



II

Starting the Job

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A. THE INSTALLER

As an installer, you play an important role in your customer's warranty protection. For the most complete warranty protection, you should install your customer's floor according to the Armstrong Guaranteed Installation System. Your customer is counting on you to use the proper adhesives and to install the floor according to Armstrong's guidelines. It is highly recommended that you review the appropriate chapters in this manual before starting the job. If you have any questions about these guidelines, the flooring materials or adhesives, the suitability of the flooring material for a particular application, or you would like a copy of the warranties, please call Armstrong at 1 800 233 3823.

1. Material Inspection:

- Inspect all flooring products to ensure the correct type, pattern, color and quantity.
- Inspect all adhesives to ensure the correct type and quantity.
- Inspect all materials for defects or damage. Defects are easier to correct **before** installation.
- Make sure you have the proper equipment and materials for the installation.

2. Training:

Do not try to install resilient flooring unless you are thoroughly familiar with the material and installation system. Armstrong conducts installation courses across the country. If you have not had specific training in resilient installation, you should attend one of these courses. Ask your local distributor for the time and location of installation schools and seminars.

3. Appearance:

It's important to make a good impression on the customer when you arrive at the job site. If you arrive in dirty clothes, unshaved, and generally looking less than professional, the customer will assume you will do the same kind of work. Wear a uniform or neat work clothes. Remember, first appearances are lasting.

4. Conduct On The Job Site:

This is more important on residential work than commercial, but should be considered on every job. Be considerate and respect the customer. This includes the language you use, the respect you give the homeowner's property and the condition of the living area when you leave. Do not use the homeowner's property without asking. Protect other flooring products with runners if you need to move materials over them. Do not clean trowels in sinks. Do not "borrow" cleaners from under the sink. Do not smoke without asking permission.

B. JOB SITE

1. Job Site Conditions:

- Armstrong resilient flooring products are intended for interior applications only. They should not be used for exterior installations, commercial kitchens and commercial food processing areas, heavy industrial areas, or where pointed spikes such as golf or track shoes will be used.
- The environment where resilient flooring will be installed is of critical importance to a successful installation and the continued performance of the flooring products.
- It is highly recommended that the installation of resilient flooring not begin until the work of all other trades has been completed.
- Areas to receive resilient flooring should be clean, fully enclosed, weather-tight and have the permanent or temporary HVAC in operation (see additional information in section 3).
- The entire area should be well lit, so the installer can properly prepare the substrate and install the floor.

2. Material, Storage and Handling Requirements:

If it becomes necessary, resilient flooring may be stored in an unheated warehouse at temperatures between 30°F (-1°C) and 85°F (29°C), as long as the flooring is protected from the weather and the area is dry, out of direct sunlight and free of internal combustion. (Exposure to exhaust from gas or oil combustion in the form of oxides of nitrogen can lead to warehouse yellowing, especially in residential flooring.) Prior to installation, the following requirements must be followed:

- Deliver all flooring materials, adhesives, patches, and seaming products to the job site a minimum of 48 before installation.
- Materials should be stored in a dry, temperature-controlled interior area out of direct sunlight. (See Temperature Requirements section.)
- Store and secure all 6' and 6' 7" resilient sheet materials vertically (on end) and rolled tightly, face-out, on a suitable cardboard core.
- For 12' or wider resilient sheet materials, store horizontally with the weight supported across the entire width and rolled tightly, face-out, on a suitable cardboard core.
- Store all cartons of tile or plank flooring on a dry, flat, level surface, carefully stacked squarely on top of one another and never more than five cartons high. Cartons should never be stored on edge.
- Material should always be visually inspected prior to installation.

3. Temperature Requirements:

Resilient flooring should only be installed in temperature-controlled environments. It is required that the permanent HVAC system be in operation before the installation of resilient flooring. Temporary HVAC systems are acceptable. Portable heaters are not recommended as they may not heat the room and subfloor sufficiently. Kerosene heaters should never be used.

- Allow all flooring materials and adhesives to condition to the room temperature for a minimum of 48 hours before starting the installation.
- The area to receive resilient flooring should be maintained at a minimum of 65°F (18°C) and a maximum of 100°F (38°C) for 48 hours before, during, and for 48 hours after completion. NOTE: When using S-240 Epoxy Adhesives or installing SDT, the maximum room temperature should not exceed 85°F (29°C).
- During the service life of the floor, the temperature should never rise above 100°F (38°C) nor fall below 55°F (13°C). The performance of the flooring material and adhesives can be adversely affected outside this temperature range.

4. Subfloors/Underlayments:

Is the substrate or underlayment appropriate in the area to be covered? Remember, if you cover an underlayment with a resilient floor covering, you have – in essence – **approved** the underlayment.

If the underlayment is acceptable, check the condition and preparation needed before installation. It may not be your responsibility to make the repairs, but it is certainly your responsibility to check for repairs or preparations that are needed. These would include: patching, removing paint or adhesive and leveling or repairing existing floors that will be used as an underlayment. Check concrete subfloors for signs of moisture (i.e., wetness on the bottom of boxes, moisture under mats or rugs, and alkali deposits). Bring these issues to the attention of the dealer/contractor who sold the installation. **See Chapter 3, Subfloors and Underlayments for more details.**

5. Radiant Heat:

Radiant-heated substrates must not exceed a maximum surface temperature of 85°F (29°C).

C. ROLL LABELING INFORMATION

1. Linoleum

Roll Labeling:

The “batch number” and roll “sequence numbers” are critical for installing shade-matched material. When installing several rolls of linoleum in one area, make sure all rolls are from the same batch number. Also, stay within 20 numbers – either way – of the four-digit sequence number.

For example:

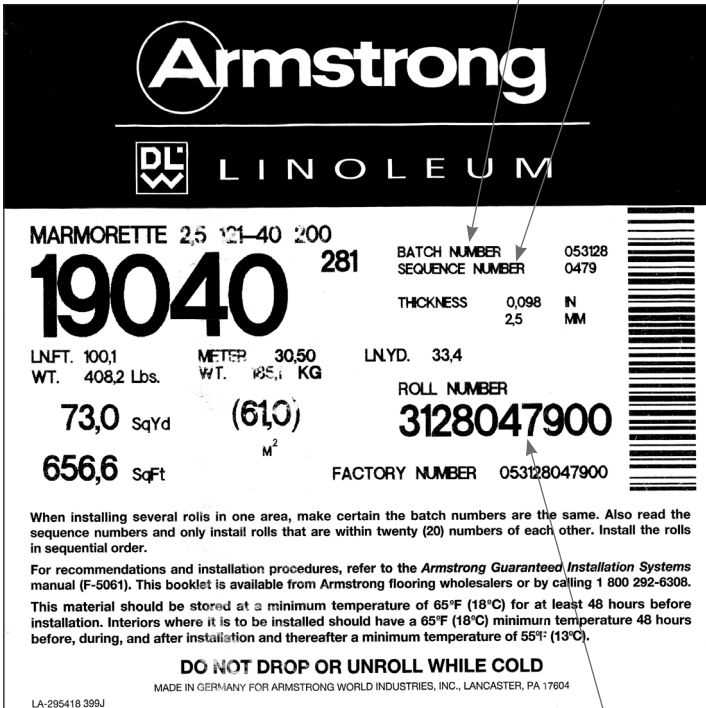
If one label is identified with Batch Number 053128, all rolls should be from that batch number.

If one Sequence Number is 0479, it is acceptable to install rolls with sequence numbers from 0459 to 0479; or from 0479 to 0499; or from 0469 to 0489.

Install rolls in sequential numerical order to ensure the best shade match.

The four-digit sequence number is followed by a one-digit “cut number,” but that number is not relevant for shade control. Due to the possibility of repeating sequence numbers, the entire Factory Number should be used to select rolls that will be installed next to each other.

Linoleum Roll Label Example: Batch Number
Sequence Number



The image shows a detailed example of a linoleum roll label. At the top, the Armstrong logo is prominently displayed in white on a black background, with the word "LINOLEUM" in a smaller font below it. The label contains the following information:

- MARMORETTE 2,5 121-40 200**
- 19040** (Large four-digit sequence number)
- 281** (Cut number)
- BATCH NUMBER** 053128
- SEQUENCE NUMBER** 0479
- THICKNESS** 0,098 IN / 2,5 MM
- LNFT.** 100,1 **METER** 30,50 **LN.YD.** 33,4
- WT.** 408,2 Lbs. **WT.** 185,1 KG
- ROLL NUMBER** **3128047900**
- 73,0** SqYd **(61,0)** M²
- 656,6** SqFt
- FACTORY NUMBER** 053128047900

Below the technical data, there is a paragraph of instructions: "When installing several rolls in one area, make certain the batch numbers are the same. Also read the sequence numbers and only install rolls that are within twenty (20) numbers of each other. Install the rolls in sequential order." This is followed by a note: "For recommendations and installation procedures, refer to the Armstrong Guaranteed Installation Systems manual (F-5061). This booklet is available from Armstrong flooring wholesalers or by calling 1 800 292-6308." A final note states: "This material should be stored at a minimum temperature of 65°F (18°C) for at least 48 hours before installation. Interiors where it is to be installed should have a 65°F (18°C) minimum temperature 48 hours before, during, and after installation and thereafter a minimum temperature of 55°F (13°C)."

At the bottom of the label, it says: **DO NOT DROP OR UNROLL WHILE COLD**
MADE IN GERMANY FOR ARMSTRONG WORLD INDUSTRIES, INC., LANCASTER, PA 17604
LA-295418 399J

Roll Number

2. Shade ID System for Rotogravure Roll Goods

Lancaster and Stillwater manufactured Rotogravure flooring material carry a shade identification system consisting of three figures.

- The first figure is the shade letter. This is the same as the old shade letters.
- The second figure is the month of manufacture – 1 to 9 (January to September), O (October), N (November), D (December).
- The third figure is the final digit of the year of manufacture – for example, 3 for 2003, 4 for 2004, etc.

On the sample Initiator label below, you will find the Shade above the Roll Number. It is B45, which means the shade is B, the 4 is for the month of April, and the 5 is for the year of 2005. All rolls used for one area must carry the same three shade identification characters.

Next to the Pattern Number (66082), the three numbers 401 represent regular material of nominal width and overall thickness. Beneath that number is a V6, which is the Version Number. The Version Number must be the same on all rolls being used for one area because the Version Number is changed when significant changes are made in the manufacturing process.

The Roll Number is located below the shade. As a general rule, install rolls in sequential order. To get the best possible match, especially on big jobs, request a roll order install report from the order group.

INITIATOR Label Example:

Version Number

Shade & Date

Armstrong

INITIATOR

66082 - **401** **SHADE B45**

LN. FT. 127.6 **METER 38.9** **LN. YD. 42.5**

WT. 600.4 Lbs. **WT. 272.3 KG**

170.1 SqYd **(142.2)** **ROLL NUMBER 05249785**

1530.7 SqFt

Inspected on: 04/23/05 02:19

When installing several rolls in one area, check the shade match of the rolls before installation and use only rolls having the same inspection date and shade letter.

For recommendations and installation procedures, refer to the *Armstrong Guaranteed Installation Systems manual (F-5061)*. This booklet is available from Armstrong flooring wholesalers or by calling 1 800 292-6308.

This material should be stored at a minimum temperature of 65°F (18°C) for at least 48 hours before installation. Interiors where it is to be installed should have a 65°F (18°C) minimum temperature 48 hours before, during, and after installation and thereafter a minimum temperature of 55°F (13°C).

DO NOT DROP OR UNROLL WHILE COLD

MADE IN THE UNITED STATES OF AMERICA BY ARMSTRONG WORLD INDUSTRIES, INC., LANCASTER, PA 17604

LA-895379 7981

Si vous installez plusieurs rouleaux sur une surface donnée, vérifiez que le ton des rouleaux soit assorti avant l'installation, et n'utilisez pas des rouleaux ayant la même date d'inspection et la même lettre de référence du ton.

Veuillez vous reporter au livret *Systèmes d'installation garantie d'Armstrong (F-5061)*, pour les recommandations et les instructions d'installation.

Ce matériau doit être conservé à une température minimale de 18°C (65°F) pendant au moins 48 heures avant l'installation. Les pièces dans lesquelles vous envisagez de l'installer doivent être maintenues à une température minimale de 18°C (65°F) pendant une période de 48 heures avant, pendant, et après l'installation, puis à une température minimale de 13°C (55°F).

NE PAS RENSERVISER OU DÉROULER À L'ÉTAT FROID

FABRIQUÉ AUX ÉTATS-UNIS PAR ARMSTRONG WORLD INDUSTRIES, INC. LANCASTER, PA 17604

Cuando se instala más de un rollo en una misma área, es preciso cerciorarse de que los tonos concuerden antes de instalarlos. Solamente utilice rollos con la misma fecha de inspección y el mismo código de tono.

Véanse las recomendaciones y el proceso de instalación en el folleto F-5061 titulado *Sistemas de instalación garantizada de Armstrong*.

Este material debe ser almacenado a una temperatura mínima de 18°C (65°F) durante un mínimo de 48 horas antes de la instalación. La temperatura mínima en las áreas techadas donde se va a colocar al piso deberá ser de 18°C (65°F) durante las 48 horas tanto antes de la instalación como durante y después de la misma; de allí en adelante deberá ser de 13°C (55°F) como mínimo.

NO DEJE CAER NI DESENLORRE EL PISO MIENTRAS ÉSTE SE ENCUENTRE FRÍO

HECHO EN ESTADOS UNIDOS POR ARMSTRONG WORLD INDUSTRIES, INC. LANCASTER, PA 17604

Pattern Number

Roll Number

3. Shade ID System for TIMBERLINE, Ambigu and StoneRun Sheet Flooring

Roll Labeling:

- TIMBERLINE, Ambigu and StoneRun Sheet flooring must be installed in sequential order.
- The Pattern and Shade Lot Numbers **must** match. On the sample label below, the Shade Lot Number is 1872/20120625. The Pattern Number is 34352.
- The Roll Number must be installed in sequential order. On the sample label below, the Roll Number is 117959.

For example:

- If the Shade Lot Number is 1872/20120625, all rolls **must** have a Shade Lot Number of 1872/20120625.
- If the Roll Number is 117959, the next sequential number you have received from the wholesaler is the next one to be installed so that the rolls are sequenced, although the Roll Numbers will rarely be consecutive because only full rolls are shipped from the plant.

TimberLine Label Example:

The image shows a rectangular label with the following text and graphics:

- At the top: PATTERN NO. / N' DU MOTIF / NÚM. DE PATRÓN
- Large bold text in the center: FP34352
- Below that: -271
- Below that: SHADE LOT NO. / TEINTE/N' DU LOT / TONO/NÚM DE LOT
- Below that: 1872/20120625
- Below that: ROLL NO. / N' DU ROULEAU / NÚM. DE ROLLO
- Below that: 117959
- At the bottom: A standard 1D barcode.

Two arrows point from the left side of the label to the text:

- An arrow labeled "Shade Lot Number" points to the text "1872/20120625".
- An arrow labeled "Roll Number" points to the text "117959".

4. Shade ID System for MEDINTECH, MEDINTONE, MEDLEY, ROYAL, and SOLID Sheet Flooring

Roll Labeling:




- MEDINTECH, MEDINTONE, MEDLEY, ROYAL, and SOLID flooring must be installed in sequential order.
- The Pattern and Production Numbers **must** match. On the sample label below, the Production Number is 8920.
- The Roll Numbers must be installed in sequential order. On the sample label below, the Roll Number is 2200069815.

For example:

- If the Production Number is 8920, all rolls **must** have a Production Number of 8920.
- If the Roll Number is 2200069815, the next sequential number you have received from the wholesaler is the next one to be installed so that the rolls are sequenced, although the Roll Numbers will rarely be consecutive as only full rolls are shipped from the plant.

MEDINTECH Label Example:

Pattern Number

	FP 88452-000-8831 ^{FP} 88452 ₂₇₁		
Bestell-Nr. Ref Nr/No de ref.	FP 88452-000-8831		
Bezeichnung Description Description	MEDINTECH BW 183 6 FT		
Dessin/Farbe Design/Color Dessin/Couleur	88452-		
Breite Width Largeur	183 cm	72 inch	
Dicke Thickness Epaisseur	2 mm	0,08 inch	
Länge Length Longeur	25 M	82 In.ft.	27,3 In.yd.
Rollen Nr. Batch No No du roull	2200069815		
Anfert Nr Prod No No de fabr	8920		
Gewicht Weight Poids	141,8 kg	312,7 lbs	
Fläche Area Surface	45,8 m2	54,7 Sq.Yd.	492,4 Sq.Ft.
EAN			
	4 020643 240652		
Made in Germany			

Product Number

Batch Number

5. Shade ID System for POSSIBILITIES Petit Point and Connection CORLON Sheet Flooring

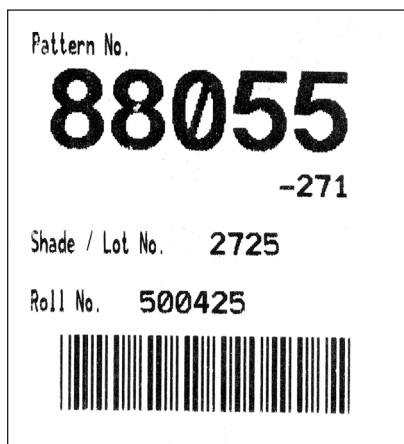
Roll Labeling:

- POSSIBILITIES Petit Point and Connection CORLON flooring **must** be installed in sequential order.
- The Pattern and Shade/Lot Numbers **must** match. On the sample label below, the Shade/Lot Number is 2725.
- The Roll Number **must** be installed in sequential order. On the sample label below, the Roll Number is 500425.

For example:

- If the Shade/Lot Number is 2725, all rolls **must** have a Shade/Lot Number of 2725.
- If the Roll Number is 500425, the next sequential number you have received from the wholesaler is the next one to be installed so that the rolls are sequenced, although the Roll Numbers will rarely be consecutive as only full rolls are shipped from the plant.

POSSIBILITIES Petit Point Label Example:



D. PRODUCT PERFORMANCE UNDER CONCENTRATED STATIC AND DYNAMIC LOADS

Armstrong Commercial Flooring is used in many applications in which it is subjected to heavy static and dynamic loads. Some furnishings, appliances, and equipment in certain environments may be equipped with wheels, casters, rests, or other floor contact devices, which concentrate rather than distribute the load over the surface of the flooring (e.g., hospital beds). With respect to portable furnishings and equipment, although concentrated wheel/caster loadings provide for easier mobility, they can be particularly damaging to resilient flooring installations. Armstrong recommends that any furnishings or equipment be fitted with floor contact devices, that avoid concentrating weight loads.

Our experience has shown that the use of hard setting reactive adhesives, like our S-240 Epoxy, offers advantages and may help protect against damage if used to install flooring under such furnishings and equipment. Depending on the application, the epoxy may only be necessary in limited areas of any particular installation such as an area immediately under and adjacent to the primary areas of contact with the flooring. In the case of certain heavy hospital beds, the application of the epoxy adhesive in an area that extends a minimum of 1' beyond the wheelbase or footprint of the four casters (approximately 4' by 8") may be sufficient. **For questions regarding product suitability and detailed instructions for floor preparation and installation in these types of applications, please contact Armstrong.**

Armstrong cannot accept responsibility for floor damage resulting from the use of inappropriate, improperly designed, or inadequate floor protection devices. Since rolling-type casters and certain floor rests on furniture, appliances, and equipment may damage resilient flooring, any warranty as to their suitability rests with the furniture, appliance, or equipment manufacturer.

E. SAFETY

1. Lifting:

Floor covering installers often lift heavy objects such as rolls of sheet goods, tile boxes, heavy tools, or toolboxes. Lifting correctly and carrying only as much as is comfortable are your first protections against injury. When an object is too heavy or awkward for you to lift alone, get help or use mechanical aids.

While one person may be able to safely lift many smaller rolls or tile boxes, two people should lift heavier rolls of sheet goods. Cut large rolls of material into needed sizes before leaving the shop. Both people should use correct lifting techniques. Mechanical lifting and carrying aids such as straps and dollies can be used even when two people are lifting an object. You should also use dollies and straps to move heavy furniture and appliances.

2. Tools:

- a. Knives:** Knives cause more disabling injuries than any other hand tool. To reduce the possibility of injury, always keep knives sharp and in good repair. Dull knives require more pressure and are more likely to slip.

Always cut away from the body. If this is not possible, keep hands and body clear of the knife's path. Always cut with smooth, not jerky, motions. Never store knives in pockets. While working, keep knives in pouches with the edge or point down into the pouch. At the day's end, store knives in toolboxes.

- b. Safety Glasses:** Wear safety glasses to protect your eyes against flying chips or nailheads. If you are using torches, be aware of your surroundings and other workers in the area. You should always fill torches outside, taking care to avoid spilling flammable liquids.

- c. Electric Tools:** Electric shock is a primary hazard from electrically powered tools. Electric shock can cause burns, injuries from falls or even death. To protect yourself, use only approved electrical tools. These are usually listed by Underwriters' Laboratories, Inc.

Most electric tools are grounded with a third wire. This ground wire protects users by draining the current from any short circuit or other tool defects. Otherwise, the resulting current would pass from the tool to the operator's body. Never cut the third prong off the plug of the grounded tool. To prevent shock:

- Keep hands dry.
- Wear non-conducting rubber-soled shoes and rubber gloves when working on wet or damp surfaces.
- Use heavy-duty extension cords.
- Keep electric lines away from nails, sharp edges, and corrosive chemicals.
- Never leave electric lines where they may be run over by vehicles.
- Regularly inspect all electric cords and tools.
- Repair/replace frayed cords immediately.
- Disconnect power lines before changing tool accessories or before adjusting or repairing tools.
- Always use a ground fault interrupter (GFI) when using power equipment in a damp or wet area.

To remove a person in contact with live or hot tools, shut off the power. If this is impossible, push the person away with a non-conducting material such as a wooden tool handle.

3. Housekeeping:

Following these general rules may help eliminate on-the-job accidents:

- Keep all walkways, work areas, stairways, and doorways free of obstruction or trash.
- Keep tools put away when not in use.
- Store unused material, such as tile and sheet goods, out of the work area.
- Keep area clean and properly dispose of scrap materials.

4. Work Site Environment:

Initially there may be a potential adverse impact on indoor air quality within the general working area associated with the installation of resilient floor covering materials. Therefore, you should advise the building manager or other appropriate person that:

- It will be necessary to establish and maintain adequate ventilation of the work area without causing the entry of contaminants to other parts of the building.
- Persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

Safety on the job is your responsibility! To assure the protection of yourself, others on the job site, and the end users of Armstrong flooring products, warnings and instructions should be strictly followed. Good work and hygiene practices require careful review of all safety and health warnings and instructions contained on labels, specifications, instruction sheets, and Material Safety Data Sheets.