

bulletin board®

pinboard linoleum

Installation guide

creating better environments

forbo

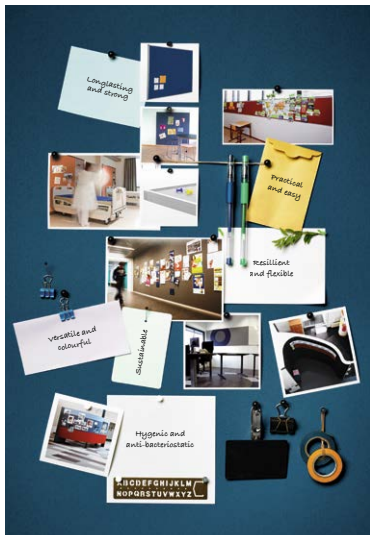
FLOORING SYSTEMS

Installation guide

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1. GENERAL



1.1 Bulletin Board

Bulletin Board is a product for specific applications, e.g. as a decorative and functional material on walls, notice boards and office furniture systems.

Bulletin Board is a uni-colored linoleum, which contains a large quantity of ground cork. The raw materials that are used are of natural origin:

- linseed oil
- rosin binders
- ground cork
- mineral fillers (limestone/pigments)

Bulletin Board is calendered onto a jute backing, which ensures dimensional stability. The calendering gives it a smooth finish to ensure ease of maintenance.

Bulletin Board's high cork flour content makes it durable, but also resilient. The high cork flour content also makes thumbtacks & pin punctures disappear over time.

1.2 Product Range

Standard:

Number of colours:
15

Roll length:
approx. 28 lin. m / 90 lin.ft

Roll width:
approx. 122 cm / 48 inches

Thickness:
approx. 6.0 mm / ¼ inch

Note: Three colours are also available in 183 cm / 72 inch width

Gauge	6.0 mm / ¼"	
Width	122 cm / 48"	183 cm / 72"
Colours		
2162	•	•
2166	•	•
2182	•	•
2186	•	
2187	•	
2204	•	
2206	•	
2207	•	
2208	•	
2209	•	
2210	•	
2211	•	
2212	•	
2213	•	
2214	•	

1.3 Features and Benefits

Color range	The colors in the Bulletin Board collection are eminently suitable for combinations with other materials such as wood, stone or aluminum. They also are in harmony with the colors of all Forbo Flooring floors.
Durability	With ground cork and oxidized linseed oil as ingredients, Bulletin Board will retain its resilience and flexibility for a long time.
Maintenance	Bulletin Board is easy to clean with a damp cloth or, if necessary, with a soft brush using a neutral detergent; rinse with clean water.
Flexibility	Bulletin Board has a flexible surface so that push pins can be easily pushed in and are gripped firmly.
Self-healing	Because of Bulletin Board's flexibility, push pin punctures will almost entirely disappear over time.
Reflection	Bulletin Board comes in matte colors so that annoying light reflection caused by sun or artificial light is reduced.
Dimension Stability	Due to the natural jute backing, providing a strong durable foundation, Bulletin Board is dimensionally stable in all directions, when properly installed. It resists cracking, drying, peeling and warping.
Environment	Bulletin Board is a very sustainable product composed almost exclusively of natural materials (91%), a large part of recycled content (43%) and free of PVC, PET and plasticizers.
Installation	Bulletin Board is easy to work with, both in manual and industrial applications.
Hygiene	Bulletin Board is easy to clean (see Maintenance section) and has bactericidal properties that inhibit the growth of certain micro-organisms.

2. FIELDS OF APPLICATION

2.1 Decorative, Functional Walls

In many rooms it is very useful to have facilities for posting temporary or permanent information. Examples of this are:

- presentations
- announcements (schools, offices)
- wall decorations (e.g. posters)
- display of school work in kindergartens and schools
- business meetings (e.g. 'war rooms')

Bulletin Board will hold push pins and thumb tacks firmly, thus making it an exceptionally functional wall covering. The modern range of colors of Bulletin Board means that Bulletin Board, either in matching or in contrasting colors, will harmonize with most interior finishes.

Bulletin Board makes walls the ideal place for hanging up notices and messages, without leaving ugly adhesive-tape marks on their removal. A few application possibilities are:

2.2 Notice Boards (framed)

In many countries Bulletin Board is known as the perfect, high-quality material for notice boards. Bulletin Board's high quality, good durability and self-healing properties make it one of the best notice board materials, and as such it finds worldwide application.

2.3 Kindergartens and Primary Schools (education)

Bulletin Board on walls in classrooms lets school children pin up and remove their drawings, coloring pictures, cut-outs and paste-ups.

2.4 Moveable Partitions

In many offices and hotels, partitions are used to divide meeting and conference rooms. With Bulletin Board on one or more of these panels, large drawings and flip-over sheets can be easily pinned up and removed without damaging the surface.

2.5 Doors and Cupboards

In open-plan offices, cupboards often serve to separate work space. Covered with Bulletin Board, the fronts as well as the backs of these cupboards can be used as notice boards or turned into decorative elements.

2.6 Hospitals

Bulletin Board is often installed behind hospital beds, serving two purposes:

- greetings cards can be easily pinned there to brighten the wall, which stays neat and clean (no adhesive tape residue);
- the walls are well protected by the high impact resistant Bulletin Board against possible damage caused by moving hospital beds. This saves the recurring cost of repair or re-plastering.

2.7 Conference Room Walls

Bulletin Board can be installed covering an entire wall or just sections of a wall, making it great for pinning up drawings, photos, or presentation ideas during business meetings.

Note: Bulletin Board can be painted or screen printed if so desired.

2.8 Office Furniture

A panel in your work station for pinning up photos or personal memos.

2.9 Moveable Art Exhibits

Fine art is often displayed in malls or in banks, etc. on freestanding panels. Bulletin Board is the perfect functional surface for these panels.

3. MAINTENANCE INSTRUCTIONS FOR BULLETIN BOARD

3.1 After Installation

Bulletin Board is ready for immediate use. Any adhesive residue should be removed as quickly as possible with a clean, damp cloth. Dried adhesive residue should be removed with a clean cloth and white mineral spirits. Always clean off mineral spirits residue with a damp clean cloth.

After wiping off residual glue, there might appear slight "wiping stripes". This can be corrected easily. Clean the wall of all dust. Prepare Forbo Polish by using one part cold water and one part Forbo Polish fluid. Apply on full wall area using a wax distributor (edges with a small applicator). Leave the surface to dry. Stripes will have disappeared.

3.2 Regular Maintenance

Regular dusting or, if necessary, wiping with a damp cloth guarantees a long useful Bulletin Board life. Bulletin Board's linoleum surface provides for a washable finish to retain original appearance. The surface can be wiped or washed using a neutral pH cleaner, pH ranging from 6 – 8. Rinse with clear water after cleaning.

Note: Bulletin Board does not normally need a special maintenance product.

3.3 Chemical Resistance

Bulletin Board is resistant to all kinds of chemicals, with the exception of high alkalis. For the full list see Technical Data.

4. INSTALLATION, ADAPTATION AND HANDLING RECOMMENDATIONS

Bulletin Board can be applied in many different ways, for example:

4.1 Installed as a framed bulletin board, notice board or panel for furniture workstations/partitions

CUTTING SHEETS

Unroll Bulletin Board and cut with the length adding two to three inches of overlap, preferably 24 hours prior to installation. Lay sheets flat and allow them to acclimate at a minimum temperature of 20°C / 68°F. It is best to store the sheets in the room they are to be installed in. Back roll sheets once in reverse direction to release roll stretch and end curl. Bulletin Board shrinks lengthwise (1% at maximum) and expands slightly widthwise. If proper installation procedures are followed, the shrinkage will be compensated and will not be visible.

CHOICE OF ADHESIVE

Forbo recommends using Eurocol 650 contact adhesive or an equivalent water-based contact adhesive. Avoid using spray contact adhesive. When using a press, a quality polyvinylacetate dispersion adhesive may be used in a double-stick method.

ADHERING AND PRESSING

Adhere the Bulletin Board onto the surface of a backing board and press in firmly with a hand roller, or with a press. Using a press enables a number of Bulletin Board covered sheets to be pressed simultaneously.

BACKING/COUNTERBALANCING

Standard recommendation: for proper counterbalancing, the back of the board should also be covered with the same material as that pasted on the front, in the same direction, with the same type of adhesive and, if possible, at the same time. Depending on the thickness, symmetrical construction and rigidity of the surface (MDF, plywood, etc.) other materials can also be used, such as foil, laminates, impregnated paper or marine lacquer sprays. We recommend conducting a test installation if you have not worked with the materials before.

4.2 Installing Bulletin Board to cover entire walls/parts of walls.

WALL CONDITIONS

- **Clean**
- **Smooth**
- **Permanently Dry**

Bulletin Board can be stuck directly onto walls which are compression and deformation resistant, permanently dry, smooth and clean. Repair damages and fill crevices in non-smooth walls and sand the surface; remove any existing wall covering and sand off any existing adhesive residue. Be sure walls to be covered are clean and free of dust. This is to ensure proper bonding with the adhesive. It is always best to conduct an adhesive bond test prior to installation. Cinder block and other irregular surfaces must be rendered smooth before applying the Bulletin Board as described above.

JOB CONDITIONS

- **Lay Flat**
- **> 20°C / 68°F**
- **24 Hours**

Cut sheets of Bulletin Board to required length, including overlap (5 to 7,5 cm / 2 to 3 inches), preferably 24 hours prior to installation. Lay sheets flat and allow them to acclimate with the permanent HVAC system set at a minimum of 20°C / 68°F for a minimum of 72 hours prior to, during and after the installation. If possible store sheets in the room they are to be installed. Back roll sheets once in reverse direction to release roll stretch. Bulletin Board shrinks lengthwise (1% at maximum) and expands slightly widthwise.

CUTTING TO SIZE

- **Remove Factory Edges**
- **Cut Straight Along Top**
- **Leave Bottom Edge with Length of Overlap**
- **Mark Perpendicular Starting Line**

Cut a sheet from the roll of Bulletin Board allowing some length of overlap. Remove factory edge from both sides with a Forbo Seam and Strip Cutter. A straight edge, utility knife and hooked blade knife may also be used to trim the factory edge. Trim off a minimum of 1,3 cm / ½ inch. With utility knife, score material about 1/3 of the material thickness. Then with the hooked blade knife, cut along the score line, holding the knife at an angle, to slightly undercut the edge. Cut straight along the top edge or direct scribe. The bottom edge should be cut to size by direct scribing during installation. Draw a perpendicular pencil line on the wall for your starting point. For best results do not use sheets less than 99 cm / 39 inches wide.

CHOICE OF ADHESIVE

Adhere the Bulletin Board using Forbo Eurocol 650 contact adhesive or an equivalent water-based adhesive. Avoid using spray contact adhesive. Apply adhesive to the wall with a putty knife and spread with a 15 mm (1/16") square notched trowel in the area of the sheet being applied. If necessary, apply 25 to 30 cm (10 to 12 inches) of contact adhesive or acrylic dispersion to the upper part of the wall and to the back of the Bulletin Board to prevent the sheet from sliding down on the fresh adhesive.

PRESSING INTO ADHESIVE

- **Work From the Top**
- **First Widthwise, Then Lengthwise**
- **Remove Adhesive Residue Immediately**

Press the sheet of Bulletin Board into the fresh adhesive, starting with the top edge and the side along the perpendicular line. Work from the top downwards, first widthwise, then lengthwise. Roll firmly through the width then the length with a hand roller to insure proper transfer of adhesive and to remove all air bubbles. Remove adhesive residue immediately with a damp cloth. Mineral spirits may be used to remove dried adhesive. The first sheet should now be fully cut in, adhered and rolled.

NOTE: On non-porous walls it is best to let the adhesive flash off at least 50% before applying the Bulletin Board material. This will give better initial tack and allow the adhesive to cure properly.

SEAMING WITH SUBSEQUENT SHEETS

- **Do Not Reverse Material Direction**
- **1,2 cm / ½ Inch Overlap**
- **Prepare for Subsequent Seam**
- **Underscribe the Seam**
- **Roll with Hand Roller**
- **Remove Adhesive Residue Immediately**

Cut the subsequent sheet to required length, including overlap (5 to 7,5 cm / 2 to 3 inches). NOTE: DO NOT REVERSE SHEET. Install all Linoleum Sheets in same direction. Overlap at seam should be a minimum of 1,2 cm / ½ inch. Using the Forbo Seam and Strip Cutter, trim the factory edge on opposite side to prepare for the next seam. Draw a pencil line on the wall where next seam line will fall. Spread the Forbo Adhesive with proper notched trowel. Spread from the edge of the first sheet up to the pencil line at the seam edge of the second sheet. If necessary, apply 25 to 30 cm / 10 to 12 inches of contact adhesive or acrylic dispersion to the upper part of the wall and to the back of the Bulletin Board, to prevent the sheet from sliding down along the fresh adhesive. Immediately after material has been laid into wet adhesive, underscribe the seam. NOTE: Scribe should be set for a net fit, so that material will fall into place without force or pressure. This will compensate for the slight expansion that will occur. Next cut the material along the scribe line using a hooked blade knife and holding it at an angle so as to slightly undercut the material. Roll seam with hand roller.

Remove adhesive residue immediately. Dried adhesive can be removed with mineral spirits. Repeat the same procedures for each sheet, completing one sheet at a time until the job is completed.

NOTE: When installing Bulletin Board to cover an entire wall, it is best to finish off walls with crown molding and base. Plus, in doing your take offs, order enough material so that you won't have any cross or butt seams.

NOTE: Another acceptable method for fitting the Bulletin Board in an entire wall installation is to pattern scribe the material. This would be recommended when the material has to be fit to the exact size without the use of molding or base.

FINISHING OFF JOINTS & POSSIBILITIES

Gouge Out

Install Bulletin Board sheets, with trimmed factory edges butted against each other, and gouge out grooves between the sheets with the grooving gouge.

Short Scriber

Remove the factory edge from sheet one; stick sheet two onto the wall with a 2 cm / 3/4" overlap over sheet one; scribe sheet two lengthwise with the short scriber and cut with undercut.

Narrow Groove

Remove the factory edges from Bulletin Board sheets and affix the sheets to the desired distance from each other, after having painted the visible part of the wall in a matching color.

T-Profile

Finish the edges with T-profiles, obtainable from retail shops.

Trim Factory Edges

Trim factory edges; then using a routing machine, bevel or shape the edge for the desired look. Then install Bulletin Board butted against each other.

FINISH

Finish off wall with strips and skirting.

INSIDE CORNERS

For best results, pattern scribing the material will ensure a tight fit between the Bulletin Board sheets.

OUTSIDE CORNERS

For the best finish look, an outside corner profile should be used. Corner guard profile should be used. This will ensure adequate protection and durability to the installation.

4.3 Handling and storing

Bulletin Board can be stored in rolls or in sheet.

Rolls should be stored standing upright ("eye to the sky"), to prevent them from getting pressure lines.

Sheet should be stored flat. Buildup of pressure on the material at any point should be avoided.



*This is an example how **NOT** to store Bulletin Board.*

Bottom rolls are "eye to the sky", top rolls are prone to having pressure faults. At the places of the red markings, horseshoe prints may occur. At the places where the rolls are lying on top of each other, pressure lines may occur.

Storage areas should be clean, dry, cool and well ventilated.

4.4 Adaptation

SAWING/MILLING TO SIZE

Bulletin Board can be cut using all kinds of saws: circular saws, band saws, saber saws, jigsaws, hacksaws or handsaws.

Test the Bulletin Board for proper adhesion then saw or mill to size. Note: Always use sharp tools for best results.

CUTTING/MACHINING

Bulletin Board can be worked with most tools used for machining wood. Tool speeds that give the best results are the ones that are highest in speed at which overheating of the tool or sheet does not occur.

It is important to keep cutting tools sharp at all times.

DRILLING

Standard drills for wood or metal can be used on Bulletin Board. Optimum bit speed, feed rate, and applied pressure will depend on hole size and sheet thickness.

Note: when drilling be sure to hold or clamp the sheet securely to prevent from cracking or slipping and presenting a safety hazard to the operator.

ROUTING

Routing with sharp two-flute straight cutters can produce a smooth edge. Routers are useful for trimming the edges of flat or formed parts, particularly when the part is too large or irregular in shape for a band saw. Routing can also be used to cut intricate designs and patterns inside the then sheet.

Bulletin Board should be fed to the router slowly to avoid excessive frictional heating. The router or sheet, whichever is moving, must be guided with a suitable template.

SHAPING

Bulletin Board can be cut for use into logos or specific shapes. Intricate and detailed graphics can be cut out using digital imagery and computer processed sand-blasting, laser cutting or water-knifing tools. Mechanical shaping methods are knife cutting, die-cutting and guillotining. Caution should be used when laser cutting as this uses heat.

FINISHING OFF EDGES



The edges can be finished by:

- fitting a frame around the edge,
- beveling the edges,
- milling to desired edge,
- cutting the edges straight

5. PRODUCT SPECIFICATIONS

5.1 Drying room yellowing

Bulletin Board is made from natural raw materials. An occurrence during the manufacturing process is that while it is maturing in the drying stoves, a yellow cast, termed “drying room yellowing” may appear on its surface. This film, caused by oxidation of linseed oil, occurs intermittently and with varying intensity. It is most noticeable on the blue and grey shades. However, the discoloration is only **TEMPORARY**, and is not a product defect. The yellowing will disappear over time when exposed to natural or artificial light.

5.2 Technical Data

MATERIAL:

Linoleum resilient tackable surface material shall be Bulletin Board as manufactured by Forbo.

5.2.1. Construction

Linoleum resilient homogeneous tackable surface material shall be of natural materials consisting of linseed oil, granulated cork, rosin binders and dry pigments, mixed and calendered onto a natural burlap (jute) backing. Uni-color shall extend throughout thickness of material. Contains no harmful by-products or carcinogens.

5.2.2. Physical Characteristics

Length	28.0 linear meters / 90 linear feet approximate
Width	122 cm / 48"
	183 cm / 72" in limited color range
Thickness	6.0 mm / 1/4"
Backing	Jute

5.2.3. Technical Data

Flexibility

Will not crack or break when bent around a 70 mm / 2 3/4" diameter cylinder.

Fire Resistance

ASTM E-84 (Fuel Contribution) - Class B
NFPA 255 (Critical Radiant Flux) - Class II

Electrical Insulation

DIN 51953-1010 Ohm VDE 0100 24-106 Ohm Anti-static characteristics to ISOTR6356-minimal charges, even at 23°C and 25% relative humidity. Under normal conditions, Bulletin Board is not susceptible to build-up of electrostatic charges.

Thermal Conductivity

The coefficient of thermal conductivity is 0.10 W/m.K.

Chemical Resistance

** Diluted Acids:

Acetic Acid (5%) No effect
Citric Acid(5%) No effect
Lactic Acid(5%) No effect

** Solvents:

White Spirits No effect
Turpentine No effect
Ether No effect
Acetone No effect

** Miscellaneous:

Hydrogen Peroxide (3%) . . . No effect
Alcohol No effect
Mineral Oil No effect
Vegetable Oil No effect
Formalin (2%) No effect

** Not resistant to high alkalis. Use neutral pH cleaners (pH 7-8.5)

Self-healing

Bulletin Board has the ability to self-heal from punctures caused by thumbtacks and pins. Depending on the amount of time the tacks or pins have been in the material, it will take longer to heal. Repeated use of pins does not harm the material. Bulletin Board will not dry out, crack, peel or crumble.

Force on pins

Thumbtacks and pins can be inserted easily and are gripped firmly. When objects are pinned to the board, the combination can carry a force of 25 N, when hanging from the pins, the combination can carry a force of 10 N.

5.2.4. Technical Services

For current installation and maintenance specifications, and other technical data, contact your local Forbo Flooring systems support.

5.2.5. Short Summary

Areas of Application

For any indoor application where the following features are required.

- Wherever low life-cycle cost, decorative and durable bulletin boards are required (in schools, clubs, business, etc.)
- As a tackable surface for use on decorative or functional walls (kindergartens, schools, meeting rooms, hospitals, etc.)
- As a decorative finish to movable partitions, furniture, doors, cupboards, etc.

Washable Finish

Bulletin Board's linoleum surface provides for a washable finish to retain original appearance. The surface can be wiped or washed using any common neutral pH cleaner (pH 7-8.5) such as Johnson Wax Product's Stride Citrus Neutral Cleaner. Simply rinse with water after cleaning.

Dimensional Stability

Due to the natural burlap backing providing a strong durable foundation, the product is dimensionally stable in all directions when properly installed. It resists cracking, drying and peeling.

Self-Healing

Ability to self-heal from thumbtack and pin punctures. Does not dry out, crack, peel or crumble. Tacks can be inserted easily and are gripped firmly. Tacks can carry a force of 25 N.











Light Reflection

Bulletin Board comes in matte colors so that annoying reflection caused by sun or artificial light is reduced.

Resistance to Bacteria

Provides a self-sanitizing quality in the form of a bactericidal effect. Tests indicate that Bulletin Board has a sterile zone around the material, inhibiting contaminants such as staphylococcus aureus.

Technical specifications

	Total Thickness	EN-ISO 24346	6.0 mm ± 0.25 mm
	Roll Width	EN-ISO 24341	1.22 m (3 colours in 1.83 m)
	Roll Length	EN-ISO 24341	≤ 28 m
	Total Weight	EN-ISO 23997	4.7 kg/m ² ± 10%
	Flexibility	EN-ISO 24344	Ø 50 mm, according to method A
	Sound absorption coefficient	EN-ISO 354	α _v 0.1 (typical)
	Thermal conductivity	EN 12524	0.10 W/m-K
	Self-healing properties	LH000420	yes
	Force on pins - Perpendicular to pin direct	LH000421	25 N (typical)
	Force on pins - Perpendicular to pin at 7 mm	LH000421	10 N (typical)
	Force on pins - Parallel to pin (pulling the pin out)	LH000421	15 N (typical)
	Bacteriostatic properties	EN-ISO 22196	yes
	Chemical resistance	EN-ISO 26987	Resistant to diluted acids, oils and the most conventional solvents such as alcohol, white spirit, etc. Not resistant to prolonged exposure to alkalis.
	Dimension stability		Due to the natural jute back, providing a strong durable foundation, the product is dimensionally stable in all directions when properly installed. It resists cracking, drying and peeling.
	Anti-static		yes
	Gloss		Only available in matt colors, so that reflection caused by sunlight or artificial light is reduced.
	Natural materials (e.g. cork, linseed oil, jute)		91%
	Recycled content		43%
	PVC, PET, plasticizers content		0%

All Forbo Flooring Systems' sales organisations worldwide have a certified Quality Management System in accordance with ISO 9001.
All Forbo Flooring Systems' manufacturing operations have a certified Environmental Management System in accordance with ISO 14001.

