

Answers to Common Questions Concerning Drip Pad Maintenance

Douglass Moody, Director, Technical Support
TradeWinds International, Inc.

- 1.) Q: What is the advantage of using **KrystalSeal™** Penetrating Sealer on a drip pad, rather than using polyurethane or epoxy coating materials such as **Plasite™**, **TK-100™**, **KrystalKote™**, **Ceramkote™** or other surface coatings?
A: EPA-approved surface coating materials work very well as chemical-resistant barriers for concrete surfaces. Unfortunately, coatings can be easily damaged with the everyday work tools used on drip pads, such as forklifts, skids, etc., and a physically-compromised surface coating must be repaired immediately. Damage to a **KrystalSeal™** protected drip pad would mean gouge or crack damage to the concrete itself. Such heavy damage is very unlikely to occur through normal use of forklifts and standard tools-of-the-trade. Furthermore, **KrystalSeal™** is classified as "self-healing", which means additional applications can be made with little or no surface preparation, to quickly and easily repair any damage.
- 2.) Q: How efficient is **KrystalSeal™** as a chemical barrier for use with lumber treating chemicals, such as **CCA**?
A: Chemical Specialties, Inc., a major manufacturer of **CCA** and other wood treating chemicals, sponsored specific field and laboratory testing of three leading concrete sealers. Refer to the Law Engineering and Environmental Services report entitled "*Law Project No. 224-03309.03: Report on Concrete Sealer Testing*".
- 3.) Q: Can **KrystalSeal™** or **TK-100™** be applied in cold weather or chemically accelerated to shorten cure time?
A: Yes. Refer to the TradeWinds document: "*Inclement Weather Application of KrystalSeal™ & TK-100™*".
- 4.) Q: How is the coverage of **KrystalSeal™** determined?
A: The porosity of your drip pad concrete will determine the coverage of **KrystalSeal™**. Porosity is dictated by the density and surface finish of the concrete. Concrete with average density and a normal "sidewalk" finish, will yield @ 137 sq.ft./gal. Low density and/or "rough" finished concrete will yield @ 125 sq.ft./gal. High density and/or "patio-smooth" finished concrete will yield @ 150 sq.ft./gal. Most drip pads can be estimated at 137 sq.ft./gal. coverage.
- 5.) Q: How does **KrystalSeal™** differ from **Pena-Seal™**?
A: **KrystalSeal™** and the original **Pena-Seal™** are absolutely identical. The name change is for marketing purposes only, and does not reflect any physical or formulation changes what-so-ever.
- 6.) Q: How economical is **KrystalSeal™**?
A: Based on 137 sq.ft./gallon and 1999 prices:
 - a.) A 5,000 sq.ft. drip pad requires 37-gallons, yielding @ 65¢/sq.ft.;
 - b.) A 10,000 sq.ft. drip pad requires 73-gallons, yielding @ 61¢/sq.ft.;
 - c.) A 20,000 sq.ft. drip pad requires 149-gallons, yielding @ 59¢/sq.ft.
- 7.) Q: How does **TK-100™** differ from **KrystalKote™**?
A: **TK-100™** is a two component, hybrid-polymeric epoxy coating designed for used on concrete flooring of warehouses; electrical, water chilling, air conditioning, compressor rooms, etc.; as well as drip pads; ramp ways; and pressure-cylinder areas. **TK-100™** is extremely chemical-resistant, highly durable, exceptionally flexible and impact-resistant. **TK-100™** is a "1:1" volume mix, which means equal volume amounts of Base and Curing Agent are mixed together for application. Epoxy-base **TK-100™** is more economical than aliphatic polyurethanes, like **KrystalKote™**, yet offers all of the chemical-resistant characteristics vital to wood treating facilities. **TK-100™** is also classified as "self-healing", requiring minimal re-coat preparation.
- 8.) Q: Is there an chemical "Accelerator" for **TK-100™**?
A: Yes. For proper use, refer to the Chemical Acceleration chart for **TK-100™**.
- 9.) Q: What is the optimal Dry Film Thickness (DFT) for **TK-100™** on vertical and horizontal surfaces?
A: For vertical surfaces, a 3 to 4-mil DFT is achieved with a 4 to 5-mil WFT application. Optimal horizontal DFT is determined by surface usage: Normal foot traffic is 7 to 8-mil DFT; moderate vehicle traffic is 10 to 12-mil DFT, and heavy vehicle traffic areas should be 14 to 16-mil DFT.

- 10.) Q: What is the maximum Wet Film Thickness (WFT) of **TK-100™** or non-slip **TK-Tred™** that can be applied to a horizontal surface? What is the maximum WFT to a vertical surface, without sagging?
A: Max WFT for horizontal surfaces is @ 7-mil per coat. Max WFT for vertical surfaces is @ 5-mil. Organic **TexShel™**, or other aggregate, can be broadcast immediately following the first application, but must have a minimal 2-mil overcoat to lock-in the aggregate. Optimal "puckering" of **TK-Tred™-100™** is achieved with consecutive 2 to 3-mil WFT applications. Heavier WFT of **TK-Tred™-100™** results in minimal puckering.
- 11.) Q: Will cured **TK-100™** or **TK-Tred™-100™** withstand stationary wheel turning common to forklift use?
A: Yes, both **TK-100™** and **TK-Tred™-100™** exhibit excellent adhesion and abrasion-resistance, very similar to **KrystalKote™** and **KrystalTred™**.
- 12.) Q: What are re-coat times for **TK-100™**?
A: Minimum re-coat time for **TK-100™** is 2 to 3-hours; optimum re-coat time is 10 to 12-hours. There is no maximum re-coat time: **TK-100™** can be re-coated at any time, with minimal surface preparation.
- 13.) Q: Can an aggregate be added to **KrystalSeal™** or **TK-100™** to enhance forklift traction in slippery or sloped areas?
A: **TexShel™**, an organic aggregate made of walnut shells, peach and apricot pits, can be broadcast directly into freshly applied **KrystalSeal™** to provide an excellent, highly durable long-lasting **non-slip** surface. Several grits of **TexShel™** are available, but that the best mesh size for drip pad and inclined ramp use is #4; and #3 at the largest. We believe the larger aggregates will break loose much more easily when subjected to the extreme stress of forklift tires under power. Instead of a second coat of **KrystalSeal™** to "lock-in" the aggregate, **TWI** suggests applying a coat of **TK-100™**, which is less expensive than **KrystalSeal™**, and can be applied 1 to 2-hours after **KrystalSeal™** with **TexShel™**. **TK-100™** and **KrystalSeal™** are completely compatible, so they will cure simultaneously. **TK-100™** can be chemically puckered, just like **KrystalKote™**, to provide an even better **non-slip** surface. **TK-100™** is custom tintable, and is easily repaired by over coating.
- 14.) Q: Can I seal asphalt ramp ways between the steel rail line and the concrete drip pad?
A: Yes. Solvent-sensitive asphalt must first be protected before an EPA-approved chemical-resistant coatings, such as **TK-100™** or **KrystalKote™**, is applied. **BarrierKote™** is a non-solvent intermediate coating, used to physically protect asphalt from the solvents present in surface topcoats.
- 15.) Q: What is the elapse time between consecutive coatings of **BarrierKote™** and **TK™-100**?
A: Optimum elapse time is 24-hours; minimum elapse time is 12-hours.
- 16.) Q: Can I use **TWI-500™ S/L** Expansion Joint Sealant between the asphalt-to-steel rail joint?
A: Yes, but the inside asphalt edge of the joint, and several surfaces-inches back, must be coated with **BarrierKote™**, to assure absolute adhesion with **TWI-500™ S/L** Expansion Joint Sealant. Both **BarrierKote™** and **TWI-500™** can be applied to damp asphalt, but adhesion is maximized by the absence of moisture.
- 17.) Q: Is an accelerator available for **BarrierKote™** and **TWI-500™ S/L**?
A: No accelerator is available for either **BarrierKote™** or **TWI-500™ S/L**, but prior to mixing, both can be heated to 80 - 85°F to enhance cure time. As soon as **BarrierKote™** is dry to the touch (Tack-Free), **TWI-500™** can be applied to **BarrierKote™**. At 65°F, this usually about 2-hours after the application, and at 40°F, the elapse time is at least 4-hours after application of **BarrierKote™**.
- 18.) Q: Are there any contradictions for Boric Acid-based DRICON® Fire Retardant with **KrystalSeal™**, **TK-100™**, **KrystalKote™**, or **TWI-500™ S/L** Expansion Joint Sealant?
A: No, these **TWI** products are designed to withstand all wood treating chemicals, even in concentrated forms.
- 19.) Q: What coating is recommended for primary or secondary containment pits for creosote or other preservatives?
A: **TK-100™** is designed for such chemical-resistant duty, and can be applied directly to cleaned concrete. For heavily creosote-stained concrete, which may bleed through a solvent-based topcoat, an intermediate 3-mil coat of water-based **BarrierKote™** should be applied at least 24-hours prior to two 5-mil coats of **TK-100™**.
- 20.) Q: How soon can either **KrystalSeal™** or **TK-100™** be applied to standard or High/Early Strength concrete?
A: **KrystalSeal™** can be applied to any concrete after a minimum of 7-days post concrete pour. Coatings, such as **KrystalKote™** or **TK-100™**, can be applied after a minimum of 14-days post pour, but allowing a full 28-days will yield best results for all coatings & sealants. These times are determined by the moisture content of green concrete.