



Division 09 65 66
Resilient Athletic Flooring

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Resilient sheet flooring.

1.2 RELATED SECTIONS

- A. Section 03300—Cast in Place Concrete.
- B. Section 06100—Rough Carpentry: Plywood subflooring and underlayment.
- C. Section 07260—Vapor Retarders: Moisture remediation.
- D. Section 0965—Resilient Tile Flooring: Resilient tile floor coverings.
- E. Section 09653—Resilient Base and Accessories: For resilient base, reducer strips, and other accessories installed with resilient floor coverings.

1.3 REFERENCES

- A. ASTM International:
1. ASTM D 2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
 2. ASTM E 648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 3. ASTM E 662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
 4. ASTM F 137 - Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical mandrel Apparatus.
 5. ASTM F 386 - Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces.
 6. ASTM F 410 - Standard Test Method for Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement.
 7. ASTM F 710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
 8. ASTM F 925 - Standard Test Method for Resistance to Chemicals of Resilient Flooring.
 9. ASTM F 970 - Standard Test Method for Static Load Limit.
 10. ASTM F 1303 - Standard Specification for Sheet Vinyl Floor Covering with Backing.
 11. ASTM F 1700 - Standard Specification for Solid Vinyl Floor Tile.
 12. ASTM F 1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
 13. ASTM F 2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In Situ Probes.



1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Submit three copies of manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Maintenance recommendations
- C. Selection Samples: For each finish product specified, two sets of each type, colors and finish of resilient flooring and accessory required, indicating full range of color and pattern variation as proof of application compliance.
- D. Verification Samples: For each finish product specified, three complete sets of each type, colors and finish of resilient flooring and accessory required, indicating color and pattern of actual product, including variations, as proof of application compliance.
- E. Certification: Upon request by Architect manufacturer to provide third party written test results of physical characteristics and performance attributes performed by an independent laboratory.
- F. Closeout Submittals: Submit three copies of the following:
 - 1. Maintenance and operation data includes - methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Warranty documents specified herein.
- G. Flame Spread Certification: Submit manufacturer's certification that resilient flooring furnished for areas indicated to comply with required flame spread rating has been tested and meets or exceeds indicated or required standard.
- H. LEED Documentation Submittals:
 - 1. LEED NC 2.2 & CI 2.0 Rating System:
 - a. MR 4.1 - Post Consumer 10% (post-consumer + 1/2 pre-consumer).
 - b. MR 4.2 - Post Consumer 20% (post-consumer + 1/2 pre-consumer).
 - c. EQ 4.1 - Adhesives and Sealants SCAQMD Rule #1168.
 - d. EQ 4.3 - FloorScore Certification in lieu of CRI.
 - e. ID 1.1 - Green Housekeeping Innovation Credit (inquire within) borrowing from LEED EB IEQ 10.3.
 - 2. LEED EB 2.0 Rating System:
 - a. MR 2.1 - Optimize Use of Alternative Materials; Post Consumer Recycled Content.
 - b. MR 3.1 - Optimize Use of IAQ Products, A. Adhesives & Sealants SCAQMD Rule #1168.
 - c. MR 3.2 - Optimize Use of IAQ Products, C. FloorScore Certification in lieu of CRI.
 - d. MR 4 - Sustainable Cleaning Products and Services.
 - e. IEQ 10.3 - Green Cleaning - Low Impact Environmental Policy.
 - 3. LEED Schools, NC & Major Renovations Rating System:
 - a. MR 1.3 - Maintain 50% of Interior Non-Structural Elements.
 - b. MR 4.1 - Post Consumer 10% (post-consumer + 1/2 pre-consumer).
 - c. MR 4.2 - Post Consumer 20% (post-consumer + 1/2 pre-consumer).
 - d. EQ 4 - Option 1 - Adhesives and Sealants SCAQMD Rule #1168.
 - e. IEQ 4 - Option 3 - Flooring Systems - CA 1350.
 - f. ID 1.1 - Green Housekeeping Innovation Credit borrowing from LEED EB IEQ 10.3.
 - 4. LEED Retail - NC & Major Renovations Rating System:
 - a. MR 1.3 - Maintain 50% of Interior Non-Structural Elements.
 - b. MR 4.1 - Post Consumer 10% (post-consumer + 1/2 pre-consumer).
 - c. MR 4.2 - Post Consumer 20% (post-consumer + 1/2 pre-consumer).
 - d. IEQ 4 - Option 1 Adhesives and Sealants SCAQMD Rule #1168
 - e. IEQ 4 - Option 3 Flooring - FloorScore Certified.
 - f. ID 1.1 - Green Housekeeping Innovation Credit borrowing from LEED EB IEQ 10.3.



1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications
 - 1. Whenever possible, provide each type of resilient flooring and accessories as provided by a single manufacturer, including recommended primers, adhesives, sealants, finish accessories and leveling compounds.
 - 2. Manufacturer must be an established firm specializing in the production of prefabricated P.V.C. Sport Surfaces with the ISO 9001 rating. All Sports Flooring materials must be manufactured by the manufacturer of the product being submitted. Manufacturer must have completed, and can produce in writing at least 10 projects of similar size and magnitude where this product has been used.
- B. Installer Qualifications:
 - 1. Minimum five years experience and completed at least five (5) projects of similar magnitude, material and complexity.
 - 2. No Installer will be allowed to install specified material if tools are rented or leased from manufacturer or distributor or another outside source.
 - 3. Owner may request to visit installer's office and warehouse facilities.
 - 4. Installer must be a recognized and approved sports flooring contractor by the manufacturer or distributor.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, sheen and finished appearance are approved by Architect.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's original unopened, undamaged packaging until ready for installation.
- B. Store all rolls standing upright; do not lay rolls down for long periods.
- C. Flooring material and adhesive shall be acclimated to the installation area for a minimum of 48 hours prior to installation.

1.7 PROJECT CONDITIONS

- A. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations. Areas to receive flooring shall be clean, fully enclosed, weather tight with the permanent HVAC set at a uniform temperature of at least 68 degrees F (20 degrees C) 72 hours prior to and during and for not less than 48 hours after installation. The flooring material shall be conditioned in the same manner prior to installation. Ambient temperature shall not exceed 100 degrees F (38 degrees C) after installation.
- B. Close spaces to traffic during resilient flooring installation and for a period of time after installation as recommended in writing by the manufacturer.
- C. Install resilient flooring materials and accessories after other finishing operations, including painting, have been completed.
- D. Where demountable partitions and other items are indicated for installation on top of sheet resilient flooring material, install flooring material before these items are to be installed.
- E. All material shall be from the same batch and the rolls shall be installed in consecutive order. If material from more than one batch is to be used, the job shall be laid out so that different batch numbers are not installed side by side.



1.8 WARRANTY

- A. Signature Sports Flooring warrants its SignaFlex and welding rods to be free from manufacturing defects for 10 years from the date of purchase and the wear layer from excessive wear under normal usage in recommended applications for a ten (10) year period, as long as the product is installed according to the manufacturer's recommendations.

1.9 EXTRA MATERIALS

- A. Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 closeout submittals requirements.
1. Quantity: Furnish quantity of flooring units in full rolls equal to 2 percent of amount installed.
 2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Signature Sports Flooring, a division of Signature Systems Group, LLC
50 East 42nd Street 14th Floor, New York, NY 10017:
Telephone: (212) 953-1116, (800) 705-1544: Fax (212) 953-1117
Email: info@signaturesportsflooring.com
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600

2.2 PROPRIETARY PRODUCT(S)

- A. SignaFlex manufactured by Signature Sports Flooring for indoor commercial applications.
1. 4.5mm SignaFlex rolled sheet vinyl
 2. 6.5mm SignaFlex rolled sheet vinyl
 3. 8.0mm SignaFlex rolled sheet vinyl
- B. SignaGrip adhesives manufactured by Signature Sports Flooring

2.3 PRODUCT DESCRIPTION

- A. The SignaFlex material shall be a prefabricated sport surface with flooring design and smooth embossed surface as supplied by Signature Sports Flooring. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed. Printing of wood design shall closely replicate standard strip flooring in size (approximately 2-1/4" width), color, board length and grain appearance. The design shall be protected by a clear layer of pure PVC and top coated with a factory applied polyurethane finish. Intermediate layers of calendared PVC and non-woven fiberglass provides balance and stability. Foam force reduction layer is high-density closed cell PVC foam with honeycomb embossing and must be applied in one continuous manufacturing process. Laminated or adhered foam layers will not be allowed. Flooring will contain anti-fungal treatment.



2.3.1 SIGNAFLEX – 4.5MM ROLLED SHEET VINYL

Resilient Sheet Flooring: SignaFlex 4.5mm by Signature Sports Flooring with the following characteristics:

- | | |
|-----------------------------|--|
| A. Construction: | High performance polyurethane top layer, clear 100% vinyl wear layer, high-res image layer, reinforcing woven fiberglass inner layer, closed cell foam backing |
| B. Reference Specification: | ASTM F 1303, Type I, Grade 1. |

Physical Data:

- | | |
|---------------------|---|
| A. Roll Size: | 1.8m width x 20m long rolls (.177" x 71" x 65.6') |
| B. Weight: | 3.10 kg/m ² |
| C. Backing Class: | 4-ply fused backing system that includes 1.7mm PVC internal layer and polyester mesh backing - Class A. |
| D. Colors: | See manufacturer's standard colors. |
| E. Total Thickness: | 4.5mm (0.177in.) (ASTM F 386) |

Performance Characteristics:

- | | |
|---------------------------------|---------------------------------|
| A. Sliding Properties: | .4-.6 (DIN V18 032-2) |
| B. Vertical Deformation: | 1.4mm (DIN V18 032-2) |
| C. Vertical Ball Rebound: | 99% (DIN V18 032-2) |
| D. Behavior under Rolling Load: | 1000N (DIN V18 032-2) |
| E. Taber Abrasion: | .19g (EN ISO 5470-1) |
| F. Shock Absorption: | >25% (DIN V18 032-2) |
| G. Flammability | Pass |
| H. Area Deflection: | 0% (DIN V18 032-2) |
| I. Residual Impression: | .19mm (DIN V18 032-2) |
| J. Chemical Resistance: | Excellent (KS M 3802-99) |
| K. Dimension Stability: | .01 (W); .03 (L) (KS M 3802-99) |



2.3.2 SIGNAFLEX – 6.5MM ROLLED SHEET VINYL

Resilient Sheet Flooring: SignaFlex 6.5mm by Signature Sports Flooring with the following characteristics:

- | | |
|-----------------------------|--|
| A. Construction: | High performance polyurethane top layer, clear 100% vinyl wear layer, high-res image layer, reinforcing woven fiberglass inner layer, closed cell foam backing |
| B. Reference Specification: | ASTM F 1303, Type I, Grade 1. |

Physical Data:

- | | |
|---------------------|---|
| A. Roll Size: | 6.5mm x 1.8m width x 15m long rolls (.256" x 71" x 49.2') |
| B. Weight: | 4.30 kg/m ² |
| C. Backing Class: | 4-ply fused backing system that includes 1.7mm PVC internal layer and polyester mesh backing. |
| D. Colors: | See Manufacturer's standard colors. Custom colors available |
| E. Total Thickness: | 6.5mm (0.256in.) |

Performance Characteristics:

- | | |
|---------------------------------|--------------------------|
| A. Sliding Properties: | .4 (DIN V18 032-2) |
| B. Shock Absorption: | ≥25% (DIN V18032-2) |
| C. Vertical Deformation: | .6mm (DIN V18032-2) |
| D. Vertical Ball Rebound: | 99% (DIN V18032-2) |
| E. Behavior under Rolling Load: | 1000N (DIN V18032-2) |
| F. Taber Abrasion: | .14g (ASTM D3389-94) |
| G. Flammability: | Pass |
| H. Residual Impression: | .22mm (DIN V18 032-2) |
| I. Dimensional Stability: | 0.1% (ASTM F2199-02) |
| J. Width Deformation: | 0% (DIN V18032-2) |
| K. Chemical Resistance | Excellent (ASTM F925-02) |

2.3.3 SIGNAFLEX – 6.5MM ROLLED SHEET VINYL (Maple 2)

Resilient Sheet Flooring: SignaFlex 6.5mm by Signature Sports Flooring with the following characteristics:

- | | |
|-----------------------------|--|
| A. Construction: | High performance polyurethane top layer, clear 100% vinyl wear layer, high-res image layer, reinforcing woven fiberglass inner layer, closed cell foam backing |
| B. Reference Specification: | ASTM F 1303, Type I, Grade 1. |

**Physical Data:**

- | | |
|---------------------|---|
| A. Roll Size: | 6.5mm x 1.8m width x 15m long rolls (.256" x 71" x 49.2') |
| B. Weight: | 4.39 kg/m ² |
| C. Backing Class: | 4-ply fused backing system that includes 1.7mm PVC internal layer and polyester mesh backing. |
| D. Colors: | Northern Maple |
| E. Total Thickness: | 6.5mm (0.256in.) |

Performance Characteristics:

- | | |
|--|---------------------|
| A. Sliding Properties (Coefficient of Friction): | 21 (ASTM E303) |
| B. Vertical Deformation: | 0.5mm (DIN 18032-2) |
| C. Vertical Ball Rebound: | 100% (DIN 18032-2) |
| D. Behavior under Rolling Load: | 1000N (DIN 18032-2) |
| E. Taber Abrasion: | .16g (ASTM D4060) |
| F. Force Reduction: | 22% (DIN 18032-2) |
| G. Flammability: | Pass (ASTM D2859) |
| H. Residual Impression: | .32mm (DIN 18032-2) |
| I. Dimensional Stability: | < 0.1% (EN 13746) |
| J. Area Deformation: | 0% (DIN 18032-2) |

2.3.4 SIGNAFLEX – 8.0MM ROLLED SHEET VINYL

Resilient Sheet Flooring: SignaFlex 8.0mm by Signature Sports Flooring with the following characteristics:

- | | |
|-----------------------------|--|
| A. Construction: | High performance polyurethane top layer, clear 100% vinyl wear layer, high-res image layer, reinforcing woven fiberglass inner layer, closed cell foam backing |
| B. Reference Specification: | ASTM F 1303, Type I, Grade 1. |

Physical Data:

- | | |
|---------------------|---|
| A. Roll Size: | 8.0mm x 1.8m width x 11m long rolls (.314" x 71" x 36.1') |
| B. Weight: | 5.2 kg/m ² |
| C. Backing Class: | 4-ply fused backing system that includes 1.7mm PVC internal layer and polyester mesh backing. |
| D. Colors: | See manufacturer's standard colors. |
| E. Total Thickness: | 8.0mm (ASTM F 386) |

**Performance Characteristics:**

A. Sliding Properties:	.57-.59 (DIN V18 032-2)
B. Shock Absorption:	≥25% (DIN V18 032-2)
C. Vertical Deformation:	1.9mm (DIN V18 032-2)
D. Vertical Ball Rebound:	99% (DIN V18 032-2)
E. Behavior under Rolling Load:	1000N (DIN V18 032-2)
F. Taber Abrasion:	.21g (EN ISO 5470-1)
G. Flammability	Pass
H. Residual Impression:	.22mm (DIN V18 032-2)
I. Chemical Resistance:	Excellent (KS M 3802-99)
J. Dimensional Stability by Heating:	.02 (W); .05(L) (KS M 3802-99)
K. Area Deflection:	0% (DIN V18 032-2)

2.4 SIGNAGRIP ADHESIVES

- A. To ensure complete compatibility with the flooring material, specially compounded adhesives shall be utilized. All adhesives shall be approved by Signature Sports Flooring and applied in strict accordance with the adhesive manufacturer's instructions.

PART 3 — EXECUTION**3.1 EXAMINATION**

- A. Installer to field check and approve of job conditions prior to commencement of installation of SignaFlex. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. The installation of the resilient flooring shall not begin until the work of all other trades has been completed, especially overhead trades.
- D. Areas to receive flooring shall be adequately lighted during all phases of the installation process.

3.2 CONCRETE SUB-FLOOR PREPARATION

- A. The concrete base (installed by others), shall be properly cured, dry and clean (usually six weeks or more are necessary for drying depending on water content and atmospheric conditions). Variations in the concrete slab shall not exceed + or - 1/8 inch in a 10 foot radius. Cracks, grooves and other imperfections shall be repaired and the slab shall be swept broom clean by the general contractor. All work required to put the sub flooring in acceptable condition shall be the responsibility of the



general contractor. All concrete sub floor installations should follow the resilient flooring institutes recommendations (RFI) or (RMA).

- B. Concrete sub-floor, on or below grade, shall be adequately waterproofed beneath the slab and the perimeter with a suitable vapor barrier. No concrete curing compounds should be used.
- C. The building shall be dry and closed in. Flooring installation shall not begin until the installer is familiar with existing sub-floor conditions, and after completion of all other work in this area. During cold weather the room temperature shall be maintained at a minimum of 75°F.
- D. When the flooring contractor is satisfied that the concrete is suitable for covering, he may then begin to lay out the Signaflex material.
- E. The moisture content of the slab should not exceed 3 lbs per 1000 square feet in a 24 hour period, according to R.M.A. testing method. (ASTM 1869-0

3.3 INSTALLATION

A. General:

- 1. Flooring material and adhesive shall be acclimated to the installation area for a minimum of 48 hours prior to installation. SignaFlex must be stored standing upright on end.
- 2. Use only Signature Sports Flooring SignaFlex adhesives.
- 3. Use a 1/32 inch by 1/16 inch by 1/32 inch (.75 mm by 1.5 mm by .75 mm) U-notch trowel only.
- 4. Material shall always be visually inspected prior to installations. Any material installed with visual defects will not be considered a legitimate claim as it pertains to labor cost.
- 5. Signature Sports Flooring sheet vinyl is dimensionally stable. It will not shrink or compress when properly installed. If cut too full, it may result in a bubble.
- 6. Install all cuts and rolls in consecutive sequence.
- 7. Do not reverse sheets for seaming.
- 8. Ensure that all recommendations for sub-floor and jobsite conditions are met prior to beginning the installation. Start of installation will indicate that Installer has accepted these conditions.

B. Preparation of Subfloor

- 1. The General Contractor will supply a smooth, flat concrete finish which will be achieved manually or mechanically. The slab will have a tolerance of $\pm 1/8"$ in a 10' radius. No curing compounds are to be used.
- 2. The concrete sub floor will be cured for a minimum of at least sixty (60) days.
- 3. Saw cuts are recommended in lieu of construction key way and expansion joints.
- 4. The concrete floor temperature will have to be maintained at a minimum of 75°F during the installation and the Contractor will make sure that the moisture content does not exceed 3 lbs per 1000 square feet in a 24 hour period, according to R.M.A. testing method. (ASTM 1869 04).
- 5. Before proceeding with any work, inspect the sub floor surface and report in writing to the Project Manager and the General Contractor any visible defects on the surface such as cracks, bumps, rough areas, or variations in planarity.
- 6. No grease, oil, paint, dust, concrete curing compounds or any contamination should be remaining on the concrete sub floor.
- 7. Before proceeding with the Signaflex material installations, clean the concrete surface to remove any dirt or foreign materials. Sanding of the sub floor is mandatory.
- 8. The General Contractor shall patch and repair all cracks, voids, and other imperfections of concrete with high strength portland cement based patching material - Ardex K-15 or equal, approved by the manufacturer. Do not use gypsum based patching materials. If concrete is out of level then it should be properly leveled by an experienced underlayment contractor using cement based material that will provide a minimum of 3,000 p.s.i. compressive strength and sufficient bond to existing clean concrete surface - Ardex K-15 or equal, approved by the manufacturer. After completion of sanding, patching and leveling, vacuum or sweep entire



surface of concrete to remove loose dust and dirt before starting the installation of the material.

Note: Should moisture content exceed 3lbs per 1000 sqft in a 24 hour period, according to R.M.A. Testing Method (ASTM 1869-04), Manufacturer recommends use of SignaFlex moisture barrier.

C. Adhesion Methods:

1. Glue material to sub-floor no sooner than 24 hours after the material has been laid in position.
2. Use an acrylic type adhesive, applied with a fine tooth notched trowel, giving coverage of between 100 to 150 square feet per gallon.
3. Recommended Adhesives as approved by manufacturer.
4. Recommended trowel gauge: 1/16" x 1/16" x 1/16" square notched. Throw away blades are recommended in order to maintain proper notch size. Use one blade for approximately 700 square feet of floor area.

D. Recommendations using Adhesives

1. Follow adhesive manufacturer's instructions after the material has been in place for 24 hours.
2. Respect the open time of the adhesive which will vary according to temperature, humidity, porosity, and absorption rate of the sub-floor.
3. Insufficient open time will cause bubbling. Too long of an open time will result in poor adhesive transfer.

E. Installation of First Sheet Vinyl

1. Strike a chalk line across the center of the playing area. Be sure that the line is square to the room.
2. Lay the first length of SignaFlex along this chalk line and then work progressively outward, leaving a small gap between the sheets to allow the material to relax.
3. Material should be unrolled in place for 24 hours prior to adhesion.
4. Starting from the center line and working outward, fold the sheets back halfway and apply the adhesive to the sub-floor.
5. Position the first half into the adhesive, and then repeat this procedure with the second half.
6. Continue laying sheets by butting the edges or overlapping and double cutting through both sheets using a strait edge.

F. Rolling

1. Manually: Immediately after material is positioned onto the adhesive.
2. Using a roller: roll entire surface crossways using a 75 pound (minimum) flooring roller.

G. Seaming of Joints (Heat Welding Method)

1. Mechanical routing using an electric routing machine by Turbo Heat Welding tools or equal approved by the manufacturer.
 - a. Foam Backed Sheet - Rout only through depth of wear layer.
2. Manual Seaming
 - a. This must be done with a heat welding gun with variable temperature control and a speed weld nozzle by Turbo Heat Welding tools or equal approved by manufacturer.
 - b. Nozzle size is 4mm
 - c. Avoid forcing welding rod into the seam to ensure a satisfactory finish.
 - d. For all types of welding equipment, observe manufacturer's instructions, particularly with regard to speed of welding.
 - e. Chalk both sides of the seam to avoid scorching and shinning of the material during the welding procedures.
3. Automatic Electric Welding Machine (Required in Large Areas)
 - a. This is done using a Turbo type automatic welding machine with a variable temperature hot air gun and a multi-outlet nozzle. Set the pressure of the guide to avoid forcing the weld into the seam (see tool manufacturer's installation procedure).

H. Finishing

1. Trimming is done in two stages once the welding rod and material have cooled.
2. First, trim using a cable slide.
3. Second, trim flush with the floor using a spatula or hook-billed knife.
4. After the welding rod is trimmed smooth or flush with the top surface, check the entire seam to ensure that the welding cord is bonded properly and is flush with the top wear layer.



3.4 HEAT WELDING

- A. Heat welding is the recommended procedure for sheet vinyl seams, coving and corner fill pieces. Professionally heat welded seams provide a strong, watertight, hygienic, monolithic surface.
- B. The welding rod is made from PVC which is designed to melt at the same temperature as the PVC of the sheet flooring, permanently fusing the two together.
- C. Heat welding shall be done after the flooring adhesive has set up, usually the following day.
- D. Seam edges shall be slightly gapped and vertical. Wide gapped or undercut seams will prevent quality welds.
- E. The depth of the groove shall be 1/2 to 2/3 the thickness of the material. Be careful not to go too deep. The groove shall also be centered along the two edges. This is very important to ensure proper strength and bonding of the welding rod.
- F. Clean grooves thoroughly of all foreign contamination, including dust.
- G. Use only professional quality welding equipment that will maintain sufficient temperatures. Many types, sizes and styles of welding tips are available today. A tip shall be chosen to produce a quality weld without damaging the appearance of the sheet vinyl.
- H. Preheat welding gun before beginning. Temperature shall be set to approximately 750 degrees. It is recommended that the installer perform a test weld on some waste material to verify proper temperature and welding speed prior to welding installed material.
- I. Determine the correct welding speed by ensuring that the welding rod actually fuses into the groove. A small ridge shall form on either side of the welding rod, at the vinyl surface. If no ridge forms, you have not heat welded the seam.
- J. While the welding rod is still warm, trim off 1/2 -2/3 the excess rod with a spatula knife and trim plate in one continuous movement.
- K. After the rod has cooled to room temperature, make the final trim pass using only a razor sharp spatula knife in one continuous movement.
- L. Apply a glaze to the surface of the trimmed weld. Remove the tip from the welding gun. Hold the gun a few inches above the welded seam and apply hot air along the seam until the surface of the weld rod begins to shine. The shine should not exceed the sheen level of the flooring. The glazed seam will be less porous, smoother, and less noticeable.

3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

