

# BEAUFLOOR Xtreme Commercial Vinyl Sheet

## Storage, Handling, Preparation, Installation and Post Installation Protection Instructions and Guidelines

### INTRODUCTION

**CAUTION: THESE INSTRUCTIONS ARE CREATED TO PROVIDE PROFESSIONAL INSTALLERS THE PREFERRED METHODS OF STORAGE, HANDLING, PREPARATION, INSTALLATION AND POST INSTALLATION PROTECTION INSTRUCTIONS/GUIDELINES FOR XTREME COMMERCIAL VINYL SHEET FLOORING. IF YOU ARE “NOT” A PROFESSIONAL INSTALLER, DO NOT ATTEMPT TO HANDLE, PREPARE THE SUBSTRATE OR INSTALL THE FLOOR!**

Beauflor’s Xtreme Commercial Vinyl Sheet Flooring is manufactured in two widths, 6’ 6” (2M) and 13’ 2” (4M) to accommodate the most challenging installation. Beauflor’s Xtreme Commercial Vinyl Sheet Flooring is not only pliable and installer friendly, but its wide widths that eliminate unwanted seams in sterile, healthcare environments. Its proprietary vinyl wear surface not only makes it easy to maintain, but provides a long-term, durable wear surface. Xtreme is equipped with excellent stain and bacteria resistance that withstands the toughest use.

When Xtreme is installed according to Beauflor’s detailed installation instructions, it is ideal for heavy traffic and rolling load areas including schools, offices, department stores, day care centers, retirement homes and hospitals.

As with all flooring, the long term performance and ease of maintenance is dependent on compulsory items necessary to extend the floor’s life and keep it looking good. Walk off mats at entry ways, proper floor protectors on all furniture, tables & chairs including the correct casters when applicable and furniture moving aids utilized during the moving of heavy items are all key components for peak and long term performance of Beauflor’s Xtreme Commercial Vinyl Sheet Flooring.

### STORAGE, HANDLING AND TRANSPORTING OF MATERIALS

Beauflor’s Xtreme Commercial Vinyl Sheet Flooring requires care during storage and handling as do all floor covering products, their adhesives and all the ancillary items for floor preparation/installation.

It is critical to store the Beauflor’s Xtreme Commercial Vinyl Sheet Flooring in a dry, temperature-controlled interior environment. The temperature range should be no lower than 65° F and no greater than 85° F and the relative humidity should be controlled and maintained between 25-65% RH.

Beauflor’s Xtreme Commercial Vinyl Sheet Flooring is packaged in rolls which must be stored on ends with steps taken to protect and secure the rolls from falling (2M). Rolls that are 4M must be stored flat on shelving that is smooth and solid to avoid any damage or distortion. Make sure the 4M rolls are stacked only one roll high so that the added weight does not compress the support cores in the roll of flooring. Stored rolls must be protected from forklifts and other traffic that could damage the rolls.

Handling rolls of Beauflor's Xtreme Commercial Vinyl Sheet Flooring can be heavy and bulky. Always use proper material handling equipment when moving these products. When handling rolls, always use proper lifting techniques and never lift more than you can safely handle. Ensure that the rolls and pallets are fully supported during transportation. Even distribution of the secured material is compulsory in your truck or van to avoid load shifting or movement to avoid damage and eliminate any safety risks. Rough handling can damage Beauflor's Xtreme Commercial Vinyl Sheet Flooring before installation. Avoid delays during the installation by simply exercising care when handling and transporting the packaged rolls.

## PRE-INSTALLATION PRECAUTIONS AND CHECKLIST

Before starting the project, take a few moments and check the flooring materials to ensure that you have the correct pattern, style and color. In addition to checking the flooring materials, make sure the correct amount of Beauflor installation adhesive and sundries required to complete the installation has been ordered. Also, ancillary items that may be required to successfully complete the installation should be on hand as well, for example, transition moldings, cove base, shoe moldings, patching compounds, vapor reduction systems etc. Care should be taken in understanding the limits of all ancillary materials to ensure their compatibility with Beauflor's Xtreme Commercial Vinyl Sheet Flooring, their adhesives and warranties. All complimentary materials required to complete the installation will be warranted by the respective manufacturer of those products.

Most critical prior to commencement of the installation, confirm the correct amount of material with sequential production or run numbers to avoid any deviation in gloss, color, design or pattern. **Beauflor will not pay labor charges on claims filed for materials installed with obvious visible defects.** If during the course of installation you discover visible defects, stop the installation immediately and contact your Beauflor Sales representative for instructions as how to proceed.

Every job is unique in its expectations and requirements. Prior to commencement of work, be certain of job specific requirements for layout, sequence, seam location/orientation, jobsite limitations, etc. and that expectations for completion are correct and can be met before starting the job.

### Jobsite Conditions

The environment and the condition of the underfloor play a key role in assuring a successful flooring product installation. If the environment is not enclosed and climate-controlled or the underfloor is not structurally sound with excessive vapor/pH readings, the chances for a successful flooring installation is radically reduced or compromised.

Temperature and humidity play a vital role in a successful installation. Do not install Beauflor's Xtreme Commercial Vinyl Sheet Flooring in any environment that is not enclosed and is not or cannot be climate controlled. Ideally the permanent HVAC should be operational and should be running continuously three weeks prior to the Beauflor's Xtreme Commercial Vinyl Sheet Flooring installation to climatize the environment and sufficiently acclimate the underfloor so that it will be similar to the conditions when the space is occupied. The jobsite should be maintained at a minimum temperature of 65°F and should not exceed 85°F for a minimum of 72 hours prior to installation, during installation and 72 hours after installation, along with the material, adhesives, patch and other temperature/humidity sensitive ancillary items or materials. The range for relative humidity should be between 25% and 65% relative

humidity during this time as well. After the flooring is installed, make sure the temperature does not fall below 55°F or exceeds a 100°F and the interior environment continues to be a climate-controlled space. Failure to control the interior environment can adversely affect the performance of the flooring along with its adhesives.

The structural integrity of the job site's underfloor is a critical component of the long term performance of the Beauflor's Xtreme Commercial Vinyl Sheet Flooring. The type and method of underfloor construction, grade level, underfloor system and its composition can impact the installation of the Beauflor's Xtreme Commercial Vinyl Sheet Flooring. Often, local building codes establish minimum requirements and may result in insufficient rigidity, flatness or smoothness as it pertains to the minimum requirements for successful installation of Beauflor's Xtreme Commercial Vinyl Sheet Flooring. Therefore, always make sure you meet the minimum requirements provided in Beauflor's Xtreme Commercial Vinyl Sheet Flooring Installation Instructions.

Structural underfloor systems are comprised of either concrete (or cement-like materials) or wood. The underfloor systems described in these installation guidelines are provided to give flooring installers accurate information to make solid decisions regarding an underfloor system they may encounter on various jobsites. For comprehensive, detailed information regarding each of these systems, contact **The American Concrete Institute** or **The American Plywood Association**.

Other critical details captured when visiting the job site, allows for field measurements, making sure all the other trades have completed their work and are no longer occupying the space and finally making sure that lighting is operating so that both the preparation of the underfloor and flooring installation can both be done in a well-lit area.

**Most important, commencement of the flooring installation means acceptance of the existing underfloor and site conditions on behalf of the flooring contractor.**

## **SUBFLOOR/UNDERFLOOR RECOMMENDATIONS & PREPARATION**

### **Underfloor Heating**

Beauflor's Xtreme Commercial Vinyl Sheet Flooring is suitable for use over underfloor heating systems, providing the heating system has been properly installed. The heating system should have an automatic cut-off to ensure that the temperature never exceeds 85° Fahrenheit. This applies to both heated water systems and electrical systems. If the heating system exceeds 85° Fahrenheit then there will be a risk of discoloration.

Ensure that the underfloor heating is working correctly prior to fitting and installing the floor covering. The underfloor heating must be turned off 48 hours prior to installation and should not be turned on for 48 hours after the installation of the vinyl flooring. During this period if the underfloor heating is the only source of heat, then an alternative form of heating must be provided to maintain a room temperature no lower than 65° Fahrenheit and no higher than 85° Fahrenheit. Forty-eight hours after the installation, the temperature of the underfloor heating should be turned on and raised gradually in increments of 40° Fahrenheit until the desired level has been reached. The temperature at the underfloor (subfloor) level should never exceed 85° Fahrenheit.

## Concrete Underfloors

Concrete underfloors must be constructed in accordance with the American Concrete Institute (ACI) 302, 1R-95 Guide for Concrete and Slab Construction. The concrete underfloors must have minimum compressive strength of 3500 psi, a minimum dry density of 115 lb./cubic foot, minimum concrete mix water/cement ratio of less than 0.45 and must be finished and cured according to ACI. Beauflor's Xtreme Commercial Vinyl Sheet Flooring must be installed over concrete underfloors conforming to ASTM F710 for concrete and other monolithic floors.

Concrete underfloors **MUST** be dry, clean, smooth, flat (no more than 3/16" in 10' or must not exceed 1/32" in span of 12") and structurally sound and free of contaminants such as grease, oils, paint and/or old adhesive. Surface contaminants should be considered any substance that would prohibit or interfere with the bond of Beauflor's Xtreme Commercial Vinyl Sheet Flooring to the concrete underfloor, such as paints, solvents, oils, existing adhesives and/or curing or parting compounds. Surface contaminants must be mechanically removed, **NEVER** use chemicals or solvents to remove concrete underfloor surface contaminants. In addition, surface defects or deficiencies must be corrected before installing flooring product. Low spots, cracks, holes and other irregularities can be patched using a high quality latex Portland cement patching compound engineered and warranted by the patch manufacturer for this purpose by following their written instructions for mixing and application. Any sanding or grinding that generates dust must be removed using a HEPA vacuum to insure a dust free underfloor before patching or leveling and installing Beauflor's Xtreme Commercial Vinyl Sheet Flooring.

Do not install Beauflor's Xtreme Commercial Vinyl Sheet Flooring over expansion joints. Cut Beauflor's Xtreme Commercial Vinyl Sheet Flooring neatly and uniformly to each side of the joint and carefully fill with an elastomeric polyurethane joint filler or cover the joint with an expansion joint plate cover; but always honor expansion joints. Other types of concrete joints such as construction control and/or saw cuts can be filled, smoothed and leveled using an appropriate latex Portland cement patching compound.

### Moisture and pH Testing

Vapor (moisture) emissions from concrete underfloors must not exceed 5 lbs per 1000 s/f using the Calcium Chloride Test Method (ASTM F 1869-04) and not exceed 85% internal concrete relative humidity as tested in accordance with ASTM F 2170-02. A pH test should be conducted on all concrete underfloors, regardless of age of the concrete or grade level. The pH level of the underfloor surface shall not be higher than 10. If any one of the limits of the aforementioned tests is exceeded, **do not install Beauflor's Xtreme Commercial Vinyl Sheet Flooring**. In cases with alkalinity above 10, neutralize the underfloor surface until the pH readings are below 10.

**ALL TESTING MUST BE FORMALLY DOCUMENTED AT THE TIME OF TESTING, JUST PRIOR TO INSTALLATION, FOR FUTURE REFERENCE IN THE EVENT CONDITIONS CHANGE AND YOU HAVE A FAILURE. THIS STEP IS FOR YOUR PROTECTION, DO NOT IGNORE!**

Vapor Reduction Systems can be a viable option when encountering concrete underfloors that have documented excessive vapor emissions, especially when the concrete is 3-6 months old or older. Final determination of a Vapor Reduction Systems' suitability and its warranties in regards to its performance and and/or any damage that may be caused to Beauflor's Xtreme Commercial Vinyl Sheet Flooring and their adhesives due to deficiencies in the Vapor Reduction System are the responsibility of the Vapor Reduction System manufacturer and the flooring contractor/installer.

## Wood Underfloors

All wood underfloor systems should be suspended at least 18" above the ground with adequate cross-ventilation. Always cover the ground surface of the crawl space with a suitable vapor barrier. All wood underfloors must be structurally sound, dry and must comply with local building codes. Wood underfloors should be double-layer construction with a minimum total thickness of 1" and must be solidly fastened to appropriately spaced floor joists. This underfloor should be covered with a minimum ¼" thick APA Underlayment Grade Plywood or other underlayment panel approved and warranted beneath resilient flooring. Follow the panel manufacturer's instructions for panel layout, fastener type, fastener length, fastener spacing and approved panel patching protocol. Be aware that many double-layered plywood underfloors may have panels that carry the American Plywood Association (APA) performance rating of Sturd-I-Floor, a panel that was designed as a combination subfloor/underlayment panel, but due to construction traffic and weather exposure often becomes damaged, therefore, in this situation Beauflor recommends installing an approved minimum ¼" underlayment panel over the Stud-I-Floor.

## Existing Resilient Floor Coverings

Occasionally existing resilient floor coverings may be present and it is important to know that installation over these existing resilient floors with Beauflor's Xtreme Commercial Vinyl Sheet Flooring can compromise the performance properties of Beauflor's Xtreme Commercial Vinyl Sheet Flooring dramatically if several key factors are NOT considered before installation. The performance of Beauflor's Xtreme Commercial Vinyl Sheet Flooring is completely dependent on the condition and ongoing/continued bond of the existing resilient floor covering.

The key factors critical to the installation of Beauflor's Xtreme Commercial Vinyl Sheet Flooring over existing resilient floor covering are as follows. The existing resilient floor covering must meet the subsequent conditions:

Be fully adhered (full spread installation only) and must be well bonded to a suitable substrate as described aforementioned section titled **SUBFLOOR/UNDERFLOOR RECOMMENDATIONS & PREPARATION (remember, in most cases, you will not be able to confirm if it is a suitable substrate since it is covered with the existing flooring)**

- Consist of a single layer of existing resilient flooring only
- Must be free of any evidence of alkaline slats, hydrostatic pressure, or excessive moisture from the underfloor that it is installed
- Cannot be heavy cushioned or a foamed backed existing resilient floor
- Cannot be a perimeter-fastened or loose-laid existing resilient floor
- Cannot be self-stick tile, rubber tile, asphalt tile, or surface containing any residual asphalt-based adhesives

**The floor covering retailer or flooring installer must determine if the existing resilient floor covering is a suitable underfloor for the installation of Beauflor's Xtreme Commercial Vinyl Sheet Flooring. If there is any doubt regarding existing resilient floor covering's suitability, remove it or cover it with the appropriate underlayment. The floor covering contractor and/or flooring installer will assume the burden of both the warranty and performance of the new flooring installation when making a decision to install over pre-existing resilient floor covering.**

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## Removal of Existing Resilient Floor Coverings

**WARNING:** Do not sand, dry-sweep, dry-scrape, drill, saw, bead blast or mechanically chip or pulverize existing resilient flooring, backing, felt lining or asphaltic “cutback” adhesives. These products may contain either asbestos fibers or crystalline silica. Avoid creating dust. Inhalation of such dust containing asbestos fibers or crystalline silica may cause cancer and respiratory tract diseases. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the product is a non-asbestos containing material, you must assume it contains asbestos. Regulations may require that the material be tested to determine asbestos content.

A brochure from the **Resilient Floor Covering Institute** entitled **Recommended Work Practices for Removal of Resilient Floor Coverings** provides a defined set of instructions for removing all resilient floor covering types.

**Important Notice:** Various federal, state and local government agencies have regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering material that contains, or is presumed to contain asbestos, you must review and comply with all applicable federal, state and local government regulations.

## Mold and Mildew

Prior to removing an existing resilient floor following the RFCI Recommended Work Practices for Removal of Resilient Floor Coverings (unless state or local law requires other measures) or installing a new floor, if there are visible indications of mold or mildew or the presence of a strong musty odor in the area where resilient flooring is to be removed or installed, the source of the problem should be identified and corrected before proceeding with the flooring work. In virtually all situations, if there is a mold issue, there is or has been an excessive moisture issue. Visible signs of mold or mildew (such as discoloration) can indicate the presence of mold or mildew on the subfloor, on the underlayment, on the back of the flooring, and sometimes even on the floor surface. If mold or mildew is discovered during the removal or installation of resilient flooring, all flooring work should stop until the mold/mildew problem (and any related moisture problem) has been addressed. Before installing the new resilient flooring, make sure the underlayment and/or subfloor is allowed to thoroughly dry and that any residual effect of excessive moisture, mold, or structural damage has been corrected. To deal with mold and mildew issues, you should refer to the U.S. Environmental Protection Agency (EPA) guidelines that address mold and mildew. Depending on the mold or mildew condition present, those remediation options range from cleanup measures using gloves and biocide to hiring a professional mold and mildew remediation contractor to address the condition. Remediation measures may require structural repairs such as replacing the underlayment and/or subfloor contaminated with mold and mildew as a result of prolonged exposure to moisture.

The EPA mold guidelines are contained in two publications "**A Brief Guide to Mold, Moisture and Your Home**" (EPA 402-K-02-003) and "**Mold Remediation in Schools and Commercial Buildings**" (EPA 402-K-01-001). Appendix B of the "Mold Remediation in Schools and Commercial Buildings" publication describes potential health effects from exposure to mold, such as allergic and asthma reactions and irritation to eyes, skin, nose and throat. These publications can be located on EPA's website at [www.epa.gov/iaq/molds](http://www.epa.gov/iaq/molds).

## Specialty Underfloors

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Specialty underfloors that may be suitable for the installation of Beauflor's Xtreme Commercial Vinyl Sheet Flooring include properly prepared ceramic/porcelain tiles, cement based Terrazzo, poured (seamless) floors and metal floors. Always follow your patch/leveling compound manufacturer guidelines on preparing these substrates to accept Beauflor's Xtreme Commercial Vinyl Sheet Flooring.

## **ADHESIVE, SUBSTRATE PRIMER, SEALER AND ENCAPSULATOR**

### **Beauflor 4N1 Multi-Purpose Acrylic Flooring Adhesive**

Beauflor Multi-purpose 4N1 is an acrylic adhesive with extremely aggressive tack, formulated to provide high shear and peel strength for installing luxury vinyl tile (LVT), luxury vinyl plank (LVP), vinyl sheet and vinyl click flooring. Multipurpose 4N1 forms a secure plasticizer and moisture resistant bond to most types of vinyl flooring. This high solids adhesive is also non-staining and contains an antimicrobial system to protect the adhesive from mold and mildew.

#### **Before you begin (4N1 Adhesive):**

**Important:** Proper substrate preparations are essential. Moisture testing must be performed and documented before installation begins. Read the section titled **Subfloor & Underfloor Recommendations and Preparation** for complete instructions before beginning installation.

#### **Usage (4N1 Adhesive):**

Follow Beauflor's installation instructions. All substrate preparation and testing procedures must conform to appropriate ASTM F710 guidelines. NOTE: It is up to the end user to determine the coverage that is appropriate for flooring and jobsite conditions. Bond testing prior to the installation will help identify the appropriate application rate, open and working time, and any potential bonding problems to the substrate or flooring. Follow Beauflor's installation instructions and guidelines regarding adhesive application rate and method. Always roll the installation in both directions with a 75-100 lbs. 3-section roller immediately after flooring is placed and positioned, ensuring complete contact with adhesive.

#### **Porous substrates (4N1 Adhesive):**

Vinyl sheet flooring may be placed into adhesive after 10–20 minutes open time (flash-off) over a porous substrate.

When installing vinyl plank and tile over a porous substrate, the adhesive should be allowed to dry to the touch sufficient to prevent slippage. Loss of adhesion can result if the flooring is not installed within the working time of the adhesive.

#### **Non-porous substrates (4N1 Adhesive):**

Install vinyl sheet, tiles and plank flooring into adhesive as it becomes dry to the touch with little or no transfer to finger when touched. This will normally require 30–60 minutes of drying time at suggested installation temperature and humidity. Do not install flooring into wet adhesive on non-porous substrates.

#### **Trowel and coverage (4N1 Adhesive):**

1/16" x 1/32" x 1/32" U-notch trowel: 220-260 square feet per gallon

**Traffic (4N1 Adhesive):**

Follow Beauflor's installation guidelines; otherwise restrict foot traffic for 24 hours after installation. No heavy traffic, rolling loads, or furniture placement for 72 hours after installation. Additional time may be necessary if the installation is over a non-porous substrate. Allow at least five days following the installation before conducting wet cleaning procedures or initial maintenance.

**Substrate conditions (4N1 Adhesive):**

Use on concrete substrates with up to 90% RH for flooring installed on or above grade (per current ASTM F2170), and pH of 8.0–10.0.

**Use with these flooring types (4N1 Adhesive):**

Luxury vinyl tile (LVT), Luxury vinyl plank (LVP), Vinyl sheet flooring, Vinyl click.

**Limitations (4N1 Adhesive):**

Do not allow product to freeze. Do not use on substrates that have been chemically cleaned or over treated plywood. Do not use to install vinyl-backed flooring over asphalt-based (cutback) adhesive residues.

**Beauflor Substrate Primer**

Beauflor Substrate Primer is an acrylic floor preparation solution designed to improve flooring substrates before the application of floor-covering adhesives. Beauflor Substrate Primer will improve dry, porous substrates for a better bonding surface, help protect the adhesive from alkalinity damage and improve adhesive spread rate.

Beauflor Substrate Primer is suitable for use over APA approved flooring grade plywood, concrete or acoustical concrete and floor patch and can prevent over absorption of adhesives resulting in a better bond. Beauflor Substrate Primer may also be used as a primer for gypsum-based substrates prepared in accordance with ASTM F2419.

Beauflor Substrate Primer is designed and warranted for use only in conjunction with approved Beauflor adhesives.

**Before you begin:**

**Important:** Proper substrate preparations are essential. Moisture testing must be performed and documented before installation begins. Read the section titled **Subfloor & Underfloor Recommendations and Preparation** for complete instructions before beginning installation.

**Usage:**

Use on concrete substrates to block high surface pH conditions. Substrate must be clean and dry. Mechanically remove all existing adhesive ridges, leaving surface smooth and make certain substrate is free of oil, grease, sealers or curing agents, adhesive residue or any material that would prevent adequate coating.

Apply Beauflor Substrate Primer as an even coat over the entire surface of the floor. Only one coat is required. Allow to dry for a minimum of 4 hours, or until completely dry and hardened to the touch.



**STOP:** Due to the many additives being used in or on concrete slabs it is critical that the bond test be performed. Some treatments will repel any sealer or adhesive. If usage instructions are not completely followed, DO NOT USE THIS PRODUCT.

**Coverage:** Approximately 350-400 square feet per gallon using a 3/8" nap roller.

**Substrate conditions:**

Use on porous concrete substrates with up to 85% RH for flooring installed on or above grade (per current ASTM F2170), and pH of 8.0-12.0.

**Beauflor Moisture Seal 95**

Beauflor Moisture Seal 95 is an aqueous acrylic polymer that dries to a translucent yellow film that is alkali and water-resistant. It designed for use on interior porous concrete substrates as a penetrating and film-forming polymer to protect flooring installations against moisture readings up to 95% in-situ Relative Humidity (RH), moisture vapor emission rate up to 10 lbs., and pH of 11.0.

Moisture Seal 95 is FloorScore® certified and contains an antimicrobial system for enhanced resistance to mold and mildew. Moisture Seal 95 is designed and warranted for use only in conjunction with approved Beauflor flooring adhesives.

**Before you begin:**

**Important:** Proper substrate preparations are essential. Moisture testing must be performed and documented before installation begins. Before applying Moisture Seal 95, the concrete substrate must be completely free of dust, dirt, paint, oil, curing or release agents (either topically applied or admixed into the concrete before it is poured), sealers, adhesives or anything that would prevent a proper bonding directly to the concrete. Excessively hard concrete surfaces may need to be abraded to achieve porosity. Concrete substrates may be tested for porosity by placing approximately a quarter-size (1 inch diameter) bead of water on the surface to observe absorption. If the water is not absorbed within 5 minutes, the floor should be considered non-porous. Read the section titled **Subfloor & Underfloor Recommendations and Preparation** for complete instructions before beginning installation.

**Usage:**

Use Moisture Seal 95 to protect interior flooring installations from high moisture and alkalinity.

**Note:** Moisture Seal 95 is not guaranteed or recommended for use where hydrostatic pressure exists, and must not be used on below-grade substrates. The concrete must be tested for porosity by placing a quarter-sized bead of water on the surface to observe absorption. If the water is not absorbed within 5 minutes, do not proceed with the installation.

Moisture Seal 95 cannot serve as a moisture reducer if applied over non-porous substrates, or over old adhesive residues. If old adhesive residue is present, it must be removed by sanding or bead blasting to render the substrate surface porous. A bond test must be performed to test for absorption by rolling Moisture Seal 95 over a 1–2 square feet test area. After the minimum 4 hour drying period, use a putty knife to test the surface. If the Moisture Seal 95 can be scraped

off, it has not penetrated sufficiently, and the substrate will require further sanding or sandblasting.

To help ensure proper adhesive bond for installations where a potential moisture vapor emission problem may exist, apply Moisture Seal 95 on porous concrete with a 3/8" nap roller as an even coat over the entire surface of the floor. Make certain to keep the application roller wet with material. Only one coat is required, at an application rate of 35–40 square yards per gallon. Allow Moisture Seal 95 to dry for a minimum of 4 hours, to the appearance of a light yellow film. Although Moisture Seal 95 can dry in as little as 4 hours depending on slab porosity and ambient conditions, it is good practice to always allow ample time necessary for the Moisture Seal 95 to cure properly before covering.

**STOP:** Due to the many additives being used in or on concrete slabs it is critical that the bond test be performed. Some treatments will repel any sealer or adhesive. If usage instructions are not completely followed, DO NOT USE THIS PRODUCT.

**Coverage:** Approximately 35-40 square yards per gallon using a 3/8" nap roller.

**Substrate conditions:**

Use on porous concrete substrates with up to 95% RH for flooring installed on or above grade (per current ASTM F2170), and pH of 8.0–11.0.

## Beauflor Isolate

Beauflor Isolate is a light-colored, high-strength acrylic polymer compound formulated to isolate old cutback stains and other adhesive residues that would discolor or affect the bond of the new flooring installation. Black asphalt-based cutback adhesive is highly reactive with vinyl back flooring and must be completely removed until there are no remaining trowel ridges or continuous film. Beauflor Isolate can be used to isolate the remaining permanent stain after the cutback has been removed. Prior to the installation of floor covering systems, Beauflor Isolate provides a clean surface for better adhesive bonds. It is solventfree, contains "zero" (calculated) VOC and an antimicrobial system for enhanced resistance to mold and mildew. Beauflor Isolate is designed and warranted for use only with Beauflor 4N1 Multi-purpose, LVT Ultra Bond, E-Wood and HS Resilient Aerosol Spray.

**Before you begin:**

**Important:** Proper substrate preparations are essential. Moisture testing must be performed and documented before installation begins. Read the section titled **Subfloor & Underfloor Recommendations and Preparation** for complete instructions before beginning installation.

**Usage:**

Existing multi-purpose and pressure sensitive adhesives must be mechanically scraped down to a bare residue flat with the substrate. Do not use solvent or any liquid cleaners to remove old adhesives. Beauflor Isolate must be applied over a solid surface. Soft adhesives, excess residue, or any surface that does not support the film will result in a failure of the product. Any remaining residue must be well-bonded with no flaking or peeling.

Floors must be clean, dry and free of dust and dirt, other concrete sealers, curing compounds, wax, oil, paint and other markings, or any foreign matter that will interfere with a good bond. Beauflor Isolate is not recommended for covering over oil and grease contamination, spray

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paint, ink, crayon, grease pencil, permanent markers, chalk lines, or other floor markings that can migrate to the finished flooring. These contaminants should be mechanically removed prior to applying Beauflor Isolate.

Patching of subfloor must follow all Beauflors' application and curing instructions prior to applying Beauflor Isolate. A bond test must be performed over any patching compound before general application of either.

**Directions and Coverage:**

Apply with a 3/8" nap paint roller, as an even coat over the entire surface of the floor. Make certain to keep the application roller wet with material. Only one coat is required at an application rate of 315–360 square feet per gallon. Allow to dry for a minimum of 4 hours, or until completely dry and hardened to the touch.

**Substrate conditions:**

Use on porous concrete substrates with up to 85% RH for flooring installed on or above grade (per current ASTM F2170), and pH of 8.0-10.0.

## INSTALLATION PROCEDURES

### General Recommendations

1. Preplanning should enable the layout to be done economically; minimizing waste.
2. Beauflor's Xtreme Commercial Vinyl Sheet Flooring requires that "ALL" seams be either chemically welded or heat welded, regardless of their location in the installation including the flat seams on the floor, vertical seams on the wall as they transition through the coved areas, including all inside and outside corners. When heat welding is executed correctly it creates a flooring installation that is ideal for health care environment.
3. Before cutting Beauflor's Xtreme Commercial Vinyl Sheet Flooring for an area larger than one roll, make sure that the rolls intended for the installation are from the same manufacturing batch, the rolls are installed in numerical sequential order, the cuts are installed in the order they are cut from each roll and are installed as **"do not reverse sheets for wood grain patterns" or "reverse sheets for the overall patterns"**.
4. Always avoid quarter turning to avoid shade matching (laid at right angles to each other).
5. Plan the layout of seams so they fall at least 6" from wood underlayment joints, seams in existing resilient flooring and/or saw cuts in concrete. **DO NOT INSTALL** over expansion joints.
6. Once the layout has been determined, you should make rough cuts of the Beauflor Xtreme Commercial Vinyl Sheet Flooring so they may become conditioned to environment's temperature and humidity. This step allows the material to "relax" and makes it easier to handle, fit and install.
7. When making rough cuts, make sure to add at least one inch on each end of the cut to allow excess material for accurate fitting and accommodating "out of square" walls.

## Beauflor's Xtreme Commercial Vinyl Sheet Flooring Fitting Practices

1. Recommended fitting procedures for Beauflor Xtreme Commercial Vinyl Sheet Flooring include free hand knifing, pattern scribing and direct scribing.
2. Complex, tight and precise installations may require the use of pattern scribing techniques.
3. Often, the installation may not require the concise fit that pattern scribing provides, but may utilize in areas where an accurate fit is imperative, a direct scribe method for that specific area only.
4. Finally, installers will utilize and employee free hand knifing when the installation provides elements that allow a "close" fit. Most flooring installations typically have a restrictive molding at the perimeter of the room such as cover base or shoe molding.
5. Occasionally installers will find that utilizing all three methods is the most efficient approach to a quality installation.

## Beauflor's Xtreme Commercial Vinyl Sheet Flooring Installation Procedures

1. Always, sweep or vacuum the space to receive flooring before positioning and fitting the sheets of flooring. Then position the first sheet in the room and employee the chosen technique/techniques to fit so that the material lies flat on the floor. Before fitting, position your roller, water bucket, adhesive bucket or sand bags on the sheet of Beauflor Xtreme Commercial Vinyl Sheet Flooring to avoid any movement of the sheet while fitting.
2. Using a straightedge and utility knife with a new straight razor blade (remove oily film from blade before using to avoid contamination of the seam) or an edge trimmer cutting approximately 1/2" from the factory edge (see Photo 1). This step is necessary to remove potential edge-curl created by compression from the rolls being stored on end on edges that will be seamed. If using a utility knife, always cut with the fall off on the same side as the cutting hand and holding the knife at a 90° angle to the underfloor to ensure a square cut. **DO NOT BUTT FACTORY EDGES!**



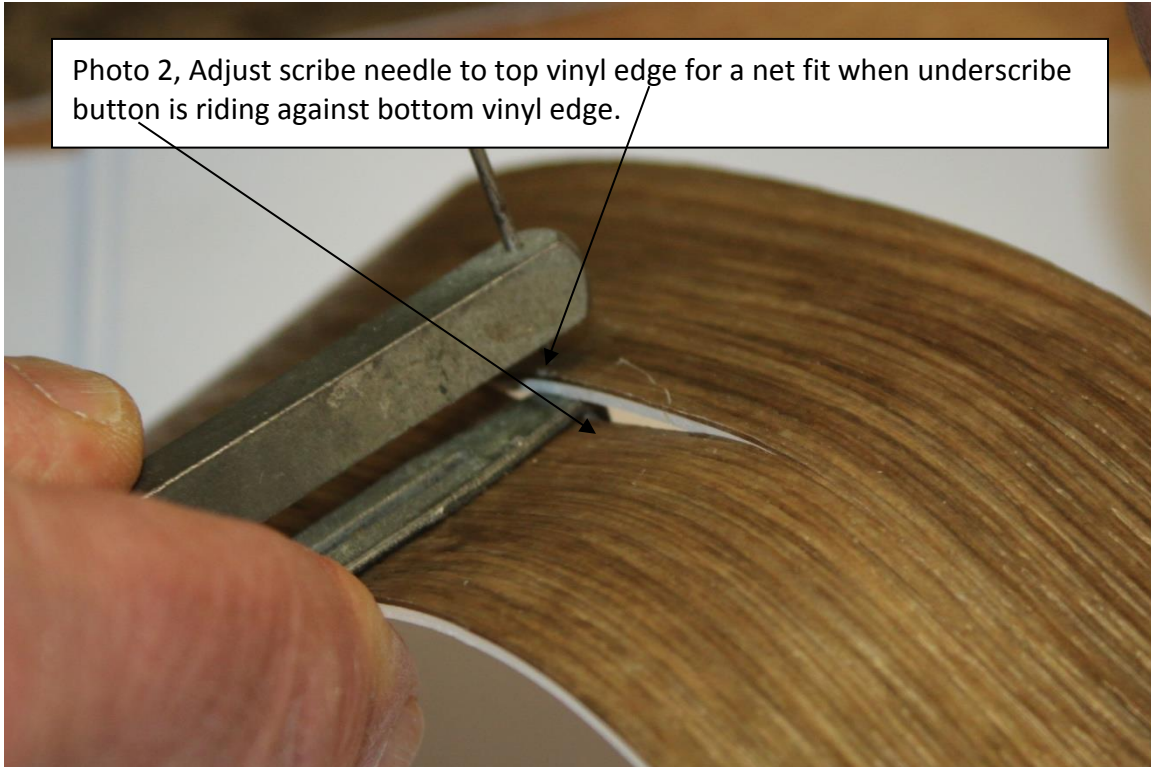
3. Using a sharp pencil, carefully draw a pencil line on the underfloor the length of the trimmed factory edge that has been cut for a seam. Position the point of the pencil at the base or bottom of the Beauflor Xtreme Commercial Vinyl Sheet Flooring's trimmed factory edge that has been cut for a seam to avoid any contamination of the seam's edge from the pencil lead. This pencil mark serves several purposes during the course of installation. 1) It is an accurate boundary for adhesive when it becomes necessary to thoroughly adhere the flooring completely to the edge, 2) in addition, it provides an easy to use guideline when positioning the sheet into the adhesive assuring that it is placed exactly in the same location before folding back to spread adhesive.
4. Cut the second sheet to allow for at least 1 inch additional material on each end for trimming. Overlap sheet #2 onto sheet #1 (sheet one has been fitted and factory edge trimmed for seam) at least 1" for cutting the seam. Again, utilize any weights on the job site to hold sheet #2 firmly in position while fitting.
5. Then repeat steps 2-3 to complete the process for sheet 2 opposite positioned seam.
6. After the material has been fit, it will be necessary to tube or lap back half of the fitted sheets to expose the underfloor for adhesive application. When folding the material back use caution. Do this step in a fashion to avoid sharp kinks and/or creases using a wide radius at the fold. Any kinks or creases could permanently damage the flooring and/or could create visible distortion on the installed flooring's surface.
7. Again, sweep, vacuum or damp mop the area to receive the adhesive and also use horse hair broom or duster to remove any dust, debris and/or dirt from the flooring's back while folded back.
8. Starting at the flooring's fold (make sure the adhesive line at the fold is straight, often the installer may follow the line created by the shadow of the fold) begin spreading the selected Beauflor 4N1 adhesive using the appropriate trowel notch and work towards the end wall opposite the fold and covering the pencil line where the two sheets overlap and up to the pencil line of the trimmed

factory edge of the second sheet. Spread the adhesive over 100% of the exposed, designated area with no skips, misses, voids or puddles.

9. Maintain uniform coverage of the adhesive by keeping the trowel notches clean (a water bucket to soak trowels between spreads is an easy, efficient technique to maintain clean notches) and always hold the trowel as close to a 90° angle to the underfloor for an idea trowel ridge (holding the trowel with your thumb on the rib of the trowel prevents lowering of the angle of the trowel that can radically reduce the correct amount of adhesive spread).
10. Reference the adhesive application instructions for proper open time determined by the underfloor's porosity and atmospheric conditions (if not sure, porosity can be determined by dropping water on the underfloor, if dry within five minutes it is considered porous). Once the recommended open time has been provided, carefully roll the first sheet forward into the adhesive, using the pencil line as a guide at the seam line while pushing the fold into the adhesive to avoid trapping unwanted air under the flooring. DO NOT drop or flop the material into the adhesive to avoid air under the flooring. Follow the same procedure for the second sheet. Starting at the center of each sheet, begin working toward the edges with your roller. Roll the flooring in two directions with 75-100 lbs. 3-section roller immediately after the flooring is placed and positioned, ensuring complete contact with the adhesive. Make sure when rolling that you stay at least two inches away from the overlap at the seam and from the glue line at the fold.

### **Beauflor's Xtreme Commercial Vinyl Sheet Flooring Cutting Process for Underscribing**

1. To assure accuracy, adjust your underscribers or recess-scribers before actually cutting the seam. Cut a slit in scrap of the flooring, then insert the button into the slit so that it rest against the bottom edge of the slit. Keep the button tight against the slit while adjusting the needle precisely to the edge of the slit above the button and tighten. This procedure will produce a net fit without fullness, but should be tested to confirm an accurate setting. If you choose to leave a slight gap (1/64") to make guiding the router easier, then the needle should be set 1/64" beyond the slit's edge to provide a uniform 1/64" gap for the auto grooving machine.

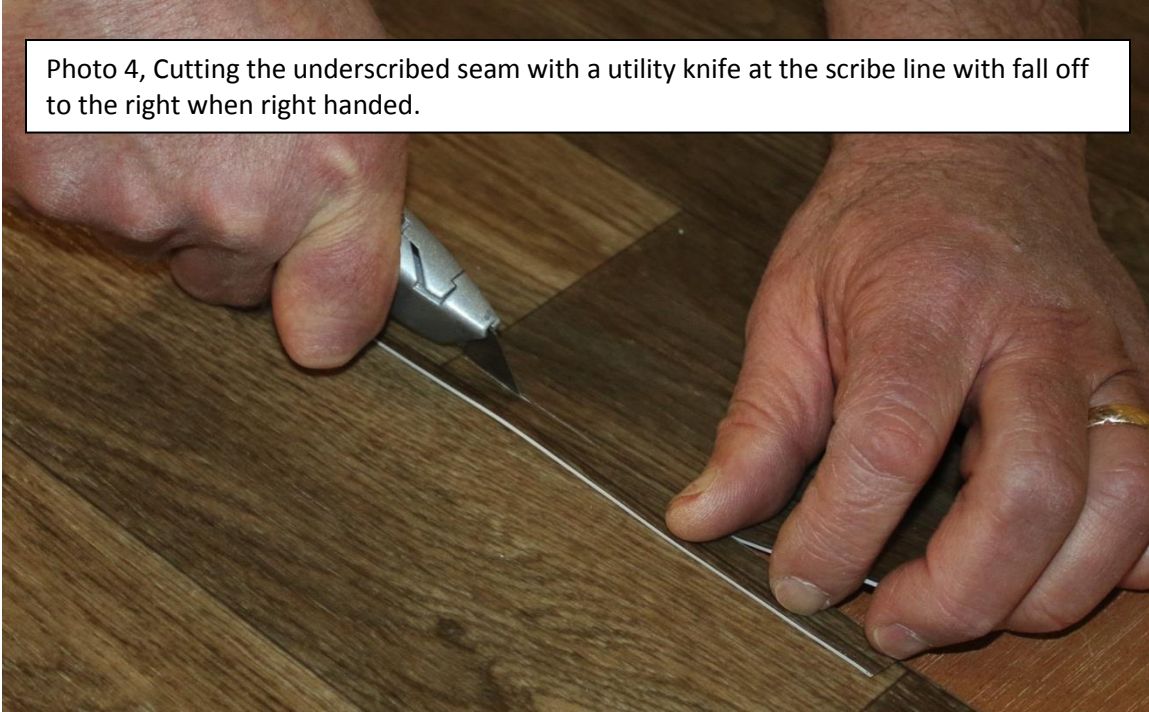


2. The underscribers or recess-scribing tool's button on the bottom of the tool should rest against the straightedged sheet under the overlap of the second sheet. The button should ride on the edge of the first sheet guiding the needle so that a light scratch or score mark is left on the top of the second sheet's overlap. Keep the tool perpendicular to the seam to maintain an accurate fit.



3. Cut the seam using a utility knife (straight or hook blade). Cut the seam by following the scribe mark. Your fall off should be to your right if you are right handed and to your left if you are left handed (see Photo 4).

Photo 4, Cutting the underscribed seam with a utility knife at the scribe line with fall off to the right when right handed.



4. Once you have completed the scribing and cutting of the seam (see net fit in Photo 5), roll the seam area with a steel hand seam roller. Roll diagonally across the seam six inches on both sides. This technique minimizes the risk of pushing adhesive into the seam and contaminating. Once you have scribed, cut and hand rolled the seam, then roll the entire area again in two directions with 75-100 lbs. 3-section roller.

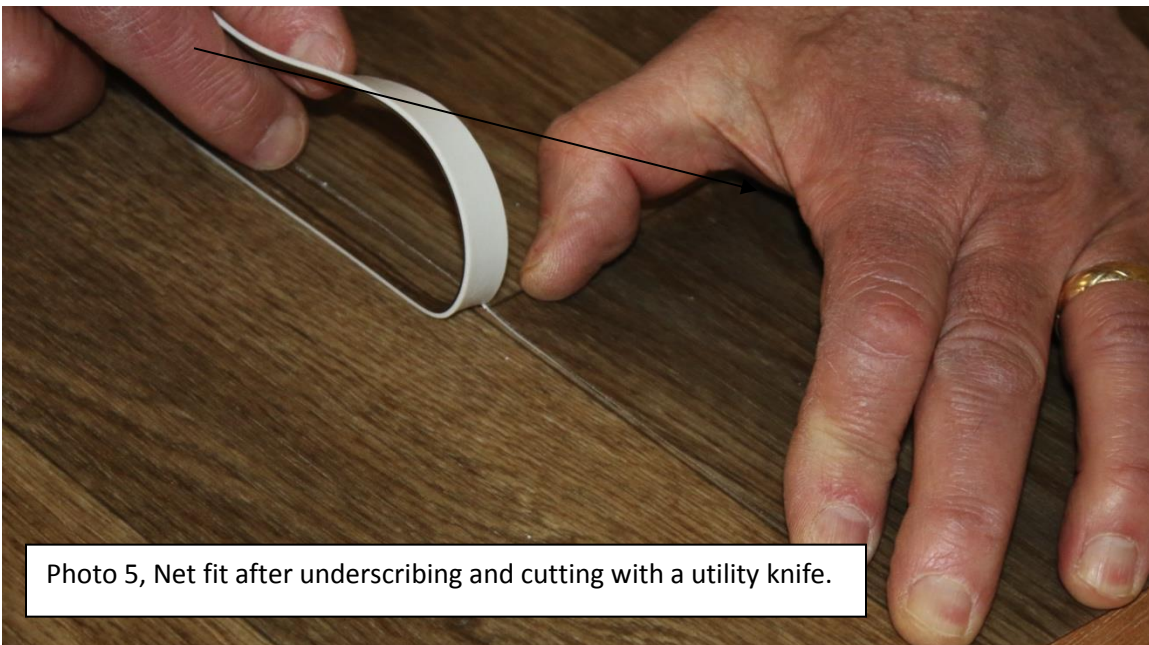


Photo 5, Net fit after underscribing and cutting with a utility knife.

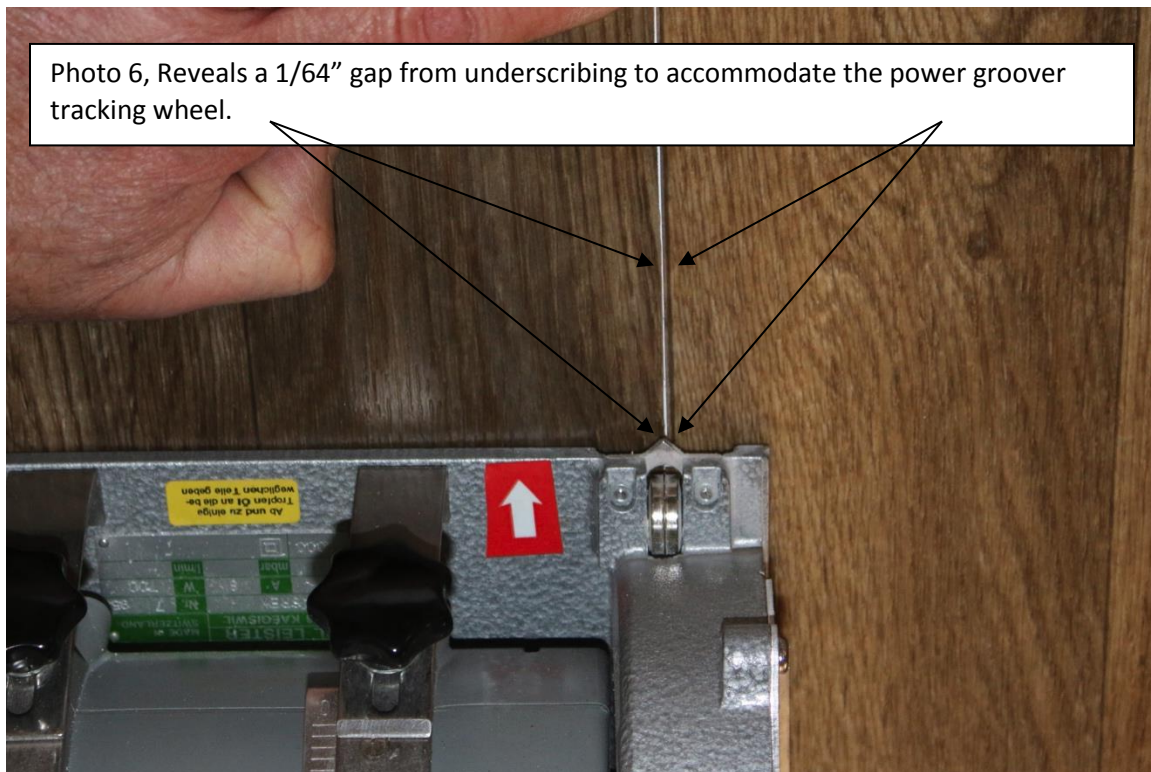
5. Thoroughly clean the seam area making sure to remove any surface adhesive with a damp rag or rag dampened with paint thinner or mineral spirits.



6. Follow the procedures for the remaining pieces until the job is finished. Make sure that you adhere any flooring that has been net fit within two hours of fitting. **DO NOT LEAVE OVERNIGHT.**
7. Restrict traffic on installed flooring for a minimum of 24 hours after installation.
8. Avoid rolling load traffic for at least 72 hours to ensure curing of the adhesive.

## Heat Welding

1. Ignoring the simple steps above for seam cutting will result in a welded seam that is prone to split, gapping and in some cases, could result in a complete loss of the rod over time at the welded seam. Critical to a successful welded seam is having material of equal proportions on the sides and underneath of the weld when the welding groove is centered over the seam and cut approximately 2/3 of the product's overall thickness from the top, either by hand or a power groover. Photo 6 reveals the 1/64" gap intentionally left for the wheel of the power groover to assist in guiding the tool centered on the seam when grooving.

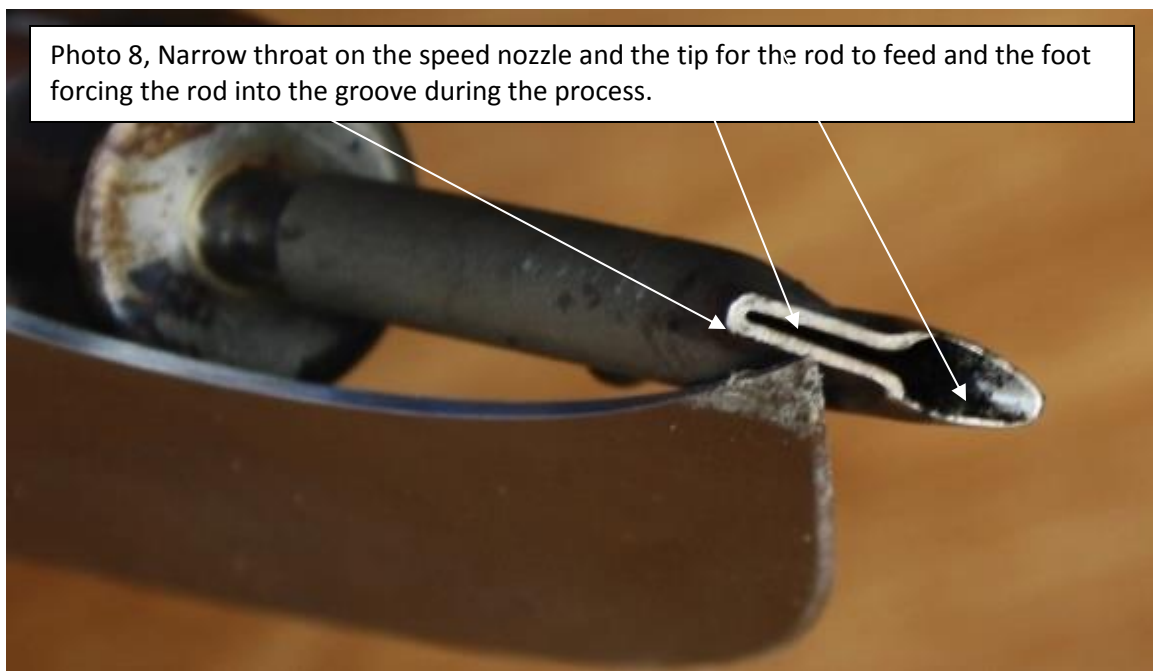


2. **DO NOT ATTEMPT TO BUTT FACTORY EDGES FOR WELDED SEAMS; IT WILL NOT YIELD A UNIFORM, CONSISTENT NET SEAM!**
3. Allow the flooring and seams to cure a minimum of 24 hours before grooving and welding. Do not pre-groove your seams until you are ready to weld to avoid any contamination from dirt and debris so that the fusion of the weld will be optimized. The Beauflor welding rod is 4.0mm, therefore the groove for the rod should be centered on the seam and the depth of the groove should be approximately 2/3 of the product's thickness, allowing for equal material on both sides and bottom

of the groove for best results. Grooving should be done with a 3.5mm hand groover or blade for the power groover centered on the seam.



4. The speed nozzle for welding should be large enough so that the rod can easily be fed through the nozzle's tip during the welding process. Please notice in Photo 8 that the throat of the speed nozzle is narrow. The purpose of the nozzle is to uniformly heat both the welding rod and the groove to a pre-determined temperature so that the physical "melting of the rod to the flooring" is uniform, consistent, without damage and without interruption.

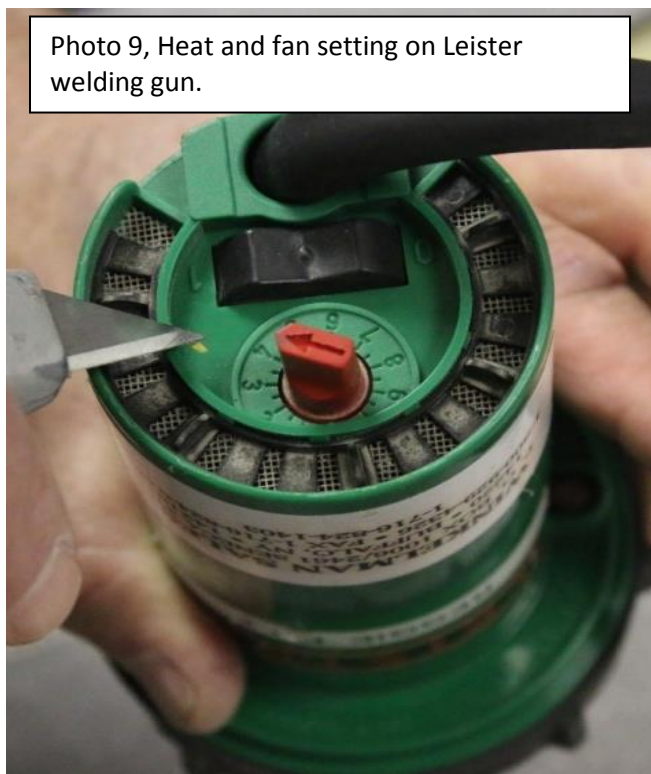


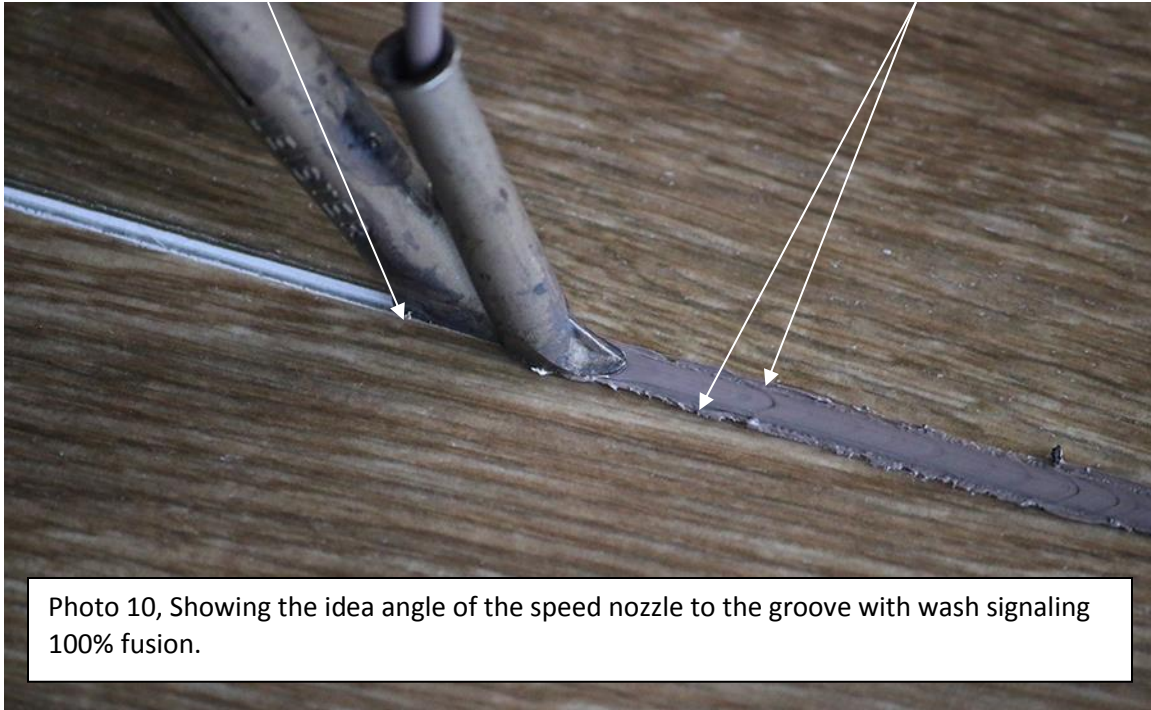
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- Once you have grooved the seam and confirmed your nozzle is correct, then you should set your welding gun or autowelder at a temperature that will accommodate the speed at which the installer will weld while heating both the flooring and rod at a temperature that provides 100% fusion but avoids irreparable damage, scorching or burning during the process. Again, take a close look at the narrow throat shown on the speed nozzle in Photo 8. The narrow throat keeps the crux of the heat focused inside the groove, minimizing the risk of the extreme heat washing out on the flooring and changing the gloss or texture of the flooring at the seam. Once you believe you have determined the idea setting on your welding gun or autowelder, then it must be tested on scrap material to confirm 100% fusion without scorching, burning and/or distortion. Photo 9 shows a setting of 3.75 with a Liester welding gun that accommodates the Beauflor Xtreme Commercial Vinyl Sheet Flooring and the speed that I weld. You will see in Photo 10 a very subtle distortion at the base of the rod at the juncture of flooring that is often referred to as a “wash” signaling that my speed, temperature and my speed nozzle’s angle to the groove is precise for 100% fusion. Prior to welding, your tool should be turned on to the pre-determined weld setting for about 10 minutes to allow time for not only the gun, but the nozzle to warm up. Also important, some welding guns may have a different setting for the blower which can add an additional element to the process of welding calibration. In addition, when completed, the heating element on your tool should be turned off while your fan blows for about 10 minutes to cool the tool down.

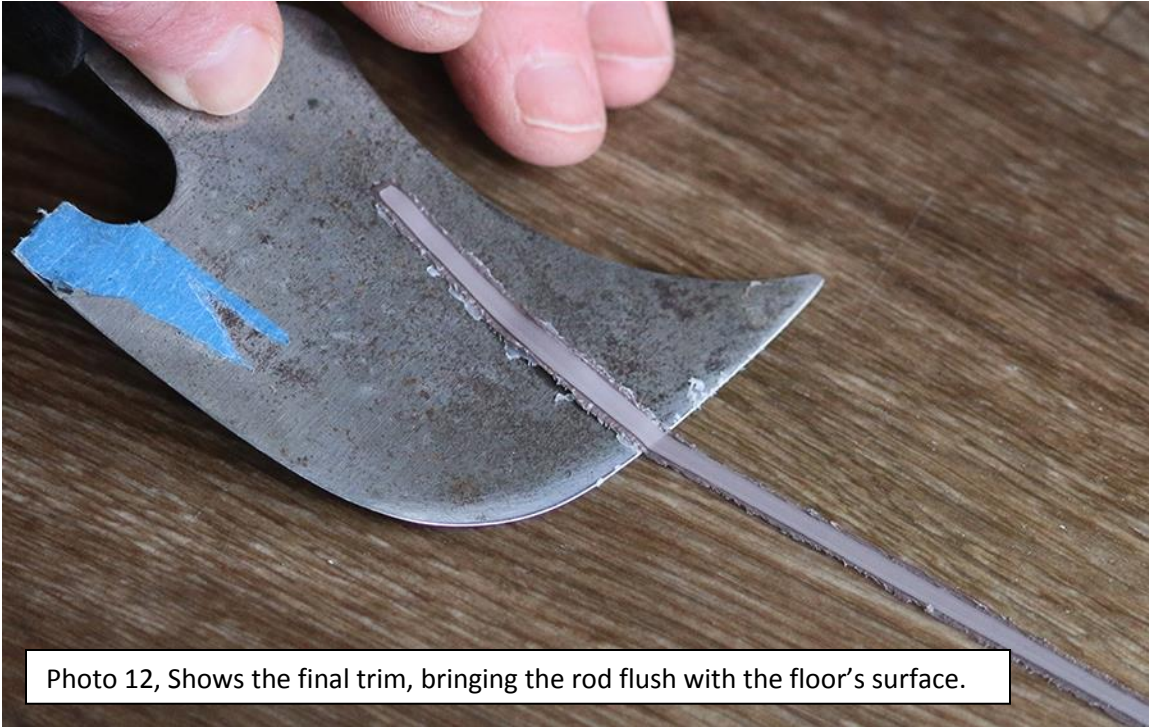




6. Once your welding is complete. Allow to cool for approximately 15 minutes, then using a spatula knife with a trim plate, you may remove the excess material as seen in Photo 11.



7. Finally, after at least one hour trim the remaining material with the spatula knife at a slight angle to the flooring, trimming the rod flush and smooth with the floor's surface as seen in Photo 12.



8. The last step to complete the welding process is to “glaze the trimmed rod” so that its trimmed surface will be impervious to dirt and will perform equally with the Beauflor Xtreme Commercial Vinyl Sheet Flooring. See Photo 13.



**WARNING: DO NOT LEAVE HEAVY OBJECTS SUCH AS THE ROLLER, ADHESIVE BUCKET, CARTS, TOOL BOXES, CARTS OR DOLLIES WITH SMALL CASTERS OR WHEELS ON THE FINISHED FLOOR AFTER INSTALLATION.**

## Flash Coving

1. Beauflor Xtreme Commercial Vinyl Sheet Flooring can be integrally self or flash coved at the juncture of any vertical surface such as the wall, a cabinet toe kick or column. Flash coving is the procedure by which the flooring in the field is continued up the vertical surface without a seam, physical break or butt joint. Typically, the flooring material will continue up the vertical surface approximately 4-6" in most cases. Coving eliminates the juncture at the floor/vertical surface, creating a soft, slow radius for easy maintenance in commercial environments.
2. When coving, it is necessary to address the juncture of the floor/vertical surface with cove fillet strip that is either plastic or wood. When fastening the cove fillet, you may employ a variety of approaches including but not limited to pin nailing, contact adhesive, double-faced tape and/or a combination of any or all of the methods. The key is to make sure that the fillet is secure and conforms to both the vertical surface and floor and leaves no voids behind or below the cove fillet. The fillet strip should be a minimum of 1 1/8" radius. Transitioning to door casings may require a field modification of the cove stick so that the radius gradually becomes smaller at the point of contact to eliminate any open voids at the end of the coving when it meets the door casing. All inside and outside corners must be mitered precisely so that the flooring contours perfectly at the corners. Often the width of a utility blade may be left at the outside corner miter so that it will serve as a guide when mitering the Beauflor Xtreme Commercial Vinyl Sheet Flooring for a precise fit at that intersection.
3. You will also need either a vinyl or aluminum cove cap to finish the top edge of the flooring on the vertical surface. The cap must be firmly attached at the desired height using any one or a combination of methods for securing utilized to secure the cove fillet above. Outside corners should be notched and formed to avoid sharp edges or corner susceptible to damage.
4. When coving, best results can always be achieved by pattern scribing. Inside corners must be cut net with no fullness to avoid unwanted puckers and bubbles, but just is important will be to avoid any gaps where the material meets above the cove stick in the corner of the vertical surface. Outside corners must be filled using a "boot" plug or a "butterfly" plug.
5. You may also utilize preformed inside/outside metal corners if preferred.
6. When coving is complete, allow at least 24 hours before grooving and welding the inside and outside corners. Unless tape was utilized to bond the Beauflor Xtreme Commercial Vinyl Sheet Flooring on the vertical surface.

**CAUTION: THESE INSTRUCTIONS ARE CREATED TO PROVIDE PROFESSIONALS INSTALLERS THE PREFERRED METHODS OF INSTALLATION FOR INSTALLING Beauflor Xtreme Commercial Vinyl Sheet Flooring. IF YOU ARE "NOT" A PROFESSIONAL INSTALLER, DO NOT ATTEMPT TO INSTALL THE FLOOR!**

**For any additional information, questions and/or guidance for unique situations not addressed in this document, you may call Beauflor Technical Support at 302.221.4132**

## POST-INSTALLATION PROTECTION

1. Protect the newly installed Beauflor Xtreme Commercial Vinyl Sheet Flooring from foot traffic for 24 hours.
2. Prohibit heavy traffic and rolling loads on the sheet flooring for a minimum of 72 hours after installation.
3. Confirm or equip all furniture, appliances, carts and any other moveable equipment with soft, wide, non-staining casters or floor protectors with a minimum diameter of 1" engineered to protect hard surface flooring from indentation from static loads.
4. Always use runways made from at least ¼" plywood or ¼" Masonite™ to protect flooring from damage that may occur when moving heavy objects across directly over the flooring. You may also use furniture moving aids or specialty equipment designed specifically for the use of moving large objects without damage to the floor. AIRSLED® would be an example of that type of equipment.
5. If the project is still under construction the floor should be protected from other trades during construction. Be cautious with protective coverings over installed floors that might stain, yellow or stick to the flooring. To avoid large chards, stones, construction debris or heavy soil, tape the paper's edges with a releasable, non-staining, non-yellowing tape. Also, if large plywood formats are to be used on the paper, again tape its edges to the paper to avoid an accumulation of dirt or debris under the plywood's edge. Heavy traffic could embed the debris into the flooring's surface causing permanent damage.
6. Avoid flooding or washing the newly installed Beauflor Xtreme Commercial Vinyl Sheet Flooring until the adhesive has fully cured-approximately 5-7 days, or longer depending on room temperature and the temperature of the underfloor. Stripping is not required nor is it recommended for initial cleaning.
7. Please note that the initial cleaning of an installed Beauflor Xtreme Commercial Vinyl Sheet Flooring is essential before occupancy. Failure to clean thoroughly and properly at this time will make routine maintenance more difficult.
8. Sweep or vacuum thoroughly to remove all dust, dirt, loose grit, soil and debris.
9. Spots of adhesive can be removed with a clean, white cotton cloth and dampened with paint thinner or mineral spirits. Always use caution when handling flammable solvents.
10. If the flooring was subjected to excess dirt, soil and heavy traffic before the initial maintenance, use Hilway Direct Neutral Cleaner mixed according to label instructions with clean potable water. **DO NOT USE ABRASIVE CLEANERS!**
11. Use a standard scrubbing machine or an automatic scrubber (175-350 rpms) equipped with the proper color of pad for the soiling to be cleaned. Test to make sure the pad selected does not damage the floor's surface.
12. Rinse using a clean mop and clean water. Change rinse water often to avoid leaving a dirty residue.
13. Wet vacuum, fan dry or simple allow it to dry naturally without any traffic.

## PRODUCT SIZE AND PACKAGING INFORMATION

Thickness: .08" (2.0 mm)

Roll Length: 82' (25m)

Roll Width: 6' 6" (2m) or 13' 2" (4m)

Roll Weight: 5.16 lbs/ square yard