

PermaBase^{BRAND} Flex Cement Board

Easy To Bend, Yet Stays Strong

When You Want The Best Substrate That Bends Like No Other: PermaBase^{MD} BRAND Flex Cement Board

This very flexible PermaBase substrate is ideal to use around archways, columns, beams, or anywhere you need an evenly curved surface. Consider this also for radius shower walls, tub step-ups and stair construction — the possibilities are almost endless.



Resists Moisture Better

- Stays intact when exposed to water: will not rot, disintegrate or swell — built for the long run.
- Achieves the industry's lowest water-absorption rating (ASTM C473) — offering better installation.
- Helps inhibit mold growth with the highest possible score on mold tests (ASTM D3273 and ASTM G21).



Stays Strong Yet Flexes Like No Other Cement Board

- Holds up to the toughest conditions yet bends like no other.
- Resists impact and remains dimensionally stable — extending the life of your project.



Installs Fast And Easy

- Pre-manufactured panels save you time.
- Bends easily — 6" radius at 90°.
- Reduces jobsite waste — easier, cleaner cut.



Offers Best In Class Warranty

- Lifetime Limited Warranty: Interior applications.
- 15-Year Limited Warranty: Exterior applications.

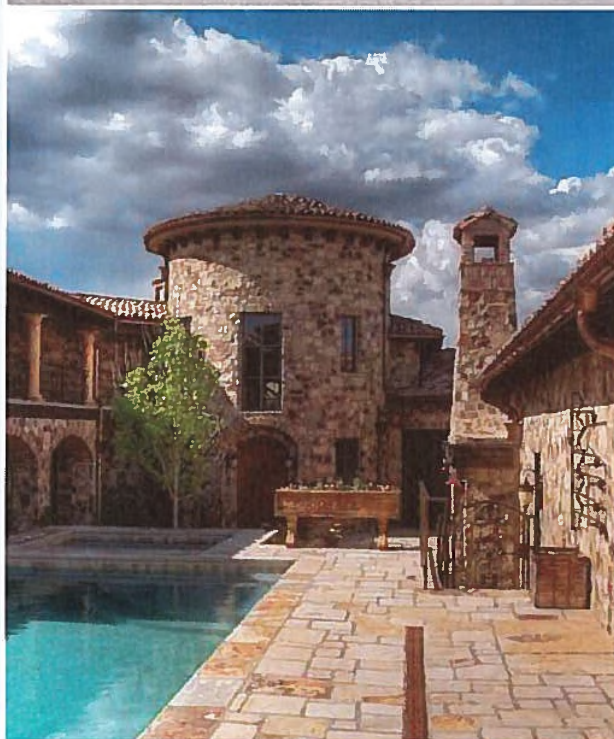
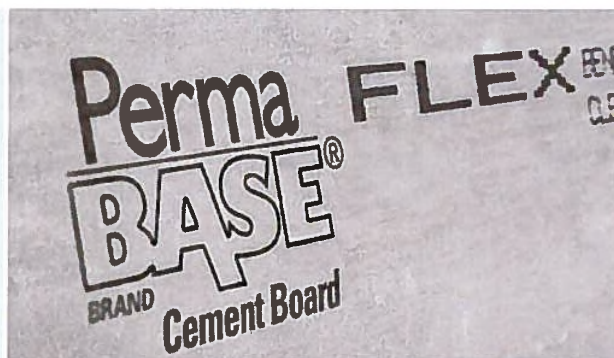
Installation

Installation recommendations for PermaBase Flex are the same as for PermaBase Cement Board with this exception: framing must be spaced a maximum of 8" o.c. (See page 12 for more information.)

Limitations

PermaBase Flex has the same limitations as PermaBase with the following additions:

- For convex surfaces, PermaBase Flex must be applied with the rough surface and tapered edges exposed.
- For concave surfaces, PermaBase Flex must be applied with the smooth surface exposed.
- PermaBase Flex Cement Board should not be used for fire-rated assemblies.
- Maximum framing spacing should not exceed 8" o.c.
- Maximum fastener spacing should not exceed 8" o.c. for wall and 6" o.c. for ceiling applications.



PermaBASE^{BRAND}
FLEX[®]
Cement Board

SIZES AND PACKAGING

Size: Thickness, Width and Length	# Of Pcs Per Unit
1/2" x 36" x 6' (12.7 mm x 914 mm x 1829 mm)	25
1/2" x 48" x 8' (12.7 mm x 1219 mm x 2438 mm)*	30

* Special Order

For installation instructions and accessories, see page 12.

Installation Guide

Interior Applications

An ideal substrate for interior applications, such as:

- Shower and tub enclosures
- Garden/whirlpool tubs
- Countertops
- Backsplashes
- Steamrooms and saunas
- Swimming pool and whirlpool decks and enclosures
- Floor underlayment
 - Entryways
 - Kitchens
 - Bathrooms
 - Foyers
 - Laundry rooms

Installation

General: All framing should comply with local building code requirements and be designed to provide support with a maximum allowable deflection of $L/360$ under all intended loads. Framing members should be spaced a maximum of 16" o.c.

Cut or score PermaBase on printed side of panel. Use a straightedge and pencil to mark line. Use utility knife to score/cut the glass mesh. Snap the board and cut through the now visible glass mesh on the other side. Install tile and tile setting materials in accordance with current ANSI specifications and Tile Council of North America (TCNA) guidelines.

Control Joints: For interior installations, allow a maximum of 30 lineal feet between control joints. A control joint must be installed but not limited to the



following locations: where expansion joints occur in the framing or building (discontinue all cross furring members located behind joint); when boards abut dissimilar materials; where framing material changes; at changes of building shape or structural system; at each story separation. Place control joints at corners of window and door openings, or follow specifications of architect. Control joint cavity shall not be filled with coating or other materials.

Walls And Ceilings

Wall Framing: Edges of PermaBase parallel to framing should be continuously supported. Provide additional blocking when necessary to permit proper PermaBase attachment.

Do not install PermaBase directly over protrusions from stud plane, such as heavy brackets and fastener heads. Studs above a shower floor should either be notched or

Installation Accessories

For a seamless installation, we recommend PermaBase^{MD} Tape and PermaBase^{MD} Screws.



Fasteners

PermaBase corrosion resistant screws or equivalent, 1-1/4" or 2" long, for use with wood framing. Type S-12 screws or equivalent, 1-1/4" or 1-5/8" long, for use with 20 gauge or heavier steel framing.

Galvanized roofing nails, 1-1/2" long with hot dipped galvanized coating for use with wood framing. Nails

should meet Federal Specification #FF-N105B/type 2 style 20.

Joint Reinforcement

PermaBase mesh tape must be used on all edges and cuts made to size. Use 2" wide polymer-coated (alkali resistant) mesh tape for interior applications and 3" wide polymer-coated (alkali resistant) mesh tape for exterior applications.

Bonding Materials

Treat joint and set facing material, preferably with latex-Portland cement mortar or with dry-set (thin-set) mortar. All mortars should comply with ANSI A118.1, A118.4 or A118.15 standards. Type 1 organic adhesive meeting ANSI A-136.1 may be utilized for interior use only.

furred to accommodate the thickness of the waterproof membrane or pan. The surround opening for a tub or precast shower receptor should not be more than 1/4" longer than unit to be installed.

Ceiling Framing: The deflection of the complete ceiling assembly due to dead load (including insulation, PermaBase, bonding material and facing material) should not exceed L/360. The dead load applied to the ceiling frame should not exceed 10 psf. Ceiling joist or furring channel should not exceed 16" o.c. (Edges of PermaBase parallel to framing should be continuously supported.) Provide additional blocking when necessary to permit proper PermaBase attachment.

PermaBase Cement Board:

Apply PermaBase with ends and edges closely butted but not forced together. Stagger ends joints in successive courses. Drive fasteners into field of cement board first, working toward ends and edges. Space fasteners maximum 8" o.c. for walls, 6" o.c. for ceilings with perimeter fasteners at least 3/8" and less than 5/8" from ends and edges. Ensure PermaBase is tight to framing.

Fasteners must be installed into framing members. Select proper fastener type and length for the application.

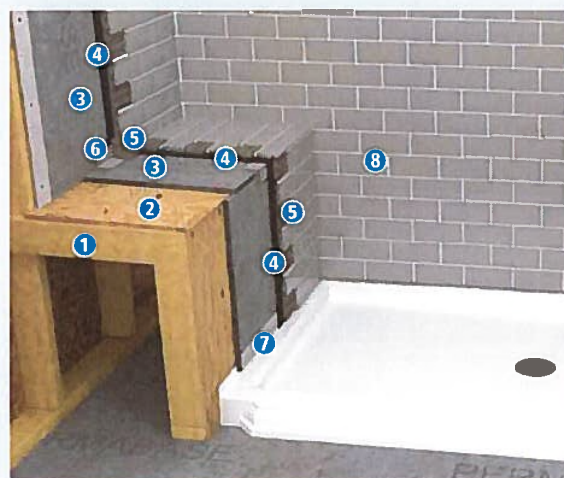
Joint Reinforcement: Trowel bonding material to completely fill the tapered recessed board joints and gaps between each panel. On non-tapered joints apply a 6" wide, approx. 1/16" thick coat of bonding material over entire joint. For all joints, immediately embed 2" alkali resistant fiberglass mesh tape fully into applied bonding material and allow it to cure. For outside corners, 3" wide mesh tape is recommended. Same bonding material should be applied to corners, control joints, trims and other accessories. Feather bonding material over fasteners to fully conceal.

Divider Wall Installation



1. PermaBase Cement Board
2. Membrane
3. Latex-Portland Cement Mortar
4. Alkali-Resistant Mesh Tape

Shower Installation



1. Support Framing
1/4" / 12" slope toward drain
2. Plywood, Min. 1/2"
3. PermaBase[™] Cement Board
4. Membrane
5. Latex-Portland Cement Mortar
6. Alkali-Resistant Mesh Tape
7. Sealant
8. Tile and Grout

Installation Guide

Floors And Counters

Subfloor Or Base: For flooring applications with 16" o.c. floor joists, 5/8" tongue and groove exterior grade plywood or 3/4" tongue and groove exterior grade OSB may be used. For 19.2" o.c. and 24" o.c. floor joists, 3/4" tongue and groove exterior grade plywood or OSB must be used. Tile size for floors with 24" o.c. floor joists must be 12" x 12" or larger. The joist and subfloor assembly must meet L/360 as well as the appropriate code tables for live and dead loads.

Underlayment Using a 1/4" square-notched trowel, apply a setting bed of polymer-modified mortar (or thin-set mortar) to the subfloor or counter base. Immediately laminate PermaBase to subfloor or base leaving a 1/8" space between boards at all joints and corners. Leave a 1/4" gap along walls. Stagger all joints so that they do not line up with underlying substrate joints. Fasten PermaBase every 8" o.c. throughout board field and around all edges while setting bed mortar is still workable. Around perimeter of each board, locate fasteners 2" from corners and not less than 3/8" from the edges. Fill all joints solid with bonding material. On non-tapered joints such as butt ends, apply a 6" wide, 1/16" thick coat over the entire joint. For all joints, immediately embed 2" fiberglass mesh tape fully into applied bonding material; ensure that tape is centered over joint. Apply bonding material over fasteners to fully conceal. Remove all excess bonding material and allow to cure.

Limitations

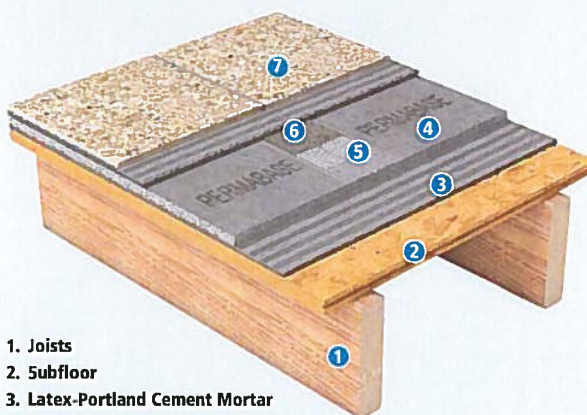
- Joints should be treated with alkali resistant fiberglass mesh tape set in a polymer modified mortar.
- Conventional paper drywall tape, joint compound and drywall nails or screws should not be used.
- Maximum wall framing spacing should not exceed 16" o.c. and must be designed to limit deflection to L/360 under all live and dead loads.
- Steel framing must be 20 gauge (galvanized) or heavier – 16" o.c.
- 1/4" PermaBase and 1/4" UltraBacker should not be used on walls or ceilings.
- PermaBase is not a water barrier. Consult local building code for moisture barrier requirements.
- Not recommended for use with vinyl flooring or carpets.
- For exterior and interior finishes applied directly to PermaBase, reinforcing mesh must be embedded in basecoat. Consult finish manufacturer for additional requirements.
- PermaBase should not be exposed to temperatures over 220°F (105°C).
- PermaBase is not a nailing base for other finishes.

Countertop Installation



1. Plywood
2. Latex-Portland Cement Mortar
3. PermaBase™ Cement Board
4. Fiberglass Mesh Tape (Alkali-Resistant) Embedded in Mortar
5. Latex-Portland Cement Mortar
6. Tile and Grout

Floor Underlayment



1. Joists
2. Subfloor
3. Latex-Portland Cement Mortar
4. PermaBase™ Cement Board
5. Fiberglass Mesh Tape (Alkali-Resistant)
6. Latex-Portland Cement Mortar
7. Tile

Exterior Applications

An ideal substrate for exterior applications such as:

- Tile applications
- Stucco applications
- Cement board stucco
- Thin brick
- Adhered stone veneer
- Thin porcelain tile
- Ventilated rainscreen facade
- EIFS
- Soffit panels
- Sheathing panels
- Outdoor kitchens/grills

Installation

General: All framing should comply with local building code requirements and be designed to provide support with a maximum allowable deflection of $L/360$ under all intended live including wind) and dead loads.

Some applications may require stricter deflection requirements. Consult finish manufacturer for recommendations.

Note: Cut or score PermaBase on rough side of panel.

Control Joints: For exterior installations, allow a maximum of 16 lineal feet between control joints. Consult finish manufacturer for other requirements. For exterior tile applications, control joints should be spaced a maximum of every 12'. A control joint must be installed but not limited to the following locations: where expansion joints occur in the framing or building (discontinue all cross furring members located behind joint); when boards abut dissimilar materials; where framing material changes; at changes of building shape or structural system; at each story separation. Place control joints at corners of window and door openings, or follow specifications of architect. Control joint cavity shall not be filled with coating or other materials.

Walls And Ceilings

Wall Framing: Studs should be spaced a maximum of 16" o.c. Edges/ends of PermaBase parallel to framing should be continuously supported. Provide additional blocking when necessary to permit proper PermaBase attachment. Do not install PermaBase directly over protrusions from stud plane such as heavy brackets or fastener heads.

Ceiling Framing: The deflection of the complete ceiling assembly due to dead load (including insulation, PermaBase, bonding material and facing material) should not exceed $L/360$. The dead load applied to the ceiling frame should not exceed 10 psf. Ceiling joist or furring channel should not exceed 16" o.c. (Edges of PermaBase parallel to framing should be continuously supported.) Provide additional blocking when necessary to permit proper PermaBase attachment.

Water Barrier: While PermaBase is unaffected by moisture, a Water/Air Resistive Barrier (WRB) must be installed to protect the cavity. The type and specific placement or location of the water barrier will vary based on local building codes and/or manufacturers warranties. Consult the WRB manufacturer's recommendations for specific installation guidelines.

PermaBase Cement Board: Apply PermaBase with ends and edges closely butted but not forced together. Stagger end joints in successive courses. Drive fasteners into field of cement board first, working toward ends and edges. Space fasteners maximum 8" o.c. for walls, 6" o.c. for ceilings with perimeter fasteners at least $3/8"$ and less than $5/8"$ from ends and edges.

Joint Reinforcement: Trowel bonding material to completely fill the tapered recessed board joints and gaps between each panel. On non-tapered joints apply a 6" wide, approximately $1/16"$ thick coat of bonding material over entire joint. For all joints, immediately embed 3" alkali resistant fiberglass mesh tape fully into applied bonding material and



allow to cure. Same bonding material should be applied to corners, control joints, trims or other accessories. Feather bonding material over fasteners to fully conceal.

Decks

Subfloor: Plywood should be securely glued and fastened to floor joists spaced a maximum of 16" o.c. Subfloor should be sloped at a minimum pitch of $1/4"$ per foot. The floor surface should be true to plane within $1/8"$ in 10'.

Underlayment: Using a $1/4"$ square-notched trowel, apply a setting bed of Latex-Portland cement mortar to the subfloor. Immediately laminate PermaBase to subfloor leaving a $1/8"$ space between boards at all joints and corners. Leave a $1/4"$ gap along walls. Stagger joints so they do not line up with underlying substrate joints. Fasten PermaBase every 8" o.c. throughout board field and around all edges while setting bed mortar is still workable. Around perimeter of each board, locate fasteners 2" from the corners and not less than

$3/8"$ from the edges. Fill all joints solid with bonding material. On non-tapered joints such as butt ends, apply a 6" wide, $1/16"$ thick coat over the entire joint. For all joints, embed alkali-resistant fiberglass mesh tape fully into applied bonding material; ensure that tape is centered over joint. Apply bonding material over fasteners to fully conceal. Remove all excess bonding material and allow it to cure.

Waterproof Membrane:

Trowel apply waterproof membrane to the entire surface of the cement board, following membrane manufacturer's installation instructions in detail.

Installation Guide

Water-Managed, High-Impact Resistant Wall System

Cement Board Ventilated Rainscreen Façade System

Description

The Cement Board Ventilated Rainscreen Façade System is a water managed exterior cladding wall system designed to provide increased high impact and weather resistance and improved dimensional stability.

The Cement Board Ventilated Rainscreen Façade System combines the strength and durability of PermaBase Cement Board with the performance and beauty of reinforced base coats and textured finishes. It includes specific components such as wood or metal furring, latex-modified Portland cement base coat, glass fiber mesh, trims, primer and acrylic textured finish coat. It provides unequalled protection against water penetration and weathering.

The Cement Board Ventilated Rainscreen Façade System allows you to enclose and finish a project in as little as two days, speeding occupancy. It has already been satisfactorily used for over 25 years on thousands and thousands of square meters of exterior walls.

Uses

For all your exterior walls needing high-impact and weather resistance in commercial, institutional and residential applications.

Advantages

Durability/Strength: PermaBase Cement Board provides an exceptionally hard, durable surface that is able to withstand prolonged exposure to moisture and has a proven durability in cold climates.

PermaBase offers a competitive advantage over similar products on the market with its patented EdgeTech[®] technology. The tapered, reinforced edge design allows for closer nail or screw application to the edge.

Weather Resistance: Acrylic finishes repel weather at the system's surface.

Water-Managed Design: The water-managed design of the system provides positive drainage directly behind the cladding, enabling the escape of incidental water that might enter around or through window or door openings and penetrate behind the cladding in frame construction. It also provides air pressure equilibrium, minimizing the chances of water being driven into the wall cavity by incidental building envelope pressure differential.

Design Options: Cement Board Stucco provides the popular stucco look, including the attachment of special pre-molded shapes and a wide variety of finish texture and color options in standard colors and custom colors.

Contact exterior coatings manufacturer for color and installation instructions.

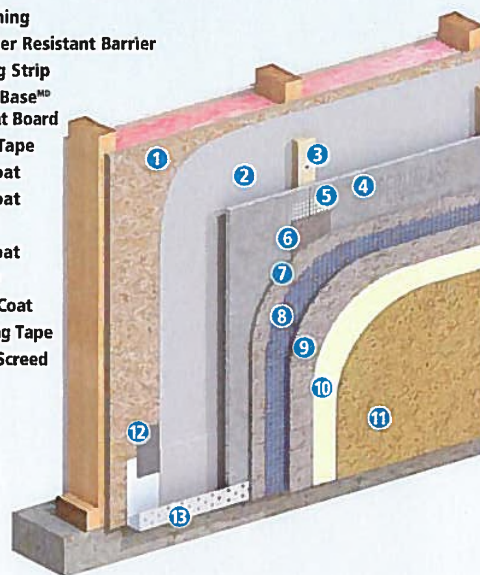
Some exterior wall assemblies including the PermaBase boards were tested according to CAN/ULC-S101. Consult ULC's online directories for details.

Limitations

- Boards shall never be fastened directly on studs.
- Thin veneer construction will tend to reveal planar irregularities in the frame construction.
- Minor cracking at joints might become visible in the finished exterior surface.
- For exterior finishes applied direct to PermaBase, reinforcing mesh must be embedded in basecoat. Consult Unifix's website to get the latest exterior cladding system complete architectural specifications and for detailed installation instructions.
- The cavity between the PermaBase Cement Board and the intermediate sheathing or the insulation board must allow for venting to the exterior, at the bottom and at the top of the wall, in order to provide efficient water drainage and humidity management.

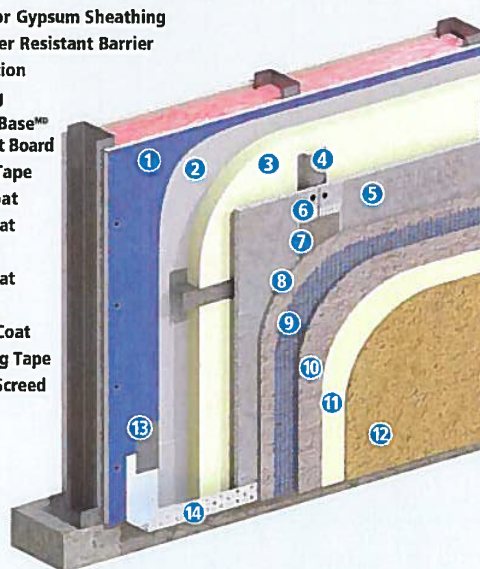
Residential Ventilated Rain Screen Installation

1. Sheathing
2. Weather Resistant Barrier
3. Furring Strip
4. PermaBase[®] Cement Board
5. Mesh Tape
6. Basecoat
7. Basecoat
8. Mesh
9. Basecoat
10. Primer
11. Finish Coat
12. Flashing Tape
13. Weep Screed



Commercial Ventilated Rain Screen Installation

1. Exterior Gypsum Sheathing
2. Weather Resistant Barrier
3. Insulation
4. Furring
5. PermaBase[®] Cement Board
6. Mesh Tape
7. Basecoat
8. Basecoat
9. Mesh
10. Basecoat
11. Primer
12. Finish Coat
13. Flashing Tape
14. Weep Screed



Cement Board Masonry Veneer Wall System (CBMV)

PermaBase as a component of CBMV Systems

The use of adhered manufactured stone and thin brick masonry veneers is increasing in popularity. Cement Board Masonry Veneer Wall Systems (CBMV) have been designed to offer complete, engineered solutions for the installation of manufactured and natural stone masonry veneer, as well as thin brick veneers.

These systems have been developed and are marketed by various manufacturers of the adhering materials used to install them as well as the veneer manufacturers themselves. CBMV Systems offer increased performance by utilizing polymer modified adhesive mortars which have been designed for hanging materials versus type S and N mortars that were primarily designed for stacking materials. In some cases these systems offer warranties.

Several of these systems call for the use of an ASTM C1325 cement board. In addition to meeting this requirement, the features and benefits of PermaBase Cement Board make it an ideal component for use in these systems.

Advantages

Durability/Strength: PermaBase Cement Board provides an exceptionally hard, durable surface that is able to withstand prolonged exposure to moisture and has a proven durability in cold climates.

Consistency: PermaBase is produced in a factory controlled environment which provides for a consistent product produced within tighter tolerances than can be achieved with field fabricated substrates.

Cutting and Handling:

PermaBase is produced with its patented EdgeTech technology. The tapered, reinforced edge design allows for fastening of nails or screws closer to the edge without crumbling or spinout. The homogeneous core provides a very clean score and snap using a standard drywall knife.

Low Water Absorption:

PermaBase has the lowest water absorption of any cement board which provides greater open time and increased workability of the adhering materials used in the application of veneer products.

Limitations

The system shall be engineered to withstand all applicable loads, including live, dead, seismic, positive and negative, etc. CBMV Systems utilize a primary sheathing beneath the PermaBase Cement Board to provide required structural performance. The selection and installation of this sheathing varies according to the type of wall construction.

In the case of exterior walls only, the CBMV Wall System shall not exceed 3 meters (9.8') in height above the foundation walls. Do not use the CBMV System to make soffits or use underground or in frequently submerged areas. Make sure to follow the latest national, provincial or local building code regulations.

Consult Unifix's website to get the latest exterior cladding system complete architectural specifications and for detailed installation instructions.

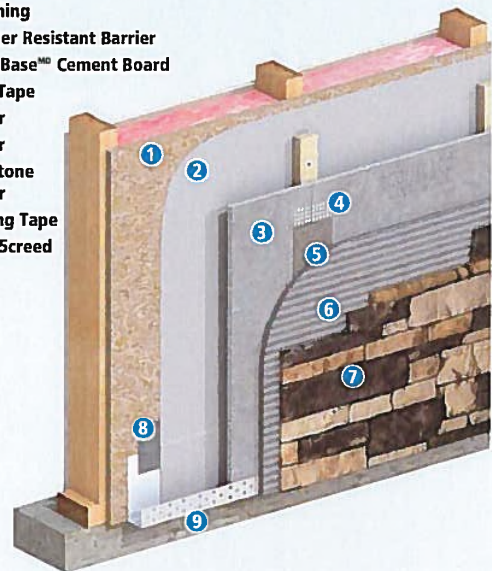
The details provided give a general sense of representative CBMV Systems only.

Water Resistant Barriers (WRB)

While PermaBase is unaffected by moisture, a water resistant barrier (WRB) must be installed to protect the cavity. One of the advantages of CBMV Systems is the ability to incorporate an effective, accountable water management system. The type and specific placement of the water barrier will vary based on local building codes and/or manufacturers warranties.

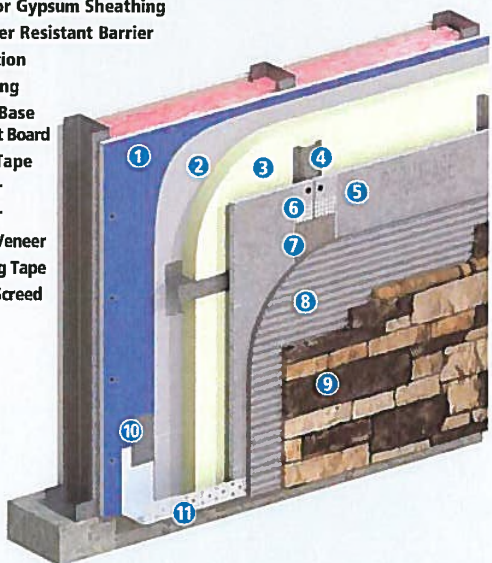
Residential Manufactured Stone Veneer Wall Installation

1. Sheathing
2. Weather Resistant Barrier
3. PermaBase[®] Cement Board
4. Mesh Tape
5. Mortar
6. Mortar
7. Thin Stone Veneer
8. Flashing Tape
9. Weep Scribed



Commercial Manufactured Stone Veneer Wall

1. Exterior Gypsum Sheathing
2. Weather Resistant Barrier
3. Insulation
4. Z-Furring
5. PermaBase Cement Board
6. Mesh Tape
7. Mortar
8. Mortar
9. Stone Veneer
10. Flashing Tape
11. Weep Scribed



This section of the PermaBase Construction Guide provides information on how to utilize PermaBase within both a CBMV System and a Ventilated Rainscreen Facade System. While some typical examples are shown (right) for reference purposes, the specifications and details on how to design and construct individual systems should be obtained from the design professional, or the adhering material or veneer manufacturer of the materials that are being used to complete the system.

For more information go to: unifixinc.com/applications

Installation Guide

Heat Shield Applications

Features/Benefits

- Protects walls and floors.
- Reduces clearance in back up to 40%.
- Lightweight and easy to install.
- CAN/ULC- S632 & UL1618 tested.

Limitations: Do not apply combustible finishes, such as wallpaper, on the panel surface.

Installation

The heat shield made with PermaBase boards can reduce the required clearance between a heat producing appliance and the wall by up to 40%, except where the clearance includes provision for access or ventilation.

Furring is made by cutting a full PermaBase panel into 4" (100 mm) wide strips. Attach a double layer of these furring strips to the wall studs using cement board

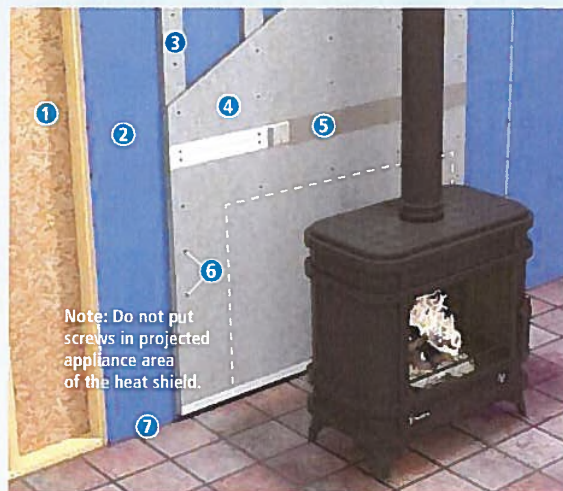
screws which provide a minimum penetration of 3/4" (19 mm) into the framing. When installing the panels, leave a minimum 2" (50 mm) gap at the ceiling and a 1"-2" (25-50 mm) gap at the floor.

Fasten the PermaBase panels to the studs with galvanized roofing nail or cement board screws spaced 8" (200 mm) o.c. Be sure your cement board screws are long enough to go through the furring and into the studs at least 3/4" (19 mm). Do not put any nails or screws into the wall area directly behind the proposed location of the appliance.

Finish the joints with polymer modified Portland cement mortar and alkali resistant fiberglass tape. Cover fasteners with the same mortar. The mortar should be dry before applying any decorative coating.

Heat build-up is reduced by allowing air to enter and exit the cavity between the wall and the heat shield. This air space is required for the good functioning of the heat shield. Do not close or block these openings.

Heat Shield Installation



1. Studs Spaced 16 in. o.c.

2. Existing Gypsum Board

3. Two Layers 4 in. wide Furring Strips

4. PermaBase^{MD} Heat Shield

5. Joint Treatment

6. Fasteners Spaced 8 in. o.c. Maximum

7. 1-2 in. Minimum Clearance from the Floor

PermaBase^{MD} heat shielding permits clearance reduction up to 40 percent of the manufacturer's suggested clearance.

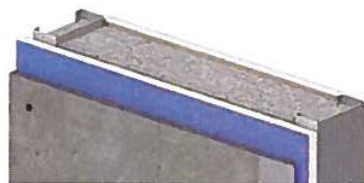
UL Listed PermaBase^{MD} Cement Board Partitions – Steel Framing

1-hour Fire Rating
V452 UL Design



7/16" PermaBase PLUS or 1/2" PermaBase applied vertically or horizontally to one side of 3-5/8" steel studs 16" o.c. 5/8" Fire-Shield Gypsum Board applied vertically to opposite side. 3" mineral wool insulation in stud cavities.

1-hour Fire Rating
U425 UL Design



7/16" PermaBase PLUS or 1/2" PermaBase applied vertically or horizontally over 5/8" Fire-Shield Gypsum Board applied vertically to each side of 3-1/2" 20-gauge steel studs 16" o.c. PermaBase secured to studs with cement board screws of adequate length to penetrate studs 3/8" spaced 8" o.c.

1-hour Fire Rating
V438 UL Design



7/16" PermaBase PLUS or 1/2" PermaBase applied vertically or horizontally over 5/8" Fire-Shield Gypsum Board applied vertically to each side of 3-5/8" steel studs 16" o.c. PermaBase secured to studs with cement board screws of adequate length to penetrate studs 3/8" spaced 8" o.c.

2-hour Fire Rating
V452 UL Design



7/16" PermaBase PLUS or 1/2" PermaBase applied vertically over 1/2" Fire-Shield C or 5/8" Fire-Shield Gypsum Board, applied vertically to one side of 3-5/8" steel studs 16" o.c. 2 layers 1/2" Fire-Shield C or 5/8" Fire-Shield Gypsum Board applied vertically to opposite side. 3" mineral wool insulation in stud cavities.

PermaBase Over Foundation Walls

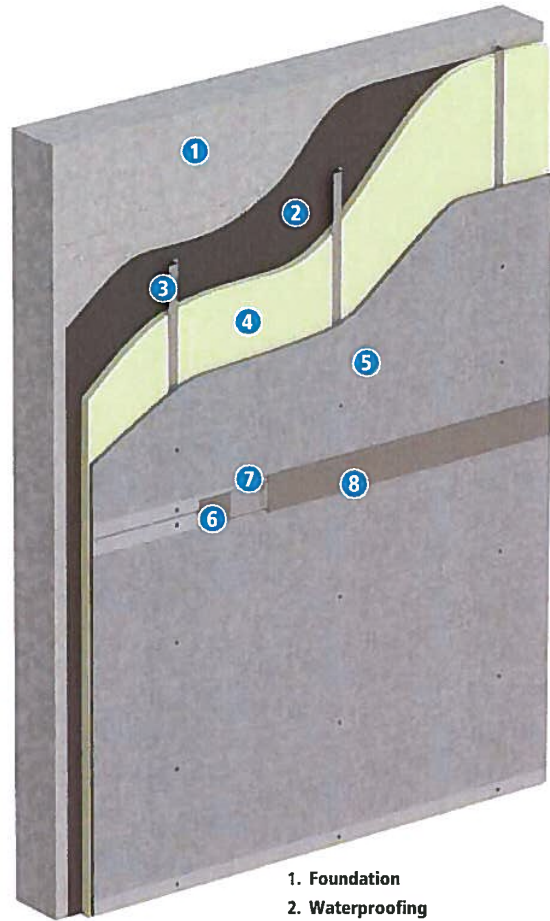
Installation

The 1/2" PermaBase boards can be installed below ground level over extruded polystyrene boards that are themselves installed over a foundation wall, under the following conditions.

1. That the PermaBase boards be fully supported, over their entire surface, by the polystyrene boards.
2. That the PermaBase boards be installed using our specially designed PermaBase screws, every 8" o.c. (200 mm), over furring channels (wood or galvanized metal 20 gauge or thicker) that comply with the following requirements:
 - a. That the furring strips be spaced at a maximum of 24" (610 mm) o.c.
 - b. That the furring strips have the same thickness (or depth) as the polystyrene board.
 - c. That the furring strips be in full contact with the foundation wall.
 - d. That the furring strip be affixed to the foundation wall with the proper fasteners and in sufficient number to provide an adequate support for the board, its finish and other building loads.
- e. That the furring strips be corrosion or rot proof.

3. That the extruded polystyrene boards be approved for exterior use, below ground and that they have a compressive strength of 20 psi (140 kPa) or higher when tested according to ASTM D1621.
4. That the PermaBase boards be installed below ground at a maximum depth of 10' (3 m).
5. That the water table level be at all times be below the base of the foundation wall.
6. That the base of the foundation wall be properly drained in order to avoid any accumulation of water and consequently an added pressure on the wall.
7. That the wall design be in conformance with the applicable and most up to date local, provincial, and federal building codes where the project is located.

Limitations: The PermaBase boards are resistant to water but are not water impermeable or waterproof and cannot be considered a vapor barrier. Where a wall or cavity must be kept dry, use proper water resistant membranes, in conformance with the applicable and most up to date local, provincial, and federal building codes where the project is located. Some waterproofing compounds, sealants, or adhesives may contain solvents or petroleum distillates. These may damage the polystyrene. Please contact the manufacturers of these products to verify their compatibility with polystyrene and concrete. The PermaBase boards are not structural boards.



1. Foundation
2. Waterproofing
3. Furring Strips
4. Insulation
5. PermaBase[™] Cement Board
6. Mortar
7. Mesh Tape
8. Mortar

LIMITED WARRANTY AND REMEDIES

Products manufactured and sold by National Gypsum Company are warranted by National Gypsum Company to its customers to be free from defects in materials and workmanship at the time of shipment. THIS EXPRESS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO SUCH PRODUCTS, AND IS IN LIEU OF AND EXCLUDES ALL OTHER EXPRESS ORAL OR WRITTEN WARRANTIES AND ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

National Gypsum Company will not be liable for any incidental, indirect or consequential losses, damages or expenses. The customer's exclusive remedy for any type of claim or action for defective products will be limited to the replacement of the products (in the form originally shipped) or, at National Gypsum's option, to a payment or credit not greater than the original purchase price of the products.

National Gypsum Company will not be liable for products claimed to be defective where the defect resulted from causes not within National Gypsum's control, or which arose or occurred after shipment, including but not limited to accidents, misuse, mis-handling, improper installation, contamination or adulteration by other materials or goods, or abnormal conditions of temperature, moisture, dirt or corrosive matter.

Any claim that products sold by National Gypsum Company were defective or otherwise did not conform to the contract of sale is waived unless the customer submits it in writing to National Gypsum within thirty (30) days from the date the customer discovered or should have discovered the defect or non-conformance. No legal action or proceeding complaining of goods sold by National Gypsum may be brought by the customer more than one year after the date the customer discovered or should have discovered the defect or problem of which it complains.

Mold And Mildew Resistance

PermaBase was designed to provide extra protection against mold and mildew. When tested by an independent laboratory, PermaBase received the highest possible ratings on ASTM G21 and D3273. The use of PermaBase in actual installations may not produce the same results as were achieved in controlled laboratory conditions. No material can be considered "mold-proof," nor is it

certain that any material will resist mold or mildew indefinitely. When used in conjunction with good design, handling and construction practices, PermaBase can provide increased mold resistance. As with any building material, avoiding water exposure during handling, storage and installation, and after installation is complete, is the best way to avoid the formation of mold or mildew.



PRODUCT
CERTIFIED FOR
LOW CHEMICAL
EMISSIONS:
UL.COM/GG
UL 2818

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UNIFIX INC. 
A SUBSIDIARY OF NATIONAL GYPSUM COMPANY

Section 1: Product and Company Identification**Product Name**

PermaBase® BRAND Cement Board Products

Product Identifiers**PermaBase****PermaBase Flex****PermaBase UltraBacker****PermaBase Plus****PermaBase DEK****Other means of identification**

Tile Backer Board, Cementitious Backer Board (CBU)

Recommended Use

Underlayment for ceramic tile on floors, countertops, EIFS systems. Use per manufacturer's recommendations.

Restrictions on Use

Use in well-ventilated area and avoid breathing dust.

Avoid skin contact.

Manufacturer/Supplier Details

National Gypsum Company

2001 Rexford Road

Charlotte, NC 28211

Emergency Telephone Number

Director Quality Services

(704) 551-5820 - 24 Hour Emergency Response

Website: www.nationalgypsum.com**In Canada:**

UNIFIX INC. A subsidiary of National Gypsum Company

35, Unifix Street

Bromont, QC J2L 1N5 CANADA

1-450-534-0955 or toll free 1-800-461-0955 (8h00 -17h00)

e-mail: info@unifixinc.comWebsite: www.unifixinc.com**Section 2: Hazards Identification****United States (US)**

According to OSHA 29CFR 1910.1200 (HCS)

GHS Classification of the substance or mixture

Carcinogenicity - Category 1A - (H-350)

Specific target organ toxicity, repeated exposure - Category 1 (H-372)

Acute toxicity, inhalation - Category 4 (H-332)

Skin corrosion/irritation Category 2 (H315)

Serious eye irritation - Category 2A (H-319)

GHS Label Elements**Pictogram****Signal Word****Danger****Hazard Statements**

H-350

H-332, 372

H-315, 319

Precautionary Statements**Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust.

Use personal protective equipment as required. (See Section 8)

Use engineering controls and wet methods to minimize dust.

May cause cancer.

Harmful if inhaled. Causes damage to organs (lungs) through prolonged or repeated exposure.

Causes skin irritation and serious eye irritation

Section 2: Hazards Identification (Continued)**Response**

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If on skin, wash with plenty of soap and water. If skin irritation occurs, get medical attention.

If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Get medical attention if exposed or concerned.

Storage

Store material in a cool, dry, ventilated area, away from excessive heat or sunlight.

Disposal

Dispose of material in accordance with federal, state, and local regulations.

Section 3: Composition/Information on Ingredients

Chemical Name	Common name/ Synonym	Identifiers CAS Number	% (weight)	Impurities
Silicon Dioxide (SiO ₂)	Sand, quartz	14808-60-7	<50	
In CANADA- Calcium Carbonate	Limestone, industrial sand	1317-65-3	<50	Crystalline silica (CAS # 14808-60-7)
Mixture-calcium and aluminum silicates	Portland Cement	65997-15-1	<25	Crystalline silica (CAS # 14808-60-7)
Mixture-silicates, aluminates	Pozzolan, fly ash	68131-74-8	<25	Crystalline silica (CAS # 14808-60-7)
Mixture-calcium aluminates	High Alumina Cement	65997-16-2	<6	Crystalline silica (CAS # 14808-60-7)
Mixture-calcium, aluminum silicates, amorphous silica	Fiberglass scrim or fiberglass mat laminates	65997-17-3	<5	
Calcium Hydroxide	Hydrated lime	1305-62-0	<2	Crystalline silica (CAS # 14808-60-7)

Section 4: First-Aid Measures

Inhalation	Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
Eye contact	Do not rub or scratch eyes. Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
Skin contact	Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
Ingestion	This product is not expected to be hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

Medical Conditions aggravated by exposure

Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

Most important symptoms/effects, acute and delayed: See Section 11. (Toxicological Information)

Section 5: Fire-Fighting Measures**Extinguishing Media**

Dry chemical, foam, water, or extinguishing media appropriate for surrounding fire.

Unusual Fire and Explosion Hazards

Mixture poses no fire-related hazard.

Special hazards arising from the mixture

None known

Special Protective Equipment and Precautions for Firefighters

A SCBA is recommended to limit exposures to combustion products when fighting any fire.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Product is an article composite.

General recommendations:

Wear appropriate Personal Protective Equipment. (See Section 8)

Maintain proper ventilation.

Environmental precautions

This product could be toxic to fish due to its high alkalinity from the Portland Cement.

Dispose of in accordance with applicable federal, state, and local regulations.

Methods and materials for containment and cleaning up

Pick-up larger pieces to avoid a tripping hazard.

Sweep or vacuum remaining material into a waste container for disposal.

Use a light water spray to minimize dust generation.

Section 7: Handling and Storage

Precautions for safe handling

Avoid breathing dust.

Minimize generation of dust.

Provide appropriate exhaust ventilation at places where dust is formed.

Avoid contact with eyes, skin and clothing.

Wear recommended personal protective equipment when handling. (See Section 8)

Conditions for safe storage, including any incompatibilities

Store material in a cool, dry, ventilated area, away from excessive heat or sunlight.

Store panels flat to minimize damage.

Do not stack panels too high when storing to minimize the risk of falling.

Avoid contact with strong acids.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Component	Exposure Limits	
	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Portland Cement	15 ^(T) 5 ^(R)	10 ^(T)
High Alumina Cement	15 ^(T) 5 ^(R)	10 ^(T)
Pozzolan	15 ^(T) 5 ^(R)	10 ^(T)
Sand	$\frac{[(10) / (\%SiO_2+2)]^{(R)}}{[(30) / (\%SiO_2+2)]^{(T)}}$	0.025 ^(R)
Crystalline Silica (Quartz) ¹	$\frac{[(10) / (\%SiO_2+2)]^{(R)}}{[(30) / (\%SiO_2+2)]^{(T)}}$	0.025 ^(R)
Fiberglass Scrim	15 ^(T) 5 ^(R)	1 f/cc ^(R)
Calcium Hydroxide (Hydrated Lime)	15 ^(T) 5 ^(R)	5 ^(R)
Calcium Carbonate	15 ^(T) 5 ^(R)	10 ^(T)

1 – Present as an impurity in raw materials

T- Total Dust

R- Respirable Dust

Exposure Controls

Appropriate Engineering Controls

Work/Hygiene Practices: Utilize methods to minimize dust production. Utilize wet methods, when appropriate, to reduce generation of dust.

Ventilation: Provide local and general exhaust ventilation sufficient to maintain a dust level below the PEL/TLV.

Personal Protective Equipment

Respiratory Protection

A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.

Eye Protection

Safety glasses or goggles.

Skin

Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

Section 9: Physical and Chemical Properties

- (a) **Appearance:** Gray solid
- (b) **Odor:** Slight organic odor upon opening that dissipates quickly.
- (c) **Odor threshold:** Not available
- (d) **pH :** ~12
- (e) **Melting point/freezing point:** Not Available
- (f) **Initial boiling point and boiling range:** Not Available
- (g) **Flash point:** Not available
- (h) **Evaporation rate:** Not available
- (i) **Flammability (solid, gas):** Not flammable
- (j) **Upper/lower flammability or explosive limits:** Not available
- (k) **Vapor pressure:** Not available
- (l) **Vapor density:** Not available
- (m) **Relative density:** ~1.2
- (n) **Solubility(ies):** Slightly soluble in water
- (o) **Partition coefficient: n-octanol/water:** Not available
- (p) **Auto-ignition temperature:** Not available
- (q) **Decomposition temperature:** Unknown
- (r) **Viscosity:** Not available
- (s) **VOC (Volatile Organic Compound):** N/A

Section 10: Stability and Reactivity

- (a) **Reactivity:** No data available
- (b) **Chemical stability:** Stable in dry environments
- (c) **Possibility of hazardous reactions:** None known
- (d) **Conditions to avoid (e.g., static discharge, shock, or vibration):** Contact with strong acids.
- (e) **Incompatible materials:** Strong acids
- (f) **Hazardous decomposition products:** None known.

Section 11: Toxicological Information

Information on Toxicological effects

Information on likely routes of exposure

- | | |
|---------------------|--|
| Ingestion | May cause gastroIntestinal irritation. |
| Inhalation | Dust may irritate respiratory system. Chronic exposure may result in lung disease. (See below) |
| Skin contact | May cause irritation, itching or dermatitis. (See below) |
| Eye contact | Contact with dust may cause mechanical irritation. |

Symptoms related to the physical, chemical and toxicological characteristics

Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, and a burning irritation of the nose, throat, and upper respiratory tract, along with possible impaired pulmonary function. Chronic exposures may result in lung disease. (Silicosis and/or lung cancer)

Contact with wet Portland Cement may cause severe irritation, redness, and possible burns. Continued and prolonged contact may result in drying of the skin. Contact with dust or glass fibers may produce itching, rash and/or redness. Repeated or prolonged exposure may result in dermatitis.

Toxicological data

No toxicological data is available for this product. Toxicological information for components of this product listed below.

Acute toxicity Not available

Skin corrosion/irritation Not available

Serious eye damage/eye irritation Not available

Skin sensitization Not available

Respiratory sensitization Not available

Sensitization Not available

Mutagenicity Not available

Carcinogenicity Not available

This product contains crystalline silica. (quartz) The International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen.

Reproductive effects Not available

**Specific target organ toxicity –
single exposure** Not available

Aspiration toxicity Not available

Section 12: Ecological Information

(a) **Ecotoxicity (aquatic and terrestrial, where available):** This product could be toxic to fish due to its high alkalinity from the Portland Cement. No studies are available.

(b) **Persistence and degradability:** Unknown

(c) **Bioaccumulative potential:** Unknown.

(d) **Mobility in soil:** Unknown

(e) **Other adverse effects (such as hazardous to the ozone layer):** None known

Section 13: Disposal Considerations

This material is not considered a hazardous waste. Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14: Transport Information

This product is not a DOT hazardous material

Shipping Name: Same as product name

ICAO/IATA/IMO: Not applicable

Section 15: Regulatory Information

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313

CERCLA: Not listed

RCRA: Not listed

OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.



Safety Data Sheet

SDS No. GB-1504

PermaBase® BRAND Cement Board Products

State Regulations

California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer.

Canada WHMIS

All components of this product are included in the Canadian Domestic Substances List (DSL).

Crystalline silica: WHMIS Classification D2A

Section 16: Other Information

SDS Prepared by: National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211

Phone Number: (704) 551-5820

Date of Preparation: July 16, 2015

Revision indicators and Date

Effective Date Change: 7/16/2015

Supersedes: 6/1/2015

Format Changes: Conforms to OSHA 29CFR 1910.1200 (HCS)
Compliant with the 2015 Canadian Workplace Hazardous Materials Information System (WHMIS 2015), the Canadian Hazardous Products Act, and the Controlled Products Regulations. (CPR)

Key to Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HCS	Hazard Communications Standard
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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Spécification

Pratique standardisé

Proposé à :

*AIR MP
754, Rue Saguenay
Rouyn-Noranda (Qc) J9X 7B5*

A/S : Guillaume Gauthier

Préparé et présenté par :

Danielle Matte

*NACE CIP Certifié Niveau 3
#64593*



Distribution E.S.
104-A, 5^e Ave Est
La Sarre (Qc) J9Z 2Y1
T.819.339.2101
admin@distributiones.com

1. Système standard

Primer :

ARP Primer Époxy (Kits Gallon)

→ Gris pâle

→ Satiné

Finition :

Supershield Uréthane (Kits Gallon)

→ Toutes les couleurs

→ Standard Lustré 80-90% lustre

→ Disponible en différents lustres sur demande.

2. Système salin

Projets résistance saline – 3000 heures

Primer :

Guertin EF75122 Époxy (Kits 4 Gallons)

→ Gris Charcoal

→ Semi-Lustre

Finition :

Supershield Uréthane (Kits Gallon)

→ Toutes les couleurs

→ Standard Lustré 80-90% lustre

→ Disponible en différents lustres sur demande.



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PRIMER – Système 1 – Projet standard

Époxy de finition sans sablage ARP 2.1VOC Primer

Ratio : 3 :1 → vendus en kits 1x GALLONS

Partie-A : 83030A01 @ format 2.84 litres

Partie-B : 83030B01 @ format 950 ml

NE PAS DILUER ; PRÊT À L'USAGE

NE PAS PIGMENTER

Résistance saline : >1500hrs

Préparation :

- Bien lire la fiche technique avant d'appliquer
- Le nettoyage au solvant (SSPC-SP1) est nécessaire
- Arrondir tous les coins et adoucir les soudures, retirer les bavures de soudage, contaminants louses (SSPC-SP2 ET SSPC-SP3)
- Pour acier autre que satiné, effectuer un grenaillage conformément la norme SSPC-SP6

Application :

- Mélanger la Partie A et Partie B indépendamment avant de les mélanger ensemble.
- Combiner les 2 parties ensemble en ratio 3 :1 en mélangeant mécaniquement à basse révolution pendant au moins 2 minutes jusqu'à ce que le mélange ait une consistance uniforme
- Utiliser un mesh 100 pour le filtre
- S'assurer que le taux d'humidité ambiante est en dessous de 80%.

ÉPAISSEURS :

Appliquer entre 4 et 6 mils humide

Vous obtiendrez entre 2.4 et 3.6 mils sec (DFT)

APPLIQUER LA FINITION SUPERSHIELD LA JOURNÉE MÊME, ENTRE 1h et 6h
APRÈS



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PRIMER – Système 2 – Résistance Saline

Époxy Haute Performance EF75122

Ratio : 4 :1

Partie-A : EF75112P1-12L @ format 12 litres

Partie-B : EF75061P2-3L @ format 3 litres

NE PAS DILUER ; PRÊT À L'USAGE

NE PAS PIGMENTER

Résistance saline >3000h.

Préparation :

- Bien lire la fiche technique avant d'appliquer
- Le nettoyage au solvant (SSPC-SP1) est nécessaire
- Arrondir tous les coins et adoucir les soudures, retirer les bavures de soudage, contaminants louses (SSPC-SP2 ET SSPC-SP3)
- Pour acier autre que satiné, effectuer un grenaillage conformément la norme SSPC-SP6

Application :

- Mélanger la Partie A et Partie B indépendamment avant de les mélanger ensemble.
- Combiner les 2 parties ensemble en ratio 4 :1 en mélangeant mécaniquement à basse révolution pendant au moins 3 minutes jusqu'à ce que le mélange ait une consistance uniforme
- Utiliser un mesh 100 pour le filtre
- S'assurer que le taux d'humidité ambiante est en dessous de 80%.

ÉPAISSEURS :

Appliquer entre 7 et 8 mils humide

Vous obtiendrez entre 4.2 et 4.8 mils sec (DFT)

APPLIQUER LA FINITION SUPERSHIELD LA JOURNÉE MÊME, ENTRE 1h et 6h

APRÈS



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FINITION URÉTHANE – Système Universel (1 et 2)

Uréthane Supershield sans Isocyanates formule 3 :1

Ratio : 3 :1

Partie-A : Supershield Intermix @ format 2.83l

Partie-B : SI25002P214 @ format 946ml

NE PAS DILUER ; PRÊT À L'USAGE

Préparation :

- Bien lire la fiche technique avant d'appliquer
- Aucun temps d'induction nécessaire

Application :

- Mélanger la Partie A et Partie B indépendamment avant de les mélanger ensemble.
- Combiner les 2 parties ensemble en ratio 3 :1 (vendu en kits) en mélangeant mécaniquement à basse révolution pendant au moins 2 minutes jusqu'à ce que le mélange ait une consistance uniforme
- Utiliser un mesh 100 pour le filtre
- S'assurer que le taux d'humidité ambiante est en dessous de 80%.
- Appliquer sur le primer en système « wet-on-wet » après 1 heure seulement, et dans un maximum de 6 heures sinon il y aura délamination entre les 2 produits.
- Le produit sera prêt à manipuler après 1 à 3 heures dépendant de la chaleur ambiante.

ÉPAISSEURS :

Appliquer entre 4 et 5 mils humide

Vous obtiendrez entre 2.6 et 3.2 mils sec (DFT)



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MÉTHODE DE PRISE DE MESURE D'ÉPAISSEUR DE PEINTURE SELON SSPC-PA2

STANDARD DE BASE

- 3 relevés dans un rayon de 4cm à 5 endroits différents pour chaque surface de 100pi2
- Les relevés doivent être mesurés à maximum de 1po d'un rebord
- Total de 15 relevés individuels pour établir 1 mesure
- Un minimum de 5 relevés doit être dans le spectre de DFT requis par la spécification
- Aucun relevé peut représenter une valeur de :
 - Moins de 80% du DFT requis par la spécification
 - Plus de 120% du DFT requis par la spécification
- Si la moyenne des relevés indique une mesure acceptée par la spécification, passer à une autre pièce
- Si la moyenne des relevés indique une mesure hors spécification, la pièce ne doit pas être acceptée par le chargé de projet.

STANDARD SELON GRANDEUR DES SURFACES

- Pour les surfaces de moins de 1000pi2, sélectionner au hasard 3 endroits de 100pi2 et effectuer les prises de mesures conformément au standard de base mentionné ci-haut (45 relevés)
- Pour les surfaces de plus de 1000pi2, mesurer le premier 100pi2 conformément au standard de base mentionné ci-haut (45 relevés), et effectuer par la suite 1 seule mesure (15 relevés) pour chaque section de 100pi2 suivante.
- Lorsqu'une anomalie est détectée, reculer de section (100pi2) et prendre des relevés conformément au standard de base pour les surfaces de moins de 1000pi2 (5 spots de 3 relevés à 3 endroits différents = 45 relevés) jusqu'à ce que les sections respectent la spécification.
- Refaire les pièces défectueuses et recommencer.

LEXIQUE :

Relevé : Prise de mesure individuelle avec la jauge électronique à un endroit précis

Mesure : C'est la mesure du DFT utilisé pour le résultat final. Il est calculé en faisant moyenne des relevés.

DFT : Épaisseur de peinture sèche (dry film thickness)

INTEGRITY
 INNOVATION
 PERFORMANCE



TECHNICAL DATA EF75122

Description

EF75122 is a grey, high solids, 2.8 VOC, epoxy primer. It is designed to fill blast profiles in a single coat. No induction time is required.

Mixed Coating Properties

Mix Ratio	4 Parts base to 1 Part epoxy part 2
VOC	
EF7500P2	3.00 lbs / gal or 360 grams / litre
EF7501P2	2.80 lbs / gal or 336 grams / litre
Volume Solids	
EF7500P2	57.81%
EF7501P2	60.84%
Sag	
Airless	12 - 15 mils
Air Assist Airless	12 - 15 mils
Air Spray	12 - 15 mils
HVLP	12 - 15 mils
Viscosity @ 70°F (21°C)	25 - 30 Seconds Zahn#2 / 300 cps
Pot Life @ 77°F (25°C)	
EF7500P2	5.00 hours
EF7501P2	4.00 hours
Salt Spray (B1000)	3000 hours @ 4 mils DFT
Theoretical Coverage	
EF7500P2	624 ft ² / gal (22.6 m ² / litre) @ 1 mil DFT
EF7501P2	672 ft ² / gal (23.8 m ² / litre) @ 1 mil DFT

DFT = Dry Film Thickness

Product Weight - Container weight not included

EF75122P1 base	13.82 lbs / gallon or 1.658 kg / litre
EF7500P2 standard cure	7.58 lbs / gallon or 0.908 kg / litre
EF7501P2 fast cure	7.78 lbs / gallon or 0.930 kg / litre

Shelf Life

Shelf Life is applicable only for material stored in unopened and undamaged original factory filled containers at 4° to 38°C (30° to 100°F).

EF75122P1	1 year	EF7500P2	2 years
		EF7501P2	2 years

Subject to reinspection. Store unused material in tightly closed containers. Contents of partially filled containers may show surface skinning after storage. If skinning forms, remove by straining before use.

BENEFITS

- excellent edge coverage
- exceptional corrosion resistance
- excellent adhesion
- excellent sprayability
- humidity resistance

USES

- power transmission & distribution equipment
- containment tanks
- OEM - chemical tankers & trailers
- OEM - oil patch applications
- OEM - fleet applications



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TECHNICAL DATA EF75122

Surface Preparation

SSPC – SP6 Commercial Blast minimum recommended or a minimum of 3-stage to 7-stage phosphate cleaning system.

Mixing Instructions

- 1) Pre-Mix EF75122P1 Base for 2 minutes with an air-operated Jiffy Mixer®, or equivalent, to produce a uniform consistency within its container
- 2) Properly ratio material at 4:1 (by volume):

4 Parts EF75122P1 Base to
1 Part EF75060P2 Standard Cure Epoxy Part 2 or
1 Part EF75061P2 Fast Cure Epoxy Part 2
- 3) Mix material for 3 minutes with an air-operated Jiffy Mixer®, or equivalent, to a uniform consistency before use
- 4) No induction time required
- 5) No Thinning required
- 6) Filter through 100 mesh in line filter

Application Instructions

Application Temperature

Minimum	55°F (10°C)
Maximum	100°F (38°C)

Equipment Settings

Air Spray:	pot pressure:	10 – 20 psi
	atomizing air:	45 – 65 psi
	nozzle set:	1.4 – 1.8
Airless Spray:	fluid pressure:	2000 - 2500 psi
	tip size:	.013 - .019
Air Assist Airless:	fluid pressure:	700 - 1500 psi
	atomizing air:	20 – 60 psi
	tip size:	.013 - .019

- Precision plural component equipment is recommended. All spray equipment including lines and filters must be kept clean at all times to avoid nozzle plugging. When hand mixing follow /Mixing Instructions/ procedures.
- Apply in wet coats making even parallel passes. Overlap each pass 50% to minimize holidays, bare areas and pinholes.
- Excess wet film will cause sags and runs.

Recommended dry film thickness is 3 mils above profile.

If thinners are required: *Please contact your Guertin Representative for recommendations.*

Note: Successful application requires following the recommended temperature, humidity conditions and film thickness ranges.

Recoat Window for best D.O.I.

Substrate Temp	70°F (21°C)
Over Itself	up to 3 days
With Urethane Topcoat	4 hours up to 24 hours
With Super-Shield® Topcoat	1 hour to 4 hours

Flash times:

Allow a minimum of 4.0 hours flash off time before applying a two-component urethane topcoat. Higher film builds (>4mils) and/or cooler temperatures will require longer flash times.

The epoxy primer can be recoated with itself up to 3 days. After 3 days the epoxy primer must be scuff sanded.

It can be topcoated with 2K urethane and Super-Shield® topcoats up to 24 hours. After 24 hours the epoxy primer must be scuff sanded.

It is recommended to apply at ambient air and surface temperatures between 55° - 100°F (10° - 38°C). Apply at a relative humidity level below 80%.

Surface temperature must be at least 5°F (3°C) above the dew point to ensure that moisture condensation does not occur during application and the drying period.

Higher/lower temperatures & humidity, film thickness, improper activator range and poor air movement will affect the dry time and recoat window.

Equipment Cleanup

Clean application equipment with Guertin's SP02859T0 or SP05127T0.

Safety Precautions

FOR INDUSTRIAL USE ONLY. To be used by professionally trained personnel using proper safety equipment. Use only with adequate ventilation. Warning: this product is flammable, keep away from heat, sparks and open flame. Please refer to material safety data sheets.

Warranty

Guertin Coatings warrants its product to be free from defects in materials and workmanship and will REPLACE ANY PRODUCT PROVED TO BE DEFECTIVE OR REFUND OF THE ORIGINAL PURCHASE PRICE OF THE QUANTITY PROVED TO BE DEFECTIVE. Requests for refund or replacement of product must be made in writing within one year from the original date of purchase. This Warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligent application, or acts of God.

GUERTIN COATINGS WILL NOT BE LIABLE FOR DEATH, INJURY TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCT, INCLUDING DOWNTIME OR LOSS OF USE OF PRODUCT.

All data, statements, and recommendations made herein are based upon information we believe to be reliable, but are made without any representation, guarantee or warranty of accuracy. Our products are sold on the condition that the user himself will evaluate them, as well as our recommendations, to determine their suitability for his own purpose before adoption. Also, statements regarding the use of our products or processes are not to be construed as recommendations for their use in violation of any patent rights or in violation of any applicable laws or regulations.



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FICHE SIGNALÉTIQUE

SECTION I - RENSEIGNEMENTS SUR LE PRODUIT

Identificateur du Produit: GREY HIGH BUILD ANTICORROSIVE
Numéro du Produit: EF75122P1
Usage du Produit: PEINTURE
NOM DU FABRICANT: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
PREPARE PAR: Mr Robert Tinsley, 204-237-0241
WHMIS CATEGORIE: B2 D2A D2B
NOM DU FOURNISSEUR: Cloverdale Paint Inc.
50 PANET ROAD
WINNIPEG, MB
R2J 0R9 204/237-0241
DATE: 04/10/15

SECTION II - INGREDIENTS DANGEREUX

INGREDIENTS	NUMERO CAS	POURCENTAGE	LIMITES D'EXPOSITION	LC50	LD50
TITANIUM DIOXIDE	13463-67-7	5.0-10.0	10 MG/M3	6.82MG/L RAT	>25G/KG ORAL RAT
MAGNESIUM SILICATE(TALC)	13776-74-4	10.0-30.0	5 mg/m3 DUST	N/AV	N/AV
CARBON BLACK	1333-86-4	0.1-1.0	3.5mg/m3DUST	>156 MG/M3 RAT	>240 MG/KG IP
BISPHENOL A DIGLYCIDYL ETHER	25068-38-6	1.0-5.0	NO INFO	N/AV	N/AV
XYLENE, MIXED ISOMERS	1330-20-7	1.0-5.0	100 ppm	5000 PPM RAT	4G/KG RAT ORAL
METHYL AMYL KETONE	110-43-0	1.0-5.0	50 ppm	2000 PPM RAT	1600 MG/KG RAT
METHYL ISOBUTYL KETONE	108-10-1	1.0-5.0	50 ppm	5700 PPM RAT	2080MG/KG RAT
METHYL ETHYL KETONE	78-93-3	5.0-10.0	200 ppm	2000 PPM RAT	2737 MG/KG RAT
N BUTYL ACETATE	123-86-4	1.0-5.0	150 ppm	2000 PPM RAT	14.0 G/KG RAT
GLYCOL ETHER PM ACETATE	108-65-6	1.0-5.0	50 ppm	N/AV	8532MG/KG RAT
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	1.0-5.0	100 ppm	13000 MG/KG RAT	5660 MG/KG RAT
ETHYLENE	100-41-4	1.0-5.0	100 ppm	>4000 PPM RAT	3.5 G/KG RAT

N.A. SANS OBJET

SECTION III - PROPRIETES PHYSIQUES

POINT D'EBULLITION : 79-260 C
ODEUR : ODEUR PIQUANTE
APPARENCE : LIQUIDE GRIS
SOLUBILITE : 2% EAUABLEE
VOLATILES EN VOLUME: 40.0%
PH @ 0.00 % : 7.0
TENSION DE VAPEUR : 77.5 mm Hg
DENSITE DE LA VAPEUR: PLUS LOURD QUE L'AIR
TAUX D'EVAPORATION : PLUS RAPIDE QUE ACETATE BUTYLE
DENSITE SPECIFIQUE : 1.584
POINT DE CONGELATION: -40 C



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EF75122P1 - 04/10/15

PAGE 2

SECTION IV - RISQUES D'INCENDIE OU D'EXPLOSION

POINT D'ECLAIR: -6 C
(TAGLIABUE C. C.)
CLASS 3, DIV. 1

LEL: 1.0%
UEL: 13.8%

MOYENS D'EXTINCTION: CHIMIQUES SECS CO2 LA MOUSSE BROUILLARD DE L'EAU

RISQUE PARTICULIERE DE LUTTE CONTRE L'INCENDIE: LIQUIDE COMBUSTIBLE (POINT ECLAIR EST INFERIEUR A 100 F/38 C). PEUT FORMER DES MELANGES INFLAMMABLES. LES VAPEURS PEUVENT ETRE EXPLOSIVE DANS L'AIR. ELIMINER TOUTE SOURCE D'IGNITION. TOUT EQUIPMENT DOIT ETRE MIS A LA TERRE. GARDER LE RECIPIENT FERME.

PROCEDURE D'EXTINCTION: LES POMPIERS DOIVENT PORTER UN APPAREIL RESPIRATOIRE AUTONOME ET DES VETEMENTS DE PROTECTION COMPLETS. UTILISER DE L'EAU PULVERISEE POUR REFROIDIR LES STRUCTURES ET LES CONTENANTS EXPOSES AU FEU.

SECTION V - DANGERS POUR LA SANTE

EFFETS DE LA SUREXPOSITION: *** INHALATION: LES VAPEURS PEUVENT IRRITER. L'EXPOSITION A DES VAPEURS TRES CONCENTREES PEUVENT CAUSER DES MAUX DE TETES, DES ETOURDISSEMENTS, DES NAUSEES, UNE DEPRESSION DU SYSTEME NERVEUX CENTRAL. L'EXPOSITION PROLONGEE A DES VAPEURS TRES CONCENTREES PEUT CAUSER L'EVANOUISSEMENT OU LA MORT. *** INGESTION: MODEREMENT TOXIQUE. LE PRODUIT EST NOCIF LORSQU'IL EST INGERE. L'INGESTION DE GRANDES QUANTITES PEUT CAUSER DES MAUX DE TETES, DES NAUSEES, DES VOMISSEMENTS, UNE DEPRESSION DU SYSTEME NERVEUX CENTRAL. UNE PETITE QUANTITE DE CE LIQUIDE ASPIREE DANS LES POUMONS SOIT PAR INGESTION OU PAR VOMISSEMENT, RISQUE D'AVOIR DE GRAVE EFFETS NOCIF POUR LA SANTE (P.EX., PROVOQUER UN OEDEME PULMONAIRE). *** PEAU: PEUT CAUSER DE L'IRRITATION MODEREE. PEUT CAUSER LE DEGRAISSEMENT ET LA DERMATITE. UNE EXPOSITION PROLONGEE PEUT RESULTER A UNE SENSIBILITE DANS LA PEAU. PEUT PROVOQUER DES BRULURES CHIMIQUES. PEUT ETRE ABSORBE PAR LA PEAU ET PROVOQUER UN RISQUE POUR LA SANTE. *** YEUX: LES VAPEURS PEUVENT IRRITER. LE LIQUIDE ET LES BRUIES IRRITENT LES YEUX ET PEUVENT CAUSER DES BRULURES. *** EFFETS DE LA SUREXPOSITION: CONTIENT SILICE. LA SUREXPOSITION A LONG TERME AU SILICE CAUSE LA SILICOSE ET LA DETERIORATION CARDIOPULMONAIRE. LA SUREXPOSITION A LONG TERME AU NOIR DE CARBONE PEUT ENTRAINER DES LESIONS CUMULATIVES AU COEUR ET AUX POUMONS. L'EXPOSITION PROLONGEE OU REPETEE PEUT CAUSER UNE SENSIBILITE DE LA PEAU ET/OU UNE SENSIBILITE RESPIRATOIRE. L'EXPOSITION PROLONGEE OU REPETEE PEUT CAUSER UN MAUVAIS FONCTIONNEMENT DU FOIE, DES REINS, ET/OU DU SYSTEME NERVEUX. L'EXPOSITION PROLONGEE OU REPETEE PEUVENT CAUSER A LA LONGUE DES DOMMAGES AU SYSTEME SANGUIN, GASTRO-INTESTINAL, NERVEUX, ET/OU REPRODUCTEUR. LES EXPOSITIONS PROLONGEES ET REPETEE PEUVENT PROVOQUER DES EFFETS TOXIQUE. L'EXPOSITION A CE PRODUIT NE DEVRAIT CAUSER AUCUN PROBLEME LORSQUE MANIPULER AVEC SOINS. LE CIRC A CLASSÉ L'ÉTHYLBENZENE PARMI LES SUBSTANCES DU GROUPE 2B EN SE FONDANT SUR DES DONNÉES SUFFISANTES DÉMONTRANT SA CANCÉROGÉNÉCITÉ POUR LES ANIMAUX DE LABORATOIRE, MAIS DE DONNÉES INSUFFISANTES SELON LES RÉSULTATS DE CERTAINES ÉTUDES MENÉES SUR DES ANIMAUX, DE TRES GRANDES EXPOSITIONS AUX XYLENES ON ENTRAINÉ DES EFFETS NÉFASTES SUR LE DÉVELOPPEMENT DES EMBRYONS/FOTUS. CES EFFETS SONT SOUVENT APPARUS A DES NIVEAUX D'EXPOSITION TOXIQUES POUR LA MERE. LA PORTÉE DE CES RÉSULTATS POUR LES HUMAINS N'A PAS ÉTÉ ÉTABLIE. LES EXPOSITIONS EXCESSIVES LONG TERME PEUT CAUSER TALCOSE, FIBROSE PULMONAIRE, QUI A SON TOUR MON ENTRAINER DES DOMMAGES GRAVES ET PERMANENTS AUX POUMONS. UNE ÉTUDE PORTANT SUR L'INHALATION DURANT TOUTE UNE VIE FAIT RESSORTIR QU'UNE EXPOSITION A DE LA POUSSIÈRE DE DIOXYDE DE TITANE A UNE CONCENTRATION DE 250 MG/M3 A ENTRAINÉ L'APPARITION DE TUMEURS AUX POUMONS CHEZ DES RATS. CES TUMEURS NE SONT APPARUES QU'A DES CONCENTRATIONS DE POUSSIÈRES QUI DÉPASSENT LA CAPACITÉ DES MÉCANISMES DE CLAIRANCE PULMONAIRE DES ANIMAUX ET SONT DIFFÉRENTES DES TUMEURS PULMONAIRES COMMUNES CHEZ L'ETRE HUMAIN TANT DANS LE TYPE QUE DANS



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BF75122P1 - 04/10/15

PAGE 3

SECTION V - DANGERS POUR LA SANTE

L'EMPLACEMENT. LA PERTINENCE DE CES RÉSULTATS SUR LE CANCER (CIRC) A CLASSÉ LE DIOXYDE DE TITANE PARMI LES LES CANCÉROGENES PRÉSUMÉS POUR LES HUMAINS (GROUPE 2B) EN SE FONDANT SUR DES DONNÉES INSUFFISANTES DÉMONTRANT SA CANCÉROGÉNÉCITÉ CHEZ LES HUMAINS ET DE DONNÉES SUFFISANTES DÉMONTRANT SA

CONDITIONS MÉDICALES GÉNÉRALEMENT AGGRAVÉES PAR L'EXPOSITION: LES PROBLÈMES CUTANÉS. LES PROBLÈMES OCULAIRES. LES PROBLÈMES RESPIRATOIRE CHRONIQUES. EN 1995 CIRC A CONCLURE EXISTE DES PREUVES SUFFISANTES CHEZ LES ANIMAUX EXPÉRIMENTAUX DE LA CANCÉROGÉNÉCITÉ DU NOIR DE CARBONE CLASSEMENT BLACK PROBABLEMENT CANCÉROGÈNE AUX HUMAINS.

VOIES PRIMAIRES DE PÉNÉTRATION: CONTACT DERMIQUE INHALATION INGESTION

MESURES DE PREMIERS SOINS: *** INHALATION: TRANSPORTER À L'AIR FRAIS. AIDER LA RESPIRATION SI NÉCESSAIRE. GARDER LA VICTIME AU CHAUD ET CALME. CONSULTER UN MÉDECIN. *** INGESTION: NE PAS FAIRE VOMIR OU BOIRE. FAIRE REPOSER. CONSULTER SANS DÉLAI UN MÉDECIN. SI LE VOMISSEMENT SE PRODUIT, GARDER LA TÊTE DE LA VICTIME BAISSÉE AU-DESSOUS DE SES HANCHES POUR ÉVITER L'ASPIRATION DANS LES POUMONS. *** PEAU: LAVÉ LA PEAU CONTAMINÉE AVEC DE L'EAU. CONSULTER SANS DÉLAI UN MÉDECIN. *** YEUX: RINCER DE L'EAU CLAIRE PENDANT AU MOINS 15 MINUTES ET FAIRE IMMÉDIATEMENT APPEL À UN MÉDECIN.

SECTION VI - DONNÉES SUR LA REACTIVITE

STABILITE: CE PRODUIT EST STABLE DANS DES CONDITIONS NORMALES D'ENTREPOSAGE.

POLYMERISATION DANGEREUSE: NE SE PRODUIRA PAS DANS DES CONDITIONS NORMALES.

PRODUITS DE DÉCOMPOSITION DANGEREUX: OXYDES DE CARBONE. VAPEURS TOXIQUES ET FUMÉE. FUMÉE INFLAMMABLES.

CONDITIONS À ÉVITER: CHALEUR, ÉTINCELLES, FLAMMES.

PRODUITS INCOMPATIBLES: AGENTS OXIDABLES. ACIDES. ALCALINS. AMINES. AGENTS RÉDUCTEURS. AGENTS D'AZOTES. LES SULFURES. HALOGENES. L'EAU. LES COMPOSÉS CHLORINES.

SENSIBILITE AUX DÉCHARGES ÉLECTROSTATIQUES: PRENDRE DES PRÉCAUTIONS CONTRE LES DÉCHARGES STATIQUES.

SECTION VII - MESURES POUR FUITE OU DEVERSEMENT

ACTION À PRENDRE EN CAS DE FUITE OU DE DEVERSEMENT: ÉLIMINER TOUTE SOURCE D'IGNITION. ARRÊTER LA SOURCE DE FUITE. ASSURER UNE VENTILATION ÉVACUER TOUT PERSONNEL NON-ESSENTIEL. PORTER LES VÊTEMENTS NÉCESSAIRE. ENDIGER L'ENDROIT POUR ÉMÉCHER PROPAGATION. ABSORBER LE LIQUIDE AVEC UN PRODUIT ABSORBANT INÉPTE. TRANSFÉRER DANS UN CONTENANT À L'ÉPREUVE D'IGNITION.

MÉTHODES D'ÉLIMINATION: NE PAS CONTAMINER LES COURS D'EAU POTABLE, LES LACS, LES ÉTANGS OU LES RUISSEAUX. SELON RÉGLEMENTS MUNICIPAUX, LES LOIS PROVINCIAL ET FÉDÉRALES APPLICABLE À VOTRE LOCALITE.

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EF75122P1 - 04/10/15

PAGE 4

SECTION VIII - PRECAUTIONS D'EMPLOI

PROTECTION RESPIRATOIRE: UTILISER UN MASQUE RESPIRATOIRE A HAUT RENDEMENT QUI PROTEGE CONTRE LES VAPEURS ORGANIQUES ET LES POUSSIÈRES TOXIQUES. POUR DES HAUTES CONCENTRATIONS, UTILISER UN MASQUE RESPIRATOIRE A ALIMENTATION D'

VENTILATION: VENTILATION EFFICACE SUR PLACE POUR EVACUER LA POUSSIÈRE. EMPLOYER UN APPAREILAGE DE VENTILATION ANTIDÉFLATION.

GANTS PROTECTEURS: PORTER DES GANTS/VETEMENTS RESISTANTS AUX PRODUITS CHIMIQUES AFIN DE PROTEGER LA PEAU POTENTIELLEMENT EXPOSEE.

PROTECTION YEUX: EVITER LE CONTACT AVEC LES YEUX. PORTER DES LUNETTES PROTECTRICES CONTRE LES PRODUITS CHIMIQUES ET UN ECRAN FACIAL.

AUTRE EQUIPEMENT PROTECTEUR: TABLIER ET BOTTES IMPERMEABLES. DOUCHE OCULAIRE ET DOUCHE D'URGENCE.

AUTRE MESURES DE PROTECTION: EVITER TOUT CONTACT AVEC LES YEUX, LA PEAU ET LES VETEMENTS. EVITER DE RESPIRER. NE PAS INGERER. CONSERVER LOIN DE TOUS ALIMENTS. BIEN LAVER LES MAINS APRES AVOIR MANIPULER LA MATIERE. CHANGER ET LAVER LES VETEMENTS CONTAMINES.

RENSEIGNEMENTS SPECIAUX EN MATIERE D'EXPEDITION: PEINTURE. LIQUIDE INFLAMMABLE
CLASSE:3 UN# 1263 LE GROUPE D'EMBALLAGE II. CANUTEC 24 HOUR EMERGENCY NUMBER: (613) 996-6666

SECTION IX - PRECAUTIONS SPECIALES

PRECAUTIONS A PRENDRE A LA MANIPULATION ET L'ENTREPOSAGE: ENTREPOSER DANS UN ENDROIT FRAIS, SEC ET BIEN VENTILE, A L'ECART DES MATIERES INCOMPATIBLES. NE PAS LAISSER A PROXIMITE D'UNE SOURCE DE CHALEUR, D'ETINCELLES, OU D'UNE FLAMME. GARDER LE RECIPIENT FERME. TOUT EQUIPEMENT DOIT ETRE MIS A LA TERRE.

AUTRES PRECAUTIONS: NE PAS COUPER, BROYER, SOUDER OU PERCER SUR OU PRES DE CE CONTENANT.

SECTION X - HMIS INFORMATION

HMIS RATIO: SANTE: 2 FLAMMABILITE: 3 REACTIVITE: 1 PROTECTION
PERSONNELLE: K

***** BASE 99001 ***** FORM 10193 *****

INTEGRITY
 INNOVATION
 PERFORMANCE



TECHNICAL DATA

EF25000 SUPER-SHIELD® SERIES

3:1 & 4:1 Mix Ratio

Description

The EF25000 Series is a high performance, isocyanate free urethane system that is VOC compliant at $\leq 2.8 - 3.5$ lbs / gal ($\leq 335 - 420$ grams/litre). Each of Cloverdale's Super-Shield® coatings are custom formulated to customer specifications; application and cure properties vary to optimize performance.

Mixed Coating Properties

Mix Ratio	3 Parts base to 1 Part catalyst (faster cure, lower spray viscosity, excellent flow out) 4 Parts base to 1 Part catalyst (STD cure, higher sag resistance, longer open time)
VOC	$\leq 2.8 - 3.5$ lbs / gal or $\leq 335 - 420$ grams / litre
Volume Solids	50 - 65%
Sag	
Airless	4 - 5 mils
Air Assist Airless	4 - 5 mils
Air Spray	4 - 5 mils
HVLP	4 - 5 mils
Viscosity @ 70°F (21°C)	30 $\pm$ 3 Seconds Zahn#2 (3:1 Mixing) 35 $\pm$ 3 Seconds Zahn#2 (4:1 Mixing)
Pot Life @ 77°F (25°C)	2.00 hours
Gloss	
20°	Matte to ultra gloss (to customer specifications)
60°	Matte to ultra gloss (to customer specifications)
Impacts	160+ in/lbs @ 2 mils DFT
Pencil Hardness	HB - F
Theoretical Coverage @ 1 mil DFT	602 - 1042 ft ² / gal (19.7 - 25.6 m ² / litre)

DFT = Dry Film Thickness

Product Weight - Container weight not included

EF25000 base	8.76 - 11.26 lbs / gallon or 1.050 - 1.350 kg / litre
SI25002P2 catalyst	6.75 lbs / gallon or 0.810 kg / litre

Shelf Life

Shelf Life is applicable only for material stored in unopened and undamaged original factory filled containers at 39° - 100°F (4° to 38°C).

EF25000 series base	2 years	SI25002P2	6 months
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Subject to reinspection. Store unused material in tightly closed containers. Contents of partially filled containers may show surface skinning after storage. If skinning forms, remove by straining before use.

BENEFITS

- ISO Free
- outstanding appearance
- excellent DOI
- excellent color & gloss retention
- low VOC
- ultra low HAP's
- meets Canadian auto refinish single stage VOC requirement
- 4:1 meets AIM VOC spec for 'other industrial maintenance coatings'

USES

- fleet finishing applications
- oil field application
- ACE
- electrical transformers
- recreational vehicles
- plastics



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TECHNICAL DATA EF25000 Series

Surface Preparation

Properly prepared, primed surface following all application procedures and recoat instructions on primer technical data sheet.

Mixing Instructions

Mixing at 3:1 by volume:

3 Parts SI25000 series base to
1 Part SI25002P2 activator

Mixing at 4:1 by volume:

4 Parts SI25000 series base to
1 Part SI25002P2 activator

Mix thoroughly to uniform consistency before use. Filter through 100 mesh in line filter.

Application Instructions

Application Temperature

Minimum	55°F (10°C)
Maximum	100°F (38°C)

Equipment Settings

Air Spray:	pot pressure:	10 – 20 psi
	atomizing air:	45 – 65 psi
	nozzle set:	1.0 – 1.8
Airless Spray:	fluid pressure:	2000 - 2500 psi
	tip size:	.011 - .015
Air Assist Airless:	fluid pressure:	700 - 1500 psi
	atomizing air:	20 – 60 psi
	tip size:	.011 - .015

- Precision plural component equipment is recommended. All spray equipment including lines and filters must be kept clean at all times to avoid nozzle plugging. When hand mixing smaller quantities, stir thoroughly to a uniform consistency prior to use.
- Apply in wet coat making even parallel passes. Overlap each pass 50% to minimize holidays, bare areas and pinholes.
- Excess wet film will cause sags and runs.

Recommended dry film thickness is 2 – 3 mils.

Supershield® is only recommended to be a finish coat over two component epoxy primers. Never apply over one component or urethane primers.

If thinners are required: Please contact your Cloverdale Representative for recommendations.

Note: Successful application requires following the recommended temperature, humidity conditions and film thickness ranges.

Drying Schedule

To customer specifications

Recoat Window for Best DOI

Substrate Temp	70°F (21°C)
Over itself	15 minutes to 1 day
Over Epoxy Primers	1 hour to 3 days

Flash times: Please refer to specific Cloverdale Primer Technical Data Sheet for appropriate flash times and recoat windows for this topcoat.

It is recommended to apply at ambient air and surface temperatures between 55° - 100°F (10° - 38°C). Apply at a relative humidity level between 33% - 85%.

Surface temperature must be at least 5°F (3°C) above the dew point to ensure that moisture condensation does not occur during application and the drying period.

Higher/lower temperatures & humidity, film thickness, improper activator range and poor air movement will affect the dry time and recoat window.

Equipment Cleanup

Clean application equipment with Cloverdale's SP03078TD.

Safety Precautions

FOR INDUSTRIAL USE ONLY. To be used by professionally trained personnel using proper safety equipment. Use only with adequate ventilation. Warning: this product is flammable, keep away from heat, sparks and open flame. Please refer to material safety data sheets.

Warranty

Cloverdale Paint Inc. warrants its product to be free from defects in materials and workmanship and will REPLACE ANY PRODUCT PROVED TO BE DEFECTIVE, OR REFUND OF THE ORIGINAL PURCHASE PRICE OF THE QUANTITY PROVED TO BE DEFECTIVE. Requests for refund or replacement of product must be made in writing within one year from the original date of purchase. This Warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligent application, or acts of God.

CLOVERDALE PAINT INC. WILL NOT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY OR FOR INCIDENTAL, CONTINGENT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCT, INCLUDING DOWNTIME OR LOSS OF USE OF PRODUCT.

All data, statements, and recommendations made herein are based upon information we believe to be reliable, but are made without any representation, guarantee or warranty of accuracy. Our products are sold on the condition that the user himself will evaluate them, as well as our recommendations, to determine their suitability for his own purpose before adoption. Also, statements regarding the use of our products or processes are not to be construed as recommendations for their use in violation of any patent rights or in violation of any applicable laws or regulations.



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FICHE SIGNALÉTIQUE

SECTION I - RENSEIGNEMENTS SUR LE PRODUIT

Identificateur du Produit: SUPERSHIELD

Numéro du Produit: SI25000-12

Usage du Produit: PEINTURE

NOM DU FABRICANT:

Cloverdale Paint Inc.

50 PANET ROAD

WINNIPEG, MB

R2J 0R9 204/237-0241

PREPARE PAR: Mr Robert Tinsley, 204-237-0241

WHMIS CATEGORIE: B2 D2AD2B

NOM DU FOURNISSEUR:

Cloverdale Paint Inc.

50 PANET ROAD

WINNIPEG, MB

R2J 0R9 204/237-0241

DATE: 05/16/13

SECTION II - INGREDIENTS DANGEREUX

INGREDIENTS	NUMERO CAS	POURCENTAGE	LIMITES D'EXPOSITION	LC50	LD50
IRON OXIDE	1309-37-1	5.0-10.0	10 mg/m3	N/AV	N/AV
ACRYLATED URETHANE OLIGOMER	N/AV	5.0-10.0	NO INFO	N/AV	N/AV
XYLENE: MIXED ISOMERS	1330-20-7	1.0-5.0	100 ppm	5000 PPM RAT	4G/KG RAT ORAL
METHYL AMYL KETONE	110-43-0	5.0-10.0	50 ppm	2000 PPM RAT	1600 MG/KG RAT
N-BUTYL ACETATE	123-86-4	10.0-30.0	150 ppm	2000 PPM RAT	14.0 G/KG RAT
ETHYL 3-ETHOXYPROPIONATE	763-69-9	1.0-5.0	50 ppm	>1000 PPM RAT	5000 MG/KG RAT
ETHYLBENZENE	100-41-4	1.0-5.0	100 ppm	>4000 PPM RAT	3.5 G/KG RAT
1,6 HEXANEDIOL DIACRYLATE	13048-33-4	1.0-5.0	NO INFO	N/AV	4.9 G/KG RAT
TRIMETHYLOLPROPANE TRIACRYLATE	15625-89-5	5.0-10.0	NO INFO	N/AV	>5 G/KG RAT

N.A. - SANS OBJET

SECTION III - PROPRIETES PHYSIQUES

POINT D'EBULLITION : 126-170 C
ODEUR : ODEUR PIQUANT

DENSITE DE LA VAPEUR: PLUS LOURD QUE L'AIR
TAUX D'EVAPORATION : PLUS RAPIDE QUE
ACETATE BUTYLE

APPARENCE : LIQUIDE EPAIS
SOLUBILITE : NEGLIGEABLE

VOLATILES EN VOLUME: 32.7%

PH @ 0.00 % : 7.0

TENSION DE VAPEUR : 18.8 mm Hg

DENSITE SPECIFIQUE : 1.100

POINT DE CONGELATION: -40 C



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SI25000-12 - 05/16/13

PAGE 2

SECTION IV - RISQUES D'INCENDIE OU D'EXPLOSION

POINT D'ECLAIR: 15 C
(TAGLIABUE C. C.)
CLASS 3, DIV. 2

LEL: 1.0%
UEL: 12.1%

MOYENS D'EXTINCTION:

CO2 CHIMIQUES SECS LA MOUSSE

RISQUE PARTICULIER DE LUTTE CONTRE L'INCENDIE: LIQUIDE COMBUSTIBLE (POINT ECLAIR EST INFÉRIEUR A 100 F/38 C). PEUT FORMER DES MÉLANGES INFLAMMABLES. LES VAPEURS PEUVENT ÊTRE EXPLOSIVE DANS L'AIR. ÉLIMINER TOUTE SOURCE D'IGNITION. TOUT ÉQUIPEMENT DOIT ÊTRE MIS À LA TERRE. GARDER LE RÉCIPENT FERMÉ.

PROCÉDURE D'EXTINCTION: LES POMPIERS DOIVENT PORTER UN APPAREIL RESPIRATOIRE AUTONOME ET DES VÊTEMENTS DE PROTECTION COMPLÈTS. UTILISER DE L'EAU PULVÉRISÉE POUR REFROIDIR LES STRUCTURES ET LES CONTENANTS EXPOSÉS AU FEU.

SECTION V - DANGERS POUR LA SANTÉ

EFFETS DE LA SUREXPOSITION: *** INHALATION: LES VAPEURS PEUVENT IRRITER. L'EXPOSITION À DES VAPEURS TRÈS CONCENTRÉES PEUVENT CAUSER DES MAUX DE TÊTES, DES ÉTOURDISSEMENTS, DES NAUSEES, UNE DÉPRESSION DU SYSTÈME NERVEUX CENTRAL. L'EXPOSITION PROLONGÉE À DES VAPEURS TRÈS CONCENTRÉES PEUT CAUSER L'ÉVANOUISSEMENT OU LA MORT. *** INGESTION: MODÉRÉMENT TOXIQUE. LE PRODUIT EST NOCIF LORSQU'IL EST INGÉRÉ. L'INGESTION DE GRANDES QUANTITÉS PEUT CAUSER DES MAUX DE TÊTES, DES NAUSEES, DES VOMISSEMENTS, UNE DÉPRESSION DU SYSTÈME NERVEUX CENTRAL. UNE PETITE QUANTITÉ DE CE LIQUIDE ASPIRÉE DANS LES POUMONS SOIT PAR INGESTION OU PAR VOMISSEMENT, RISQUE D'AVOIR DE GRAVE EFFETS NOCIF POUR LA SANTÉ (P. EX., PROVOQUER UN ŒDÈME PULMONAIRE). *** PEAU: PEUT CAUSER DE L'IRRITATION MODÉRÉE. PEUT CAUSER LE DÉGRAISSEMENT ET LA DERMATITE. UNE EXPOSITION PROLONGÉE PEUT RÉSULTER À UNE SENSIBILITÉ DANS LA PEAU. PEUT PROVOQUER DES BRÛLURES CHIMIQUES. PEUT ÊTRE ABSORBÉ PAR LA PEAU ET PROVOQUER UN RISQUE POUR LA SANTÉ. *** YEUX: LES VAPEURS PEUVENT IRRITER. LE LIQUIDE ET LES BRUINES IRRITENT LES YEUX ET PEUVENT CAUSER DES BRÛLURES. *** EFFETS DE LA SUREXPOSITION: L'EXPOSITION PROLONGÉES OU RÉPÉTÉES PEUT CAUSER UNE SENSIBILITÉ DE LA PEAU ET/OU UNE SENSIBILITÉ RESPIRATOIRE. L'EXPOSITION PROLONGÉES OU RÉPÉTÉES PEUVENT CAUSER À LA LONGUE DES DOMMAGES AUX SYSTÈME SANGUIN, GASTRO-INTESTINAL, NERVEUX, ET/OU REPRODUCTEUR. LE CIRC A CLASSE L'ETHYLBENZÈNE PARMI LES SUBSTANCES DU GROUPE 2B EN SE FONDANT SUR DES DONNÉES SUFFISANTES DÉMONTRANT SA CANCÉROGÉNÉCITÉ POUR LES ANIMAUX DE LABORATOIRE, MAIS DE DONNÉES INSUFFISANTES DÉMONTRANT L'APPARITION DE CANCER CHEZ LES HUMAINS. SELON LES RÉSULTATS DE CERTAINES ÉTUDES MENÉES SUR DES ANIMAUX, DE TRÈS GRANDES EXPOSITIONS AUX XYLÈNES ON ENTRAÎNE DES EFFETS NÉFASTES SUR LE DÉVELOPPEMENT DES EMBRYONS/FETUS. CES EFFETS SONT SOUVENT APPARUS À DES NIVEAUX D'EXPOSITION TOXIQUES POUR LA MÈRE. LA PORTÉE DE CES RÉSULTATS POUR LES HUMAINS N'A PAS ÉTÉ ÉTABLIE.

CONDITIONS MÉDICALES GÉNÉRALEMENT AGGRAVÉES PAR L'EXPOSITION: LES PROBLÈMES CUTANÉS. LES PROBLÈMES RESPIRATOIRES CHRONIQUES.

VOIES PRIMAIRES DE PÉNÉTRATION: INHALATION CONTACT DERMIQUE

MESURES DE PREMIERS SOINS: *** INHALATION: TRANSPORTER À L'AIR FRAIS. AIDER LA RESPIRATION SI NÉCESSAIRE. GARDER LA VICTIME AU CHAUD ET CALME. CONSULTER UN MÉDECIN. *** INGESTION: NE PAS FAIRE VOMIR OU BOIRE. FAIRE REPOSER. CONSULTER SANS DÉLAI UN MÉDECIN. SI LE VOMISSEMENT SE PRODUIT, GARDER LA TÊTE DE LA VICTIME BAISSÉE AU-DESSOUS DE SES HANCHES POUR ÉVITER L'ASPIRATION DANS LES POUMONS. *** PEAU: LAVÉ LA PEAU CONTAMINÉE AVEC DE L'EAU. CONSULTER SANS DÉLAI UN MÉDECIN. *** YEUX: RINCER DE L'EAU CLAIRE PENDANT AU MOINS 15 MINUTES ET FAIRE IMMÉDIATEMENT APPEL À UN MÉDECIN.



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PAGE 3

SECTION VI - DONNEES SUR LA REACTIVITE

STABILITE: CE PRODUIT EST STABLE DANS DES CONDITIONS NORMALES D'ENTREPOSAGE.

POLYMERISATION DANGEREUSE: NE SE PRODUIRA PAS DANS DES CONDITIONS NORMALES.

PRODUITS DE DECOMPOSITION DANGEREUX: OXYDES DE CARBONE. OXYDES D'AZOTE. VAPEURS TOXIQUES ET FUMEE.

CONDITIONS A EVITER: CHALEUR, ETINCELLES, FLAMMES.

PRODUITS INCOMPATIBLES: AGENTS OXIDABLE. ACIDES. ALCALINS. AGENTS REDUCTEURS. LES SULFURES. LES METAUX ACTIFS, IONS DE METAUX. LE CUIVRE. HALOGENES. L'EAU.

SENSIBILITE AUX DECHARGES ELECTROSTATIQUES: PRENDRE DES PRECAUTIONS CONTRE LES DECHARGES STATIQUES.

SECTION VII - MESURES POUR FUITE OU DEVERSEMENT

ACTION A PRENDRE EN CAS DE FUITE OU DE DEVERSEMENT: ELIMINER TOUTE SOURCE D'IGNITION. ARRETER LA SOURCE DE FUITE. EVACUER TOUT PERSONNEL NON-ESSENTIEL. PORTER LES VETEMENTS NECESSAIRE. ENDIGER L'ENDROIT POUR EMPECHER PROPAGATION. ABSORBER LE LIQUIDE AVEC UN PRODUIT ABSORBANT INERTE. TRANSFERER DANS UN CONTENANT A L'EPREUVE D'IGNITION.

METHODES D'ELIMINATION: NE PAS CONTAMINER LES COURS D'EAU POTABLE, LES LACS, LES ETANGS OU LES RUISSEAUX. SELON REGLEMENTS MUNICIPAUX, LES LOIS PROVINCIAL ET FEDERALES APPLICABLE A VOTRE LOCALITE.

SECTION VIII - PRECAUTIONS D'EMPLOI

PROTECTION RESPIRATOIRE: UTILISER UN MASQUE RESPIRATOIRE A HAUT RENDEMENT QUI PROTEGE CONTRE LES VAPEURS ORGANIQUES ET LES POUSSIERES TOXIQUES. POUR DES HAUTES CONCENTRATIONS, UTILISER UN MASQUE RESPIRATOIRE A ALIMENTATION D'AIR.

VENTILATION: VENTILATION EFFICACE SUR PLACE POUR EVACUER LA POUSSIERE. EMPLOYER UN APPAREILAGE DE VENTILATION ANTIDÉFLATION.

GANTS PROTECTEURS: PORTER DES GANTS/VETEMENTS RESISTANTS AUX PRODUITS CHIMIQUES AFIN DE PROTEGER LA PEAU POTENTIELLEMENT EXPOSEE.

PROTECTION YEUX: EVITER LE CONTACT AVEC LES YEUX. PORTER DES LUNETTES PROTECTRICES CONTRE LES PRODUITS CHIMIQUES ET UN ECRAN FACIAL.

AUTRE EQUIPMENT PROTECTEUR: TABLIER ET BOTTES IMPERMEABLES. DOUCHE OCULAIRE ET DOUCHE D'URGENCE.

AUTRE MESURES DE PROTECTION: EVITER TOUT CONTACT AVEC LES YEUX, LA PEAU ET LES VETEMENTS. EVITER DE RESPIRER. NE PAS INGERER. CONSERVER LOIN DE TOUS ALIMENTS. BIEN LAVER LES MAINS APRES AVOIR MANIPULER LA MATIERE. CHANGER ET LAVER LES VETEMENTS CONTAMINES.

RENSEIGNEMENTS SPECIAUX EN MATIERE D'EXPEDITION: PEINTURE. LIQUIDE INFLAMMABLE
CLASSE:3 UN# 1263 LE GROUPE D'EMBALLAGE II. CANUTEC 24 HOUR EMERGENCY NUMBER: (613) 996-6666

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PAGE 4

SECTION IX - PRECAUTIONS SPECIALES

PRECAUTIONS A PRENDRE A LA MANIPULATION ET L'ENTREPOSAGE: ENTREPOSER DANS UN ENDROIT FRAIS, SEC ET BIEN VENTILE, A L'ECART DES MATIERES INCOMPATIBLES. NE PAS LAISSER A PROXIMITE D'UNE SOURCE DE CHALEUR, D'ETINCELLES, OU D'UNE FLAMME. GARDER LE RECIPIENT FERME. TOUT EQUIPMENT DOIT ETRE MIS A LA TERRE.

AUTRES PRECAUTIONS: NE PAS UTILISER DE PRESSION POUR VIDER LE CONTENANT. NE PAS COUPER, BROIER, SOUDER OU PERCER SUR OU PRES DE CE CONTENANT. TOUS LES CONTENANTS CONTIENNENT DES RESIDUS ET DES VAPEURS. MANIPULER LES CONTENANTS VIDES COMME S'ILS ETAIENT PLEINS.

SECTION X - HMIS INFORMATION

HMIS RATIO: SANTE: 2 FLAMMABILITE: 3 REACTIVITE: 1 PROTECTION PERSONNELLE: E

BASE 99001

FORM 09101



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DATA SHEET

2.1 VOC ARP Primer

Automotive Primer

Industry Approvals

Auto Refinish: ✓ Category 1
Env. Canada: Exempt
MPI: N/A
AWWA: N/A

General Properties

A high performance epoxy primer for vehicle refinish applications requiring a primer with less than 250 gr/l VOC. The 83030 primer has superior corrosion resistance when applied to prepared steel. No induction time required. 83030 has excellent sanding capability, but provides a finish so smooth that sanding is often not required.

Recommended Uses

For use in vehicle refinish applications, truck boxes & bodies, power distribution equipment, tanks, agricultural equipment, and general industrial priming.

Product Information

GENERIC TYPE	Amine Cured Epoxy
PIGMENT TYPE	Anti-corrosive
COLOR	Grey
BASES	N/A
FINISH	Flat
AVERAGE VOLUME SOLIDS	60.2%
AVERAGE WEIGHT SOLIDS	77.0%
RECOMMENDED FILM THICKNESS	Wet: 3.3-5.0 mils (82 - 125 microns) Dry: 2-3 mils (50 - 75 microns) See your Cloverdale Representative for project recommendations.
THEORETICAL COVERAGE	965 ft ² /gal @ 1 mil (25 microns) DFT 23.7 m ² /L @ 1 mil (25 microns) DFT Actual coverage may vary depending on substrate and application methods.

MIXED RATIO	3 Parts 83030A; 1 Part 83030B
INDUCTION TIME	No induction time required
POT LIFE	7 hours at 25°C (77°F) (less at higher temperatures)
VISCOSITY MIXED	57 - 63 KU
TEMPERATURE RESISTANCE (DRY)	93°C (200°F) Continuous 120°C (250°F) Intermittent
V.O.C. MIXED	250 gm./lit. (2.1 lb./gal.) *refer to MSD sheet for current VOC values
THINNER	Use as supplied.
ACCELERATOR	A-65

Methods of Application

AIRLESS SPRAY	1500 - 200 psi with tip sizes .011" - .013" or equivalent
H.V.L.P.	Tip size 1.4 - 1.6 mm. 8 - 10 psi cap pressure
CONVENTIONAL	40 - 50 psi gun pressure
BRUSH / ROLLER	Not recommended

Drying Time - Temperature, Relative Humidity, and Film Thickness will affect dry and re-coat times.

Substrate Temperature	Touch Dry	Hard Dry	Overcoat Interval with Armourshield		
			Minimum	Maximum	Normal
25°C (77°F)	3.5 hours	6 hours	2 hours	3 days	4 hours



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Recommended Topcoats

Most Cloverdale Conventional and High Performance Coatings. Note: Only the 837 and 839 series urethanes should be used for ARP applications.

Surface Preparation

Area to be painted should be thoroughly cleaned with a detergent solution in water followed by a wash using a wax and grease remover. Sand the bare metal areas using 80-180 grit abrasive. Old, existing finishes should be sanded using 320 – 400 grit paper. Sanded areas should be re-cleaned and primed as quickly as possible after drying.

Limitations

Not recommended for immersion service. For best results apply when substrate temperature is above 10°C (50°F), and at a minimum of 3°C (5°F) above the dew point. Do not apply when the relative humidity is above 85%.

Mixing Instructions

Mix 83030 base A component and curing agent 83030 activator B separately with good agitation. Add curing agent to base component and mix thoroughly until homogenous. If thinning is necessary or required proceed only after recommended induction time has passed.

Safety Precautions

This product is for industrial use only. Refer to Material Safety Data Sheet for proper health and safety information.

Storage and Handling

FLASH POINT	-20°C (-4°F) TCC
PRODUCT WEIGHT	1.435 kg/lit mixed (container extra)
STORAGE	Cool, dry, secure location. See your Cloverdale Paint Representative.
PACKAGE SIZE	1 gal kit - 3 qts 83030A and 1 qt. 83030B 4 gal kit - 3 gal 83030A and 1 gal 83030B

Some package sizes or colors may be by special order only. Please check with your Cloverdale Representative when ordering.

Warranty Disclaimer

Cloverdale Paint manufactures quality products. In the event that this product is defective or in any way unsuitable for the application for which it is sold, Cloverdale Paint Inc. will replace the product free of charge. The warranty provided by this data sheet is the only warranty or guarantee of quality made in respect of this product by Cloverdale Paint Inc. By purchasing this product the customer accepts this warranty in lieu of all others, and waives all claims to any other remedy arising from any warranty or guarantee of quality, whether such warranty or guarantee of quality was made expressly to the customer or implied by any applicable law.

Cloverdale Paint Inc.

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PERFORMANCE CRITERIA

1. Abrasion Resistance

Method: ASTM D4060 Abrasion Resistance of Organic Coating by Taber Abrader, 1000 gram load, CS-17 Wheel, 1000 Cycles
Coating System: 1 coat 83030
Results: 161 mg.

2. Adhesion

Method: ASTM D4541, method "E"

Coating System: 83030 primer, 839 Armourshield topcoat
Results: >900 psi

3. Chemical Resistance

Method: Covered spot test for 1 week at room temperature

Coating System: 1 coat 83030

Coating was exposed to - 5% Sodium Hydroxide Solution; 5% Sulfuric Acid Solution; 5% Hydrochloric Acid; 5% Mono Basic Sodium Phosphate Solution; 5% Sodium Hypochlorite Solution; Heavy Duty Liquid Detergent

Results: Unaffected - slight discoloration permitted

4. Recoating Window

Method: Internal method - Minimum = the time to >80% gloss @ 20 degree angle. Maximum = longest time tested with 5B adhesion of topcoat

Coating System: 83030 primer, 839 Armourshield topcoat
Results: 2 hrs to >72 hrs

5. Salt Spray (Fog)

Method: ASTM B117

Coating System A: 1 coat 83030

Results: >1000 hrs

Coating System B: 1 coat 83030, 1 coat 83904

Results: >1500 hrs

6. Flexibility

Method: ASTM D522 Cylindrical Mandrel Bend

Coating System: 1 coat 83030

Results: Not less than 9% elongation

7. Pencil Hardness

Method: ASTM D3363

Coating System A: 1 coat 83030

Results: pass 2H

Check for recent amendments to this data sheet at www.cloverdalepaint.com



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M A T E R I A L S A F E T Y D A T A S H E E T

SECTION I - PRODUCT IDENTIFICATION AND USE

Product Identifier: 2.1 VOC ARP PRIMER BASE

Identification Number: 83030A

Product Use: PAINT

WHMIS Class: B2 D1B D2A

MANUFACTURER:

SUPPLIER:

Cloverdale Paint Inc.

Cloverdale Paint Inc.

50 PANET ROAD

50 PANET ROAD

WINNIPEG, MB

WINNIPEG, MB

R2J 0R9 204/237-0241

R2J 0R9 204/237-0241

PREPARED BY: Mr Robert Tinsley, 204-237-0241

DATE: 03/19/14

SECTION II - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	WT. PERCENT		EXPOSURE LIMIT	LC50	LD50
		RANGE				
TITANIUM DIOXIDE	13463-67-7	10.0-30.0		10 MG/M3	6.82MG/L RAT	>25G/KG ORAL R
MAGNESIUM SILICATE(TALC)	13776-74-4	10.0-30.0		5 mg/m3 DUST	N/AV	N/AV
BISPHENOL A DIGLYCIDYL ETHER	25068-38-6	10.0-30.0		NO INFO	N/AV	N/AV
ALKYL GLYCIDYL ETHER	68609-97-2	1.0-5.0		NO INFO	N/AV	>19.2 G/KG RA
XYLENE; MIXED ISOMERS	1330-20-7	1.0-5.0		100 ppm	5000 PPM RAT	4G/KG RAT ORA
METHYL ISOBUTYL KETONE	108-10-1	1.0-5.0		50 ppm	5700 PPM RAT	2080MG/KG RAT
METHYL ETHYL KETONE	78-93-3	5.0-10.0		200 ppm	2000 PPM RAT	2737 MG/KG RA
ACETONE	67-64-1	1.0-5.0		750 ppm	16000 PPM RAT	7400 MG/KG RA
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	1.0-5.0		100 ppm	13000 MG/KG RAT	5660 MG/KG RA
FURFURYL ALCOHOL	98-00-0	1.0-5.0		NO INFO	233 MG/KG RAT	177 MG/KG RAT
TER BUTYL ACETATE	504-88-5	1.0-5.0		NO INFO	2230 MG/M3 RAT	4100 MG/KG RA

N.A. = NOT APPLICABLE

SECTION III - PHYSICAL DATA

BOILING RANGE	: 56-260 C	VAPOR DENSITY	: IS HEAVIER THAN AIR
ODOR	: AROMATIC	EVAPORATION RATE	: IS FASTER THAN BUTYL ACETATE
APPEARANCE	: GREY LIQUID	SOLUBILITY	: 8% WATER SOLUBLE
VOLATILE BY WEIGHT	: 18.6%	SPECIFIC GRAVITY	: 1.483
VOLATILE BY VOLUME	: 35.7%	FREEZING POINT	: -40 C
PH @ 0.00 %	: 7.0		
VAPOR PRESSURE	: 184 mm Hg		