MPE PART B TO TWO PARTS ECO-MPE PART A (by volume). POTLIFE: Mix only enough material which can be applied within 20 minutes. **NOTE:** Use two measuring containers for the parts that are poured into a separate pail for mixing. **ADD AND MIX THE FUMED SILICA** to a self-supporting consistency.

MIX FOR 2-3 MINUTES using a Jiffy® mixer blade.

within the work time (time between the addition of Part B to Part A and the completion of all application actions). Check the following chart for work times at various temperatures. For smaller quantities, use 2 parts A to 1 part B by volume.

APPROXIMATE WORK TIME (minutes) - °F (°C) - 65 (18.3) 70 (21.1) 75 (23.9) 80 (26.7) 90 (32.2)
40 30 25 20 15

MIX FOR 2 MINUTES using a Jiffy® mixer blade and slow speed drill. (Failure to do so could result in lower/diminished coating properties.)

IMMEDIATELY POUR ALL OF THE MIXED MATERIAL into an application tray. **DIP 3/8" (10 mm) ROLLER AND APPLY ECO-URE** with fumed silica at 6 mils (0.15 mm). **NOTE:** *If sagging or running occurs, extend coverage rate.*

APPLICATION – DECORATIVE FLAKE

REPEAT STEPS used for application of the broadcast flake.

APPLICATION – GROUT COAT – ECO-URE WITH FUMED SILICA

Tennant Wall DF can be sealed with a standard epoxy for applications that do not require light stability; however, for best results over the life of the broadcast wall, it should be sealed with an ultraviolet resistant epoxy. **NOTE:** *DO NOT use Eco-RCE™ to seal broadcast flake as this epoxy will yellow/amber more quickly.*

The grout coating should be applied in multiple thin coats. The intent is to fill in any voids without leaving excessive milage on the surface.

COVERAGE RATE: One gallon (3.78 litres) of Eco-URE with fumed silica will cover: 267 ft² (24.81 m²) at 6 mils (0.15 mm) wet/dry film.

NOTE: *Applying Eco-URE with fumed silica greater than 6 mils (0.15 mm) may result in sagging/dripping.*

REPEAT STEPS used for mixing and spreading of the second broadcast coat.

Eco-URE with fumed silica must be topcoated with Eco-HTS 100 at temperatures of 65-90°F (18-32°C) within 24 hours.

ALLOW SYSTEM TO CURE 8-10 hours at 75°F (24°C).

APPLICATION – TOPCOAT – ECO-HTS 100

TOPCOAT: Use Eco-HTS 100 for the topcoat.

COVERAGE RATE: A gallon (3.78 litres) of Eco-HTS 100 will cover: 600 ft² (55.74 m²) at 2.7 mils (0.07 mm) wet/dry film.

NOTE: *Do not apply less than or greater than 600 ft² (55.74 m²) per gallon.*

PREMIX PART A FOR 3 MINUTES USING A JIFFY® MIXER BLADE with slow speed drill. **POTLIFE:** *Mix only enough material which can be used in a two-hour period.* **NOTE:** *Once opened, this material cannot be resealed for later use.*

POUR PART C INTO PART A while mixing.

CONTINUE TO MIX AND ADD PART B.

MIX FOR 3 MINUTES using a Jiffy® mixer blade and slow speed drill. Pour into application tray.

IMMEDIATELY POUR ALL OF THE MIXED MATERIAL into an application tray. **DIP 3/8" (10 mm) ROLLER, LIGHTLY ROLL OUT EXCESS AND SPREAD THE ECO-HTS 100** at 2.7 mils (0.07 mm) evenly with V-shaped cross passes. For proper appearance and development of physical properties, it is crucial that material is not applied above or below this thickness.

MAKE SURE THE WALL HAS JUST ENOUGH COATING TO COVER EVENLY. Excess material could cause the wall coating to blister, especially in high humidity. Insufficient material will cause the wall coating to look non-uniform.

LEVEL THE AREA with straight passes that cross the initial material paths. These final strokes will reduce roller marks. If the appearance is not satisfactory, reroll the area.

REMIX THE MATERIAL in the tray occasionally (with the roller) to prevent settling of the Part C (filler).

IF SAGGING OCCURS, Eco-HTS 100 may be rerolled within 30 minutes.

ALLOW COATING TO DRY 24 HOURS at 75°F (24°C), 50% relative humidity. Allow more time at low temperatures, low humidity. Full coating properties take 14 days to develop.

TECHNICAL SUPPORT

For any preparation or application questions, please call Tennant technical support at 800-228-4943, option 3 (US & Canada), 800-832-8935 (International).

DISPOSAL

Dispose of all excess material, packaging and other waste in accordance with federal, state and local regulations.

MAINTENANCE GUIDELINES

Allow coating to cure at least one week before cleaning by mechanical means.

Care: Proper maintenance will increase the life and help maintain the appearance of your new Tennant floor coating. Remove splash quickly as certain chemicals may stain and could possibly permanently damage the finish.

Use soft nylon brushes on your new coating. Any brush more abrasive than a soft nylon can cause premature loss of gloss.

Detergent: Tennant has a full range of detergents--general purpose to heavy duty--for your cleaning needs. For assistance in determining which detergent is right for your facility or for additional technical information call: 800-228-4943, option 3 (US & Canada), 800-832-8935 (International).

Caution: Avoid scratching or gouging the surface.

Repair: Repair gouges or scratches or chip outs as soon as possible to prevent moisture or chemical contamination.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Tennant offers a limited warranty on all products. Please see the Tennant Coatings Limited Product Warranty Statement on our website at www.tennantcoatings.com/warranty. Please contact the Tennant Coatings Technical Support team for additional questions at 800-228-4943, option 3 (US & Canada), 800-832-8935 (International).