

# Tennant CRU

## Gloss Urethane Topcoat



**DESCRIPTION** – Clear, two-component, light-stable and chemical resistant urethane with a gloss appearance applied over an epoxy primer or used to recoat an existing epoxy or urethane floor.

### ENVIRONMENTALLY & USER FRIENDLY

- **INCREASED APPEARANCE** – Light stable / aliphatic over the expected life of the coating. Available in a variety of colors.
- **HIGH CHEMICAL RESISTANCE** – Tennant CRU withstands harsh industrial traffic, Skydrol®, jet fuels and other chemicals.
- **SAFER WORK ENVIRONMENT** – High-gloss finish increases brightness and light reflectivity.

### PRIMARY APPLICATIONS

Hangar Floor	Manufacturing
Automotive Manufacturing	Assembly / Production
Mechanical Room	Packaging
Clean Room / Lab	

### APPLICATION COVERAGE RATE

Coverage Rate, ft <sup>2</sup> /gal [m <sup>2</sup> /3.78 L]	500 [46.45]
Application Thickness, wet mils [mm]	3.0 [0.08]

### MATERIAL PROPERTIES (LIQUID)

Property	Test Method	Results
Percent Solids, by wt [by vol]	ASTM D2369	A+B = 72.20 [67.87]
Volatile Organic Compound, VOC, lb/gal [g/L]	ASTM D3960	A+B = 2.03 [243]

### CURED COATING PROPERTIES (DRY FILM)

Property	Test Method	Results
Abrasion Resistance, mg/loss Taber Abraser CS-17 Taber Abrasion Wheel, 1,000 gram load, 1,000 revolutions	ASTM D4060	37-39
Coefficient of Friction – COF, James Friction Tester	ASTM D2047	0.50
Coefficient of Friction, Wet Static, BOT 3000	ANSI/NFSI B101.1	0.99
Flammability, mm/min	ASTM D635	50
König Hardness 3 mil, [0.08 mm] film)	ASTM D4366	140-150
Resistance to Yellowing As measured using ASTM D2244 after 1000 consecutive hours UV exposure in QUV.	ASTM G154	<10 increase of yellow units (CIE Lab Δb) if pigmented topcoat
Tensile Strength, psi [MPa] (resin only)	ASTM D2370	7,000-9000 (48.26-62.05)
Percent Elongation (resin only)	ASTM D2370	9-10
Thermal Stability / Heat Resistance	MIL-D3134J Section 4.6.3	No slip/flow, softening or change in appearance
Water Absorption, 24-hour immersion	ASTM C413	0.2% weight increase

Results are based on conditions at 77°F (25°C)

### GENERAL PRODUCT INFORMATION

<b>STORAGE:</b>	Materials should be stored indoors between 65°F [18°C] and 90°F [32°C].
<b>SHELF LIFE:</b>	One year from date of manufacture.
<b>PACKAGING OPTIONS /</b>	2.54 gallons (9.60 litres) / 9018504
<b>PART NUMBERS:</b>	A = 9012542 – 2.16 gallons (816 litres)   B = 9018456 – 0.38 gallon (1.44 litres)
<b>OPTIONS:</b>	<b>Colors in Tennant CRU:</b> All Standard Colorants except for Medium Gray, Battleship Gray and Regal Blue may be added to Tennant CRU. Use Colorants at a rate of two units per 2.54 gallons (9.60 litres) mix. Refer to Color Selection Guide or consult Tennant Technical Support.
<b>LIMITATIONS:</b>	<b>Contamination (Fisheyes):</b> Product may fisheye if oil, silicones, mold release agents or other contaminants are present. <b>Chemical Resistance / Staining:</b> Reduced chemical resistance and staining is possible in pigmented versions of the system.

## CHEMICAL RESISTANCE PROPERTIES

	1/7 Day(s)	Splash/Spill		1/7 Day(s)	Splash/Spill
<b>Acids, Inorganic</b>			<b>Solvents (Aromatic)</b>		
10% Hydrochloric Acid	E / E	E	Xylene	E / E	E
30% Hydrochloric Acid (Muriatic)	F / F	F	<b>Solvents (Chlorinated)</b>		
10% Nitric Acid	G / P	F	Methylene Chloride	P / P	E
50% Phosphoric Acid	G / G	G	<b>Solvents (Ketones &amp; Esters)</b>		
37% Sulfuric Acid (Battery Acid)	E / G	E	Methyl Ethyl Ketone (MEK)	F / F	E
<b>Acids, Organic</b>			Propylene Glycol Methyl Ether Acetate (PMA)	E / G	E
10% Acetic Acid	E / G	E	<b>Miscellaneous Chemicals</b>		
10% Citric Acid	E / E	E	20% Ammonium Nitrate	E / E	E
Oleic Acid	E / E	E	Brake Fluid	E / E	E
<b>Alkalies</b>			Bleach	E / E	E
10% Ammonium Hydroxide	E / E	E	Motor Oil (SAE 30)	E / E	E
50% Sodium Hydroxide	E / E	E	Skydrol® 500B	E / E	E
<b>Solvents (Alcohols)</b>			Skydrol® LD4	E / E	E
Ethylene Glycol (Antifreeze)	E / E	E	20% Sodium Chloride	E / E	E
Isopropyl Alcohol	G / G	E	1% Tide® Laundry Soap	E / E	E
Methanol	G / F	E	10% Trisodium Phosphate	E / E	E
<b>Solvents (Aliphatic)</b>			Coffee	E / E	E
d-Limonene	E / E	E	Coke®	E / E	E
Jet Fuel - JP-4	E / E	E	Ketchup	E / E	E
Jet Fuel, Philip, Blue Aviation	E / E	E	Mustard	G* / G*	G*
Unleaded Gasoline	E / E	E	Red Wine	E / G*	E
Unleaded Gasoline + Ethanol	E / G	E	3M™ DuraPrep™	G* / F	G*
Mineral Spirits	E / E	E	Purdue Betadine Solution	G* / G*	G*

Registered trademarks: Tide® of Proctor and Gamble, Skydrol® of Solutia, Inc., Coke® of Coca-Cola Company and 3M™ DuraPrep™.

ASTM D1308 Test Method 3.1.1 spot test, covered. Results are based on 1-day and 7-day. 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.

**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 FLOOR INSPECTIONS

**CHECK THE TEMPERATURE AND HUMIDITY:** Floor 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 floor temperature is more than five degrees over the current, local dew point.

**BARE CONCRETE**

**CHECK THE CONCRETE:** Concrete must be structurally sound and free of curing membrane, paint and/or other sealer. If you suspect that the concrete has been previously sealed, call Tennant Company Tech Support for further instructions.

**CHECK FOR MOISTURE:** Concrete must be dry before application of this floor coating material. Concrete moisture testing must occur. In-situ relative humidity testing is recommended. Readings must be below 75% relative internal concrete humidity. Test methods can be purchased at [www.astm.org](http://www.astm.org), see F2170, or follow manufacturer's instructions. If moisture issues are present, the use of a moisture mitigation system may be a consideration. Please call Tennant Company Technical Support for further information / instructions.

**NOTE:** Although moisture testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination. Additional testing may be necessary to determine the vapor barrier and any contamination.

### APPLICATION EQUIPMENT

<ul style="list-style-type: none"> <li>Protective clothing</li> <li>Jiffy® mixer blade [Tennant Part No. 08643-1 (1 gal) or 08643-5 (5 gal)]</li> <li>Slow speed drill (500 rpm or less)</li> </ul>	<ul style="list-style-type: none"> <li>Roller assembly (18")</li> <li>Medium (3/8") nap roller</li> <li>Application tray</li> </ul>
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• 18-24" (457.2-609.6 mm) Flat rubber squeegee	• Disc machine
• 18-24" 1/16" Notched rubber squeegee	• 120 grit sandpaper
• Spiked shoes	

**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.)

## BARE CONCRETE APPLICATION

**TENNANT CRU MUST BE APPLIED OVER A TENNANT 100% SOLIDS EPOXY PRIMER.** (See appropriate epoxy product bulletin for application instructions.)

## APPLICATION – TOPCOAT – TENNANT CRU

**PREMIX TENNANT CRU 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.*

**COLORS:** Premix Tennant Colorants before adding to Tennant CRU to ensure uniform color. Add two units of colorant to 2.16 gallons (8.16 litres) Tennant CRU A.

**ADD TENNANT CRU PART B** while mixing.

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

**APPLY TENNANT CRU** at the rate of 500 ft<sup>2</sup>/gallon (46.45 m<sup>2</sup>/3.78 litres) with a 3/8" nap roller. For proper appearance and development of physical properties, it is crucial that material is not applied above or below this rate. Dip the roller in the coating and lightly roll out excess in the application tray. Apply two 8-10 foot (2.4-3.0 meter) long paths on the concrete, making one stroke left to right and one right to left. Rewet the roller and apply two more paths adjacent to the first pair. Rewet roller and apply a third pair adjacent to the second.

**SPREAD THE MATERIAL** evenly with V-shaped cross passes.

**MAKE SURE THE FLOOR HAS JUST ENOUGH COATING TO COVER EVENLY.** Excess material could cause the floor to blister, especially in high humidity. Insufficient material will cause the floor 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.

**ALLOW COATING TO DRY 24 HOURS** at 75°F (24°C), 50% relative humidity before opening to light traffic. Allow more time at low temperatures, low humidity or for heavier traffic. 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 floor coating to cure at least one week before cleaning by mechanical means (e.g., sweeper, scrubber, disc machine).**

**Care:** Proper maintenance will increase the life and help maintain the appearance of your new Tennant floor coating. Sweep and scrub your new coating regularly, as dirt and dust are abrasive and can quickly dull the finish, decreasing the life of your coating. Remove spills quickly as certain chemicals may stain and could possibly permanently damage the finish.

**Use soft nylon brushes or white pads on your new floor coating. Any brush more abrasive than a soft nylon or white pad 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. All floor coatings will scratch if heavy objects are dragged across the surface.

Do not drop heavy or pointed items on the floor as this may causing chipping or concrete popouts in the case of a weak cap.

Rubber tires can permanently stain the floor coating from plasticizer migration. Plexiglass® between the tire and the floor coating can prevent discoloration.

Rubber burns from quick stops and starts can heat the coating to its softening temperature, causing permanent marking.

**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](http://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).