

I. Substrate Inspection/ Preparation:

A. General

1. All building permits are required by local authorities shall be produced by contractor, owner, and/or their agent.
2. All inspections, as required by local building authorities, shall be the responsibility of the contractor, owner, and/or their agent.
3. Verify all necessary tools and PPE according to the various SDS Sheets are on the job site.
4. For application instructions in Inclement Weather areas, refer to Waterproof Deck Coating –Pli-Dek System Application Instructions PD-120-IW.

B. Traditional Plywood Substrates

1. Plywood shall be a minimum of 16mm, 5/8" (3/4" recommended) sound and dry, exposure 1 sheathing, and have a recommended span between supports of 410mm (16") on center. All plywood shall be securely fastened to the supports with screws or ring shank nails spaced in accordance with APA guidelines and Building Code requirements. **Contact Pli-Dek, LLC. for installation approvals over OSB, pressure treated, or marine grade, etc. substrates.
2. Maximum deflection of the deck shall be less than L/360th of the span.
3. Framing or blocking must support all plywood edges, except as per APA guidelines; blocking is not required when tongue and groove plywood is used.
4. The plywood surface shall be clean, dry, and free of dirt, dust, oil, paint, or any other contaminants that may impair adhesion.
5. All plywood seams shall be staggered and gapped 3.2mm (1/8"). NOTE: If plywood is butted tightly, the seams shall be saw cut to provide a 3.2mm (1/8") gap between sheets, except tongue & groove. Ensure that the tongue and groove section of the plywood is installed to allow for expansion.
6. All adjacent edges of the plywood sheets shall not be more than 0.78mm (1/32") out of plane (i.e. above or below each other).
7. Plywood should be installed with a 6.4mm/.3m (1/4") per linear foot slope. Decks with parapet enclosures must be sloped to a drain or scupper.
8. Any variation from the framing specifications mentioned in Section I, requires written approval and system recommendations from Pli-Dek, LLC.

C. Flashing

1. The following items that involve flashing must be completed or adhered to:
 - a) Flashing shall be minimum 26 gauge galvanized, bonderized sheet metal. (Contact Pli-Dek for Alternatives).
 - b) Ensure ALL metal flashing is wiped clean with a solvent to ensure oils are completely removed from the Surface. Dissimilar metals, such as Copper and galvanized, should NEVER come in direct contact with each other, please contact Pli-Dek for instructions on dissimilar metals.

- c) Openings shall be flashed before installation of doors and sliders. NOTE: If doors or sliders have been installed without proper flashing, we recommend they be removed, and proper flashing installed.
- d) All penetrations, including posts, or other objects that protrude through the deck shall be installed and flashed prior to applying the Pli-Dek materials.
- e) All decks with a parapet surround require a scupper not less than 76mm (3") wide, and 100mm (4") high, spaced a maximum of 3.65m (12') apart. Any scuppers or overflows shall be installed and flashed prior to applying Pli-Dek materials.
- f) All deck drains must be flanged, and properly installed to a proper depth. NOTE: Brass drains with a sheet metal flange are recommended. Pli-Dek requires a galvanized or stainless-steel drain as per Drain Detail, PD-24, on all plywood installations. Please contact Pli-Dek for help in acquiring these drains. Do not use plastic, cast iron, or shower drains. If copper drains are used, please contact Pli-Dek for instructions on dissimilar metals. The use of plastic deck drains will void warranty.
- g) Gravel stops shall have a maximum ground dimension of 3/16".
- h) All flashing must be attached to the substrate with galvanized ring shank nails a minimum 25mm (1") length.
- i) All flashing shall overlap adjacent pieces, a minimum of 100mm (4"), installed not to "buck" water, and be caulked horizontally and vertically with a Polyurethane Sealant per ASTM C 920, such as Sika-1a or 221 or equivalent, at the furthest edge with a 3/4" bead of sealant between any pieces of flashing that adjoin. (Surface caulking is NOT acceptable).
- j) (Optional) All vertical flashing and door pans shall be coated with Fiberglass and PD Resin or PD Flash Coat and Flash Coat Seam Tape or self-adhering drywall mesh tape, GU80-1 Top Coat, and GS88 Pigmented Sealer at the time of applying each product. Door pans do not need Top Coat and Sealer.
- k) Deck/Wall interfaces and all stairs must be flashed.
- l) When copper flashing/drains are used, ensure that all galvanized metal; such as, nails, staples, lath, drains, etc. does not come into contact with copper (do not allow any dissimilar metals to come in contact with each other). The contact of the two dissimilar metals will create rust and corrosion (electrolysis). **Contact Pli-Dek, LLC for additional details and recommendations.
- m) Contact Pli-Dek, LLC for written approval on flashing details that vary or are not included in Pli-Dek Details.

D. Sloping

1. It's the General Contractor's, his representative's, or individual owner's responsibility to assure adequate drainage.
2. All plywood substrates are recommended to be sloped 1/4" per foot.

3. If auxiliary slope is required, Slope Mix - DP may be applied. (See Sloping Application Instructions SP-121 for complete details and limitations). When this type of sloping will not accommodate the problem, then drains become a necessity.
4. Pli-Dek requires a galvanized or stainless-steel drain as per Drain Detail, PD-24, on all plywood installations. Please contact Pli-Dek for help in acquiring these drains. Do not use plastic, cast iron, or shower drains. If copper drains are used, please contact Pli-Dek for instructions on dissimilar metals.
5. The alternatives available for proper drainage are the responsibility of the General Contractor. Contact Pli-Dek, LLC. for complete details.
6. Additional sloping required on a project should be confirmed through a written proposal given by the trained applicator prior to the commencement of work.

II. Mixing Instructions:

A. GU80-1 Gray Base {Base Coat}

1. Pour 3.8L (1 gallon) of GU80-1 Liquid Admixture into a clean 19L (5 gallon) plastic container.
2. Add one 21kg (46lb.) bag of GU80-1 Gray Base and mix thoroughly for 3 to 4 minutes. Use a Wind-lock B-M1 mixing blade, or equivalent, powered by a 13mm (1/2") variable speed drill, capable of producing 1000 RPMs. TIP: In areas subject to extremely dry and/or hot climates, it may be necessary to add water (up to .47L [1 pint] per mix). To avoid flash drying, it may be necessary to chill the GU80-1 Liquid Admixture before mixing. Proper PPE should be worn when working with all Pli-Dek products.

B. GU80-1 Top Coat {Screed Coat & Knockdown Texture}

1. Pour 4.75L (1.25 gallons) of GU80-1 Liquid Admixture into a clean 19L (5-gallon) plastic container.
2. Add one 21kg (46 lbs.) bag of GU80-1 Top Coat powder. Mix thoroughly for 3 to 4 minutes, with a Wind-lock B-M1 mixing blade, or equivalent, powered by a 13mm (1/2 inch) variable speed drill, capable of producing 1000 RPMs. TIP: In areas subject to extremely dry, and/or hot climates, it may be necessary to add water (up to .47L {1 pint} per mix). In order to avoid flash drying it may be necessary to chill the GU80-1 Liquid Admixture before mixing. Proper PPE should always be worn when working with Pli-Dek Products.
3. Pli-Dek products must be stored in the shade to prevent overheating and reduction of pot life.
4. If colored cement is required, a Pli-Dek recommended tint pack may be added to the mix to achieve the desired color. NOTE: to ensure that all the colorant is dispersed out of the container.
5. ***All mixes must be consistent (use the same mix ratios) to maintain color consistency.***

C. GU80-1 Custom Top Coat

1. Pour 4.75L (1.25 gallons) of GU80-1 Liquid Admixture into a clean 19L (5-gallon) plastic container.

2. Add one 21kg (46 lbs.) bag of GU80-1 Custom Top Coat powder. Mix thoroughly for 3 to 4 minutes, with a Wind-lock B-M1 mixing blade, or equivalent, powered by a 13mm (1/2" variable speed drill, capable of producing 1000 RPMs. TIP: In areas subject to extremely dry, and/or hot climates, it may be necessary to add water (up to .47L {1 pint} per mix). In order to avoid flash drying it may be necessary to chill the GU80-1 Liquid Admixture before mixing. Proper PPE should always be worn when working with Pli-Dek Products.
3. Pli-Dek products must be stored in the shade to prevent overheating and reduction of pot life.
4. If colored cement is required, a Pli-Dek recommended tint pack may be added to the mix to achieve the desired color. NOTE: to ensure that all the colorant is dispersed out of the container.
5. ***All mixes must be consistent (use the same mix ratios) to maintain color consistency.***

III. Application:

A. General:

1. Ensure that the plywood surface has been prepared in accordance with Section I.
2. Ensure that all proper flashings are in place.
3. Air temperature for application of the GU80-1 Gray Base must be between 4°C (40°F) and 43°C (110°F) and must remain so for a minimum of 2 - 6 hours. Ensure humidity levels are low. Do not apply over any standing water, contact Pli-Dek for additional information.

B. Plywood Deck Preparation:

1. Install PD Seam Paper on all sides of plywood.
2. Lay out 2.5 lbs/sq yd G60 Hot Dipped Galvanized Metal Lath in a staggered pattern over the entire plywood surface overlapping the metal flashing, to the edge of the deck surface.
3. Overlap all edges of metal lath, a minimum of 13mm (3/4").
4. Offset metal lath edges a minimum of 150mm (6") from plywood seams. (as per Deck Plan Detail, PD-1).
5. Secure metal lath to plywood with a minimum 22mm (7/8") crown by a minimum 16mm (5/8") long corrosion resistant staples spaced approximately 1½" on center around the perimeter and on overlapped lath seams, and 75mm (3") in the field (average 12 staples per square foot).
6. Additional staples spaced every 1½" on center are required where the metal lath overlaps as well as the seam paper, as installed in Section I.

C. Base Coat Application:

1. Mix the GU80-1 Gray Base as described in Section II – A.
2. Pour the GU80-1 Gray Base over the metal lath and trowel the product using the lathing as a screed, filling all voids at a rate of 25 - 30 square feet per mix. The metal lath must be completely covered in the GU80-1 Gray Base.

3. Allow the GU80-1 Gray Base to fully cure (approximately 4-6 hours depending on environmental conditions) prior to applying the next application. If the base coat does not cover the lath completely, a screed coat of GU80-1 Gray Base or GU80-1 Top Coat is required.

D. Screed Coat Application:

1. Screed coat may not be necessary in all applications. Contact Pli-Dek, LLC for application details and recommendations.
2. Prior to the screed coat application, remove any high or rough edges using a hand grinding stone or scraper.
3. The deck must be free of all surface contaminants, such as dust, dirt, etc., which will impair the adhesion of the Pli-Dek GU80-1 Top Coat or GU80-1 Custom Top Coat.
4. Mix the GU80-1 Top Coat or GU80-1 Custom Top Coat as described in Section II – B or C.
5. Trowel a screed coat over the GU80-1 Top Coat or GU80-1 Custom Top Coat at a rate of 150 square feet per mix. Allow to fully cure (approximately 2 - 6 hours).

E. Pli-Dek “F” Fiberglass & Resin: PD Resin Application:

1. **This application becomes required when job conditions may experience excessive movement. Examples: cantilevered decks, large spanning decks, or if the dimensions of the deck are approximately 8' x15' or larger, or joist spacing greater than 16" O.C., etc. Contact Pli-Dek, LLC for written recommendations. Some geographic locations may require the Fiberglass and PD Resin Coating in ALL applications. Contact Pli-Dek, LLC for written verification.
2. First Coat:
 - a) The Pli-Dek Applicator must have sole right of access to the specified areas for the time needed, in order to complete the application of the Pli-Dek System and obtain an adequate cure.
 - b) Air temperature for application of the PD Resin and Fiberglass Coat must be between 4°C (40°F) and 43°C (110°F) and must remain so in the acceptable range until the product has cured.
 - c) Mix the PD Resin using a mechanical mixer at slow speed for approximately 1 minute or until completely homogenous.
 - d) The deck must be free of all surface contaminants, such as dust, dirt, etc., which will impair the adhesion of the PD Resin. The Pli-Dek GU80-1 Gray Base must be smooth so that the fiberglass properly adheres to the surface.
 - e) Lay out the ¾ oz fiberglass mat over entire deck surface extending to all edges of the deck and up all vertical transitions. Overlap fiberglass mat seams a minimum of 1/4" to a maximum of 1/2".
 - f) Apply the PD Resin over fiberglass mat, at a rate of approximately 40 - 50 square feet per gallon with a trowel. Allow to completely cure, approximately 6 - 8 hours depending on environmental conditions. PD Resin must completely penetrate through the fiberglass mat. **PD Resin should not be exposed to construction traffic.**

3. Optional:
 - a) A screed coat of GU80-1 Top Coat can be applied over the fiberglass and PD Resin application in order to make a smoother surface, or to help protect the PD Resin if prolonged exposure to construction trade traffic is anticipated.

F. Finish Options:

1. Preparation:
 - a) Prior to any finish coat installation, the following must be completed:
 - i. Grind any rough areas, being careful not to damage Fiberglass and PD Resin coat. Rough areas will affect the aesthetic appearance of the finished product.
 - ii. The deck must be free of all surface contaminants, such as dust, dirt, etc. which will impair the adhesion of the Finish Coats.
2. Knockdown Texture Finish:
 - a) Air temperature for application of the Knockdown Texture Coat must be between 40°F and 110°F and must remain so for a minimum of 8 hours.
 - b) Mix the GU80-1 Top Coat as described in Section II - A.
 - c) Using a hopper gun, spray the Knockdown Coating over the entire deck surface at a rate of 175 square feet per mix. **CAUTION: AS WITH ANY SPRAY MATERIAL, BE CERTAIN TO PROTECT ALL SURROUNDING AREAS FROM OVER-SPRAY.**
 - d) When the material begins to dry, knock down the material with a trowel. TIP: In order to eliminate footprints, we suggest wearing metal spiked shoes (golf shoes) during this process.
 - e) Allow the Knockdown to dry a minimum of 2 - 6 hours, depending on weather.
 - f) Remove any sharp edges by scraping the surface with a scraper or trowel.
 - g) Air temperature for application of the GS88-1 Pigmented Sealer must be between 40°F and 110°F and must remain so for a minimum of 8 hours. Ensure humidity levels are low. Do not apply over moisture.
 - h) The deck must be free of all surface contaminants, such as dust, dirt, etc., which will impair adhesion of the GS88-1 Pigmented Sealer.
 - i) Mix the GS88-1 Pigmented Sealer thoroughly with the use of mechanical mixers. All containers should be boxed and mixed to ensure consistent coloring throughout.
 - j) Apply the GS88-1 Pigmented Sealer over the dry Knockdown application at a rate of 100 square feet per gallon using a 19mm ($\frac{3}{4}$ ") paint roller nap, suitable for latex type coatings (2 coats may be necessary).
 - k) Allow GS88-1 Pigmented Sealer coat to dry for a minimum of 6 hours.

- l) To make cleaning easier in high traffic areas, a coat of GS13 or PD Clear Sealer may be applied over the dry GS88-1 Pigmented Sealer at a rate of 200 square feet per gallon. Surface will become more slippery. Use of a non-skid agent is recommended.
3. Polymer Sand Finish:
- a) Air temperature for application of the Sand Finish must be between 4°C (40°F) and 43°C (110°F) and must remain so for a minimum of 8 hours. Do not apply over moisture.
 - b) (Optional) Apply a bead of manufacturer's recommended elastomeric joint sealant at all wall-to-deck junctions, wood posts, wrought iron posts, etc.
 - c) Before application, mix PD Resin using a mechanical mixer at slow speeds for approximately 1 minute or until completely homogenous.
 - d) Apply PD Resin, using a ¾" nap roller and a brush at a rate of 75 square feet per gallon, ensuring a constant wet edge while broadcasting the desired aggregate until refusal. Do not allow PD Resin to puddle.
 - e) Broadcast aggregates of washed, dry, rounded, crystal silica sand, approximately 16 mesh at a rate of 100 lbs. per 100 square feet or until refusal (depending on skid resistance requirements) into wet/uncured PD Resin.
 - f) After full cure remove all excess aggregates.
 - g) Air temperature for application of the GS88-1 Pigmented Sealer must be between 4°C (40°F) and 43°C (110°F), allow to completely cure, approximately 6 - 8 hours depending on environmental conditions. Ensure humidity levels are low.
 - h) The deck must be free of all surface contaminants, such as dust, dirt, etc., which will impair adhesion of the GS88-1 Pigmented Sealer.
 - i) Mix the GS88-1 Pigmented Sealer thoroughly using a mechanical mixer. All containers should be boxed and mixed to ensure consistent coloring throughout.
 - j) Apply the GS88-1 Pigmented Sealer over the dry sand finish at a rate of 75 to 100 sq. ft. per gallon, (2 coats may be necessary) using a 19mm (¾") paint roller nap, suitable for latex type coatings.
 - k) Allow GS88-1 Pigmented Sealer coat to dry for a minimum of 6 hours.
 - l) To make cleaning easier in high traffic areas, a coat of GS13 or PD Clear Sealer may be applied over the dry GS88-1 Pigmented Sealer at a rate of 200 square feet per gallon. (Surface will become more slippery. Use of a non-skid agent is recommended.)
4. Pli-Dek "U" (Underlayment): *Note: The vertical leg of all flashings should be coated with Fiberglass and PD Resin or PD Flash Coat and Flash Coat Seam Tape or self-adhering drywall mesh tape.*
- a) Air temperature for application of the Con-Dek "U" must be between 40°F and 110°F and must remain so for a minimum of 8 hours. Do not apply over any moisture.

- b) PD Resin should not be exposed to construction traffic.
 - c) Mix the Pli-Dek GU80-1 Top Coat as described in Section II – A.
 - d) Apply a screed coat of GU80-1 Top Coat over the entire deck at a rate of 150 square feet per mix. Allow to dry for a minimum of 2 - 6 hours. Mix the GU80-1 Top Coat as described in Section II – B.
 - e) (Optional) Consult Tile Manufacturer or Sub for Recommendations: Broadcast aggregates of washed, dry, rounded crystal silica sand, approximately 16 mesh, at a rate of 100lbs. per 200 square feet.
5. Polyacrylic Smooth Finish:
- a) Air temperature for application of the polyacrylic smooth finish must be between 4°C (40°F) and 43°C (110°F) and must remain so for a minimum of 8 hours. It may be necessary to grind the rough ridges of the Base Coat to minimize chatter lines.
 - b) Mix the GU80-1 Top Coat as described in Section II – B.
 - c) Trowel a screed coat over the entire deck surface at a rate of 150 square feet per mix. Allow it to dry for a minimum of 6 hours.
 - d) It may be necessary to apply an additional coat of GU80-1 Custom Top Coat to create a smoother finish. Coverage rate should be approximately 200 square feet per mix. **Please note: Surface will not be perfectly smooth and will have some imperfections/variations.
 - e) (Optional) Apply a bead of Pli-Dek recommended elastomeric joint sealant to all wall-to-deck junctions, wood posts, wrought iron posts, etc.
 - f) Air temperature for application of the GS88-1 Sealer must be between 4°C (40°F) and 43°C (110°F) and must remain so for a minimum of 8 hours. Ensure humidity levels are low. Do not apply over standing water. **Forced air electric heater maybe required. **.
 - g) The deck must be free of all surface contaminants, such as dust, dirt, etc., which will impair adhesion of the GS88-1 Sealer.
 - h) Mix the GS88-1 Sealer thoroughly with the use of mechanical mixers for 1 minute or until completely homogenous.
 - i) All containers should be boxed and mixed to ensure consistent coloring throughout. Apply the GS88-1 Sealer over the polyacrylic smooth finish at a rate of 100 square feet per gallon using a 19mm (¾”) paint roller nap, suitable for latex type coatings (2 coats may be necessary).
6. Epoxy Stone Finish:
- a) Contact Pli-Dek, LLC for written instructions.
7. Custom Finish: Simulated Tile, Brick, and Stone
- a) Air temperature for application of the Custom Finish must be between 40°F and 110°F and must remain so for a minimum of 8 hours.
 - b) Mix the GU80-1 Custom Top Coat as described in Section II - B. Add the selected color tint pack to establish the desired grout color. Note: All mixes must be consistent (use the same mix ratios) to maintain color consistency.

- c) The deck must be free of all surface contaminants, such as dust, dirt, etc. which will impair adhesion of the GU80-1 Custom Top Coat.
- d) Trowel a tinted GU80-1 Custom Top Coat over the entire deck surface at a rate of 150 square feet per mix. Allow to dry for a minimum of 2 – 6 hours. (Decorative scroll lines can be achieved at this step prior to screed coat drying, if no templates or tape are going to be used.)
- e) Install one of the various types of stencil patterns or install tape pattern over cured screed coat to achieve desired pattern finish.
- f) Mix the GU80-1 Custom Top Coat as described in Section II – B.
- g) Trowel a tinted screed coat over the stenciled or taped deck surface at a rate of 150 square feet per mix. Apply the desired texture while spreading the GU80 Custom Top Coat. Allow to dry for a minimum of 2 - 6 hours.
- h) Apply desired stain/shading with PD Stain using a low-pressure sprayer, soft broom, or sponge. Contact Pli-Dek, LLC. for complete details.
- i) Remove stencil or tape pattern.
- j) The deck must be free of all surface contaminants, such as dust, dirt, etc., which will impair adhesion of the GS13 or PD Clear Sealer.
- k) Apply a coat of PD Clear Sealer or GS13 Clear Sealer at a rate of 100 square feet per gallon. (2 coats may be necessary). Surface will become more slippery. Use of a non-skid agent is recommended.

IV. Slip and Fall Precautions:

OSHA, American Disabilities Act (ADA), and The Federal Housing Act (FHA) have now set enforceable standards for slip-resistance on pedestrian surfaces. Pli-Dek LLC recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily/greasy, or otherwise potentially slippery conditions. It is the end user's responsibility to provide a flooring system that meets current safety standards. Pli-Dek Systems, Inc or its sales agents will not be responsible for injury incurred in a slip and fall accident. Please consult local building codes for the current coefficient of friction requirement.

Disclaimer

Information contained in this specification conforms to standard detail and product recommendations for the installation of the Pli-Dek products as of the date of publication of this document and is presented in good faith. Pli-Dek LLC assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To ensure that you are using the latest, most complete information, contact Pli-Dek LLC, at:



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* The Trained Applicator Certificate indicates certain employees of the company have been instructed in the proper application of Pli-Dek products and have received copies of the Pli-Dek Application Instructions and Specifications. The Trained Contractor Program is not an apprenticeship. Each trained contractor is an independent company and bears responsibility for its own workmanship. Pli-Dek LLC assumes no liability for the workmanship of a trained contractor.