BOARD STOCK SYSTEM SUMMARY

This is a generic summary of **IPC's** more detailed **BOARD STOCK SYSTEM SPECIFICATION**. For warranty purposes, Approved Applicators are responsible for studying, understanding, and following the specification. As always, contact **IPC** for technical assistance.

I. SURFACE PREPARATION

1. Pre-treat rust areas with **ISOPHOS**™ and rinse with water before priming. Prime all metallic surfaces to be coated with **ISOPRIME**™ and allowed to dry.
2. Remove existing roof system (Remedial construction only).
3. Install board stock.
4. Seal all gaps around roof deck, flashings, and holes with either two inch or four-inch-wide **FleeceBite**™ tape. Firmly press the material into place to ensure proper adhesion. With a weighted roller, roll out any air bubbles in surface to eliminate air entrapment.
   For Penetrations use the Alternate Detailing below
5. **Alternate Detailing** method used instead of **FleeceBite**™ tape.
6. Bridge gaps around roof deck, penetrations, flashings, holes, etc. with the following method to make sure that the **ACRYLINK G**™ membrane will be continuous:
   a. Brush a coat of **ACRYCAULK**™ along either side of gap.
   b. Embed 4-inch strip of non-woven polyester fabric in **ACRYCAULK**™.
   c. Brush heavy coat of **ACRYCAULK**™ over polyester, ensuring no wrinkles or fishmouths.
   d. Allow to cure overnight. Inspect and repair as necessary.

II. INSTALLATION OF POLYESTER REINFORCEMENT

1. The surface to be coated must be clean and dry.
2. Apply ¾ gallon per square of **ACRYLINK G**™ with an airless sprayer or roller. Allow 15 minutes curing time.
3. Embed non-woven polyester across entire roof surface, ensuring no wrinkles or fishmouths.
4. Apply ¾ gallon per square of **ACRYLINK G**™ over embedded polyester within the same working day. Apply in sections if the roof is too large to finish in one day.
5. Allow to cure overnight. Inspect and repair as necessary with **ACRYCAULK**™.

III. COATING APPLICATION

1. The surface to be coated must be clean and dry.
2. Apply **ACRYLINK G**™ elastomeric roof coating with an airless sprayer or roller, giving special attention to seams and bridged or repaired areas.
3. Use an appropriate number of coats to achieve the correct millage.
   a. 1.5 gallons per square of **ACRYLINK G**™ used to embed polyester reinforcement does not count toward total millage requirements.
   b. 5-year: 3.0 gallons of **ACRYLINK G**™ per square total.
   c. 10-year: 4.0 gallons of **ACRYLINK G**™ per square total.
   d. 15-year: 5.0 gallons of **ACRYLINK G**™ per square total.
   d. 20-year: 6.0 gallons of **ACRYLINK G**™ per square total.
4. Allow each coat to dry, inspect and repair as necessary before applying next coat.

IV. LIMITATIONS

1. This procedure is to be used only in conjunction with commonly accepted roofing and waterproofing standards.
2. No material shall be applied to wet, dirty, or frozen surfaces, or to areas of gross ponding water.
3. **ACRYLINK G**™, **ACRYCAULK**™ and **ISOPRIME**™ shall not be applied during inclement weather, when a precipitation appears imminent, when the temperature is below 45 °F, when the relative humidity exceeds 85%, or within 4 hours of sundown.
4. In order to qualify for factory warranty, applicator must have Approved Applicator status, the roof must meet the square foot minimum, the **ACRYLINK G**™ membrane must be continuous, and the membrane must meet the TDM minimum.
5. In conjunction with the final inspection, all debris, material, and equipment are to be removed from the job site, leaving the area in an undamaged and acceptable condition.

BOARD STOCK SYSTEM SPECIFICATION

Section 1.0 Scope

The intention of this specification is to outline procedures for the application of an **ACRYLINK G**™ elastomeric coating membrane in conjunction with rigid, board-type insulation panels for the purposes of installing a primary roofing membrane over a new or existing roof deck. This specification describes materials, methods, and conditions necessary for the proper installation of this membrane.

1.1 This integrated system constitutes one of the most cost-effective methods for installing an energy-efficient, durable commercial or industrial roof.

1.2 This system is only to be used in conjunction with commonly accepted roofing and waterproofing standards.

1.3 Any substantial deviation from these specifications shall be referred to an authorized representative of **Isothermal Protective Coatings, Inc. (IPC).**

Section 2.0 Materials

All materials shall be manufactured or approved by **IPC**, and shall meet the following minimum specifications:

2.1 **ACRYLINK G**™ Elastomeric Coating

Vehicle Type	Crosslinking Acrylic
Pigment to Vehicle Ratio	1.5 to 1
Solids (Volume)	63%
Elongation	360%
Tensile Strength	304 psi
Permeance @ 45 mils	2.21 perms
Reflectivity (White)	79%

2.2 **ACRYCAULK**™ Brush or Trowel Grade Sealant

Vehicle Type	100% Acrylic
Pigment to Vehicle Ratio	1.97 to 1
Solids (Volume)	70%
Elongation	325%

2.4 **ISOPRIME**™ Corrosion Inhibiting Primer

Vehicle Type	Phenolic Modified Alkyd
Solids (Weight)	57.5%
Weight (per gallon)	11.25 lbs.
Color	White

2.5 **ISOPHOS**™ Phosphating Solution

Active Ingredient	Phosphoric Acid (H_3PO_4)

2.6 Delivery and Storage

2.6.1 Materials shall be delivered in their original, tightly sealed containers or unopened packages, clearly labeled with the manufacturer's name, Underwriter's Laboratories file number, and—where appropriate—product identification and lot numbers.

2.6.2 Materials shall be kept from freezing, and shall be stored out of the weather, in their original tightly sealed containers or unopened packages, as recommended by the manufacturer.

Section 3.0 Contractor

3.1 The **ACRYLINK G**™ roof system shall be applied by a single, experienced, and competent contractor or applicator, approved by **IPC**.

3.2 Contractor or applicator shall be responsible for selecting and supplying all labor and supervision and shall be responsible for furnishing all materials required to complete the job satisfactorily, in accordance with manufacturer's specifications.

3.3 Contractor or applicator shall be responsible for assessing and determining the integrity of the existing roof deck. All structural repairs to the roof deck, all necessary or specified installations—including but not limited to the installation of crickets, scuppers, roof drains, one-way vents, expansion joints, and the like—as well as the elimination of areas of gross ponding water, shall be the exclusive responsibility of the contractor or applicator.

3.3.1 All installations or repairs shall be completed before coating application commences.

3.3.2 The industry standard definition of gross ponding water is ½ inch or more of water, standing on a 100 square foot or more area, 24 hours or more after a precipitation. Contractor shall be responsible to address and eliminate all such areas before coating application commences.

3.3.3 All installations or repairs shall be performed in accordance with commonly accepted roofing and waterproofing standards and practices.

3.3.4 An authorized representative of **IPC** may be consulted for technical assistance in such matters.

Section 4.0 Roof Deck Preparation

Preparations shall include all requirements specified by **IPC** to ensure adequate adhesion of the **ACRYLINK G**™ elastomeric coating membrane to the substrate surface. Preparation shall include, but shall not be limited to, the following:

PLEASE NOTE: During coating application procedures, **ACRYLINK G**™ shall be applied a minimum of three (3) inches above the termination of all flashings, repairs, and bridges. That is, coating shall be applied to sections of parapet walls, the bases of air handling equipment, penetrations, and the like. Section 7.0 of this specification should be consulted for details. These surfaces must be adequately prepared in order to ensure adhesion of the **ACRYLINK G**™ membrane.

4.1 All unnecessary and non-functional equipment, conduit, and debris shall be removed from the roof deck.

4.2 All parapets, metal flashings, counterflashing, the bases of air handling equipment, and any other metallic or masonry surface to be coated shall be prepared according to the following method:

4.2.1 All masonry surfaces to be coated shall be wire-brushed and all dust removed before coating application commences.

4.2.2 All oxidized metallic surfaces to be coated shall be wire-brushed or otherwise abraded before pressure washing in order to remove as much rust and scale as possible.

4.2.3 Masonry and oxidized metallic surfaces to be coated shall be pressure washed in order to remove all dust, dirt, debris, chalk, oil, tar, and the like from the substrate surface. A suitable cleaner, such as TSP, and a broom shall be used as necessary. If a cleaner is required, the surface shall be rinsed with water to remove residue.

4.2.4 After pressure washing, all metallic surfaces to be coated shall be primed with **ISOPRIME**™ corrosion inhibiting primer at an approximate rate of 250 square feet per gallon.

4.2.4.1 All oxidized metallic surfaces shall be pre-treated with **ISOPHOS**™ rust passivating solution before being primed.

4.2.4.2 **ISOPHOS**™ shall be applied by brush, roller, mop, low-pressure hand sprayer, or another suitable instrument.

4.2.4.3 **ISOPHOS™** shall be applied until the reddish color of the rust turns grayish in color.

4.2.4.4 When the reaction has taken place, the treated metal shall be rinsed clean with water, allowed to dry, and then primed with **ISOPRIME**™ as above.

4.2.5 **ISOPRIME**™ shall be given adequate time to cure before coating application commences.

4.3 Removal of Degraded Roof System (Remedial Construction Only)

4.3.1 Having determined that it is necessary or advisable to remove an existing roof system, contractor shall remove the existing roof system from the roof deck.

4.3.2 If rigid, board-type insulation panels are present, contractor shall be responsible for assessing and determining the possibility, practicability, and advisability of leaving the existing insulation panels in place. In such a case, contractor shall inform an authorized representative of **IPC** of his determination. If tearing or delamination of the felt facer has occurred during removal of the membrane, or if felt facer is excessively soiled, a new layer of insulation panels must be installed (either over the old layer, or in place of it).

4.3.3 Having removed the entire roof system, contractor shall ensure that the roof deck is as clean and smooth as possible.

4.4 All structural repairs or installations shall be completed before coating application commences.

4.4.1 Roof deck repairs or the installation of crickets, roof drains, one-way vents, scuppers, expansion joints, and the like, shall be completed before installation of the roof system commences.

4.4.2 Areas of gross ponding water shall be addressed and eliminated before roof system installation commences. Consult section 3.3.2 of this specification for further details.

4.4.3 All cracks, fissures, pits, or other problem areas in the roof deck shall be repaired with an appropriate and approved building sealant before roof system installation commences.

4.4.4 All ballasted asphaltic decks should be smoothed with a roof planer (spudder). All planer cuts and burns should be sealed using asphaltic mastic overlaid with felt (to prevent tracking the mastic up onto the boards).

Section 5.0 Installation of Board Stock Panels

Contractor shall be responsible for selecting and implementing an appropriate design and for choosing suitable materials for the installation of the board stock panels.

5.1 Installation of Vapor Retarder (Optional)

5.1.1 Contractor shall be responsible for determining whether or not a vapor retarder is required for the given roof system.

5.1.2 Should the installation of a vapor retarder be deemed necessary or advisable, contractor shall inform an authorized representative of **IPC** of his determination.

5.1.3 Contractor shall be responsible for taking all necessary steps to ensure that sufficient insulation is installed above the vapor retarder to prevent condensation from forming on the underside of the vapor retarder.

5.1.4 Contractor shall ensure that any vapor retarder chosen is compatible with the board stock installation method, and that it be compatible with common roofing application practices.

5.1.5 **IPC** recommends following ASHRAE criteria for the use of vapor retarders.

5.2 Installation of Board Stock

5.2.1 Contractor shall be responsible for all aspects of the board stock installation.

5.2.2 Contractor shall ensure that the board stock has sufficient compressive strength to support the amount of traffic that the roof will be required to withstand. That is, board stock must be chosen with roof traffic load in mind.

5.2.3 **IPC** recommends that a minimum of two layers of board stock be installed with the board joints staggered. This not only improves the thermal efficiency of the overall system, but also typically results in less stress on the roof membrane at the joints in the board stock.

5.2.4 **IPC** recommends that if two or more layers of board stock are installed, only the bottom layer be mechanically fastened, while the upper layer or layers are fully adhered according to manufacturer's specifications, as this increases the thermal efficiency of the overall system.

5.2.5 The board stock shall be installed in such a way so as to eliminate any and all areas of gross ponding water (see section 3.3.2). In some cases, this may require the use of tapered board stock.

5.2.6 The board stock used shall be non-needle-punctured on one side, with the smooth side installed up.

5.2.7 **IPC** recommends the use of at least sixteen (16) 3" plates to fasten each panel, with 8 in the interior, and 8 on the seams (shared with the surrounding panels).

Section 6.0 Surface Preparation—Detailing

Preparations shall include all requirements specified by **IPC** to ensure adequate adhesion of the **ACRYLINK G**™ elastomeric coating membrane to the substrate surface. Preparation shall include, but shall not be limited to, the following:

6.1 All structural repairs, and all installations of crickets, scuppers, roof drains, one-way vents, and the like, shall have been completed prior to detail work commencement. Areas of gross ponding water shall have been addressed and eliminated prior to detail work commencement.

6.2 Detail work shall not commence during inclement weather, when a precipitation appears imminent, when the temperature is below 45 °F, or when relative humidity exceeds 85%. To provide adequate curing time, detail work shall terminate a minimum of four (4) hours before sundown.

6.3 All galvanized, phosphated, and non-painted metallic surfaces to be coated—including, but not limited to, metal flashings, expansion joints, air handling equipment, penetrations, and the like—shall have already been primed with **ISOPRIME**™ corrosion inhibiting primer, or equal, and shall have been allowed adequate curing time before detail work commences. Refer to section 4.0 of this specification for further details.

6.4 The entire surface to be coated shall be free of dust, dirt, tar, oil, moisture, frost, or any other material that would impair the adhesion of **ACRYLINK G**™ or **ACRYCAULK**™ to the substrate surface.

6.5 All penetrations, expansion joints, gaps adjacent to the roof deck, small holes, and the like, shall be flashed, bridged, or repaired according to the following procedure:

6.5.1 On a clean, dry surface use the appropriate size **FleeceBite**™ tape to achieve an overlap or bridge over the above areas. Using a weighted roller to eliminate entrapped air

6.5.2 On a clean, dry surface, a light coat of **ACRYCAULK**™ shall be applied to both sides of the area to be flashed, bridged, or repaired.

6.5.3 A strip of non-woven or spun polyester roofing cloth, of an appropriate width, shall be pressed down into the caulk, thus bridging the gap. It is important to ensure that there are no fishmouths or wrinkles in the polyester.

6.5.4 The polyester cloth shall then be completely covered with a second coat of **ACRYCAULK**™. This second coat shall completely cover the polyester cloth and shall be applied within the same working day as the application of the polyester cloth.

6.5.5 Narrow gaps and small holes may be sealed with **ACRYCAULK**™ alone, without the use of polyester cloth.

6.6 After completing this procedure, the newly flashed or bridged areas shall be allowed to cure overnight. Before coating application commences, all such areas shall be inspected and repaired, as necessary, with **ACRYCAULK**™ or an approved building sealant.

6.7 **ACRYLINK G**™ coating shall be applied over these areas during normal coating operation procedures.

Section 7.0 Coating Application

7.1 Coating application shall not commence during inclement weather, when a precipitation appears imminent, when temperature is below 45 °F, or when relative humidity exceeds 85%. To provide adequate curing time, coating application shall terminate at least four (4) hours before sundown.

7.2 Entire surface to be coated shall be free of dust, dirt, tar, oil, moisture, frost or any other material that would impair the adhesion of **ACRYLINK G**™ elastomeric coating to the substrate surface.

7.3 All metallic surfaces to be coated shall have been prepared in accordance with the procedures specified in sections 4.0-6.0 of this specification.

7.4 Unweathered plastic surfaces to be coated (such as on some one-way vents) shall first be abraded to improve adhesion of the **ACRYLINK G**™ membrane.

7.5 Installation of Polyester Reinforcement

7.5.1 A coat of **ACRYLINK G**™ shall be applied at the rate of ¾ gallons per 100 square feet using conventional airless spray equipment or rollers.

7.5.2 **ACRYLINK G**™ shall be allowed to dry for approximately 15 minutes (in hot weather, this waiting is not necessary).

7.5.3 Non-woven polyester roofing cloth shall be embedded in the coating, across the entire surface of the roof, ensuring that no wrinkles or fishmouths result.

7.5.4 **IPC** recommends using stiff polyester cloth for this application, as it is less likely to wrinkle.

7.5.5 Polyester cloth shall overlap approximately 2-4 inches along the seams.

7.5.6 A second coat of **ACRYLINK G**™ shall be applied at the rate of ¾ gallons per 100 square feet over the embedded polyester within the same working day as the polyester was applied. If the roof is too large to finish the entire procedure in one working day, the polyester cloth shall be embedded in stages, so that no polyester is left exposed overnight.

7.5.7 If this second coat is sprayed, it should be back rolled as it is applied.

7.5.8 **ACRYLINK G**-embedded polyester shall be allowed to cure overnight, after which an inspection shall be performed. Any defects in the membrane shall be repaired with **ACRYCAULK**™ sealant.

7.6 **ACRYLINK G**™ elastomeric coating: Base Coat

7.6.1 The base coat of **ACRYLINK G**™ shall be applied at 1½ gallons per 100 square feet using conventional airless spray equipment or rollers.

7.6.2 Coating shall be applied so as to cover the substrate uniformly. All flashed, bridged, or repaired areas (as described in section 6.0) shall be coated again at this time, and during each subsequent coat.

7.6.3 Wherever possible, coating shall be applied at least three (3) inches beyond the termination of polyester flashings or bridges, especially along parapet walls, penetrations, air handling equipment, and the like. In no case shall asphaltic surfaces be left uncoated.

7.6.4 The base coat may be applied in more than one pass, if desired, to accelerate curing, provided adequate curing time has been allowed between passes to prevent damage from being done to the membrane when it is walked upon.

7.6.5 **IPC** recommends the use of a darker color, like gray, for the base coat, as it cures much faster than a lighter color, such as white.

7.6.6 If sprayed, the base coat (the first pass of the base coat if applied in multiple passes) shall be back rolled as it is being applied in order to maximize adhesion to the substrate and to eliminate voids.

7.6.7 The base coat shall be allowed to cure for at least two (2) hours, depending on temperature and humidity conditions, after which an inspection shall be performed. Any defects in the coating membrane shall be repaired with **ACRYLINK G**™ or an approved building sealant.

7.7 **ACRYLINK G**™ elastomeric coating: Subsequent Coats

7.7.1 **IPC** recommends that **ACRYLINK G**™ coating be applied in contrasting color coats to improve coverage and spray pattern. Order of application shall be as contractor specifies.

7.7.2 The surface of the **ACRYLINK G**™ base coat, and all subsequent coats, shall be free of all moisture, dirt, and debris before a subsequent coat is applied.

7.7.3 The second coat of **ACRYLINK G**™ shall be applied as soon as practical, within 24-72 hours of the application of the base coat.

7.7.4 The second coat, and all subsequent coats, shall be applied at a right angle to the direction in which the previous coat was applied. For example, if the previous coat was applied with a north-south motion, the subsequent coat shall be applied with an east-west motion.

7.7.5 The second coat, and all subsequent coats, shall be applied by conventional airless spray or roller at the rate specified to achieve the TDM minimum in a reasonable number of coats. Each coat shall completely mask the color of the previous coat.

7.7.6 The second coat, and all subsequent coats, may be applied in more than one pass, if desired, to accelerate curing, provided adequate curing time has been allowed between passes to prevent damage from being done to the membrane when it is walked upon.

7.7.7 Subsequent coats shall be applied by conventional airless spray or roller at the rate required to achieve the TDM minimum. It is essential to realize that the true surface area may be greater than the apparent surface area because of surface texture or profile. In order to achieve the TDM minimum on such a surface, the application rate must be increased appropriately.

7.7.8 Each coat shall be allowed to cure for at least four (4) hours, depending upon temperature and humidity conditions, and inspected and repaired as necessary, before a subsequent coat is applied.

7.8 The cured **ACRYLINK G**™ elastomeric coating system membrane shall be TDM minimum in all areas and shall be free of all pinholes and defects.

7.9 Required spread rates for the **ACRYLINK G**™ membrane are as follows:

7.9.1 Polyester reinforcement embedded in 1.5 gallons per 100 square feet of **ACRYLINK G**™ does not count towards the TDM average or minimum.

7.9.2 5-year application: 3.0 gallons per 100 square feet of **ACRYLINK G**™ total (30 dry mil average, 25 dry mil minimum).

7.9.3 10-year application: 4.0 gallons per 100 square feet of **ACRYLINK G**™ total (40 dry mil average, 35 dry mil minimum).

7.9.4 15-year application: 5.0 gallons per 100 square feet of **ACRYLINK G**™ total (50 dry mil average, 45 dry mil minimum).

7.9.5 20-year application: 6.0 gallons per 100 square feet of **ACRYLINK G**™ total (60 dry mil average, 55 dry mil minimum).

7.10 Having completed the procedures specified above, and having achieved the TDM minimum in all areas, the **ACRYLINK G**™ membrane shall be given adequate time to cure.

7.11 For a minimum of thirty (30) days after the **ACRYLINK G**™ membrane has been applied, contractor shall be responsible to inspect the membrane after every precipitation.

7.11.1 Contractor shall carefully remove water from small ponding areas ("birdbaths") with an air blower, without damaging the **ACRYLINK G**™ membrane.

7.11.2 Areas of gross ponding water shall have been addressed and eliminated prior to coating application, in accordance with commonly accepted waterproofing and roofing practices.

Section 8.0 Clean-Up

Upon completion of all work covered in this specification, and before the job is inspected, the contractor shall remove all equipment, material, and debris, leaving the area in an undamaged and acceptable condition. In no case shall the job be considered complete before the job site has been properly cleaned.

Section 9.0 Limitations

This system is to be used only in conjunction with commonly accepted waterproofing and roofing standards including but not limited to the following:

9.1 In order to qualify for a factory warranty, applicator must have Approved Applicator status, the roof must meet the square foot minimum, the **ACRYLINK G**™ membrane must be continuous, and the membrane must meet the TDM minimum.

9.2 No application of component materials shall commence during inclement weather, when a precipitation appears imminent, when temperature is below 45 °F, or when relative humidity exceeds 85%.

9.3 No material shall be applied to wet, dirty, or frozen surfaces.

9.4 Coating application shall not commence until all other trades are off of the roof.

9.5 Coating shall not be applied to areas of gross ponding water. Contractor shall address and eliminate areas of gross ponding water prior to coating application.

9.6 In conjunction with the final inspection, all debris, material, and equipment are to be removed, leaving the area in an undamaged and acceptable condition.