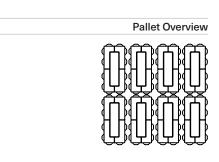
#### **AQUASTORM**

**DESCRIPTION:** Paver **TEXTURE:** Smooth



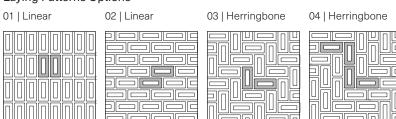
56 units / pallet

Specifications pe	r pallet		Imperial	Metric
	Product dimension (	$\bot \times W \times H$ )	20 1/16 × 10 1/16 × 3 15/16	510 × 255 × 100
THE THE	Cubing		78.39 ft <sup>2</sup>	7.28 m <sup>2</sup>
56 units / pallet	Approx. Weight		2 245 lbs	1 018 kg
	Number of rows		7	
	Coverage per unit		11.20 ft <sup>2</sup>	1.04 m <sup>2</sup>
Lin. coverage per row	Lin. coverage	Depth	13.39 lin. ft	4.08 lin. m
	Length	6.69 lin. ft	2.04 lin. m	





#### Laying Patterns Options



Patterns are for design inspiration only. The installer is responsible to calculate & purchase the correct amount of material.

#### **NOTES**

See page 6 for icons description.

See page 19 for more information about applications.

See page 56 to 58 for more technical information. When used in a permeable pavement application, see page 21 and 97 for more technical information.

JOINT WIDTH: 1 5/8" (41 mm) % OF SURFACE OPENING: 38 %

INFILTRATION RATE: 2 395 in./hr (60 842 mm/hr)

#### WINTER CONDITIONS

De-icing salts should never be used on grass as salt will damage it. The snowblower blade should be set to leave a ¾ to 1 ½ in. (2 to 4 cm) tamped snow cover to protect the grass from extreme cold and prevent it from being torn off during snow removal.

Grid pavers are ideal for emergency and service access lanes, boat ramps, and slope protection.

Aquastorm paver meet and exceeds the requirements of ASTM C1319 for Concrete Grid Paving Units.

# PERMEABLE



Aquastorm P. 98 Hydra P. 99 Mika P. 100 Oxford P. 101 Pure P. 102

#### PHYSICAL AND GEOMETRICAL CHARACTERISTICS

CHARACTERISTICS	ASTM C936	CSA A231.2:19
Compressive strength	8000 psi [55 MPa] min.	50 MPa min.
Absorption	5 % max.	
Freeze-thaw durability	Mass loss (max.): 225 g/m² at 28 cycles, or Mass loss (max.): 500 g/m² at 49 cycles	Mass loss (max.): 225 g/m² after 28 cycles, or Mass loss (max): 500 g/m² after 49 cycles
Dimensional tolerances (see Notes below):	Length and Width: ± 0.063 in. [1.6 mm] Thickness: ± 0.125 in. [3.2 mm]	Length and Width: -1.0 mm to +2.0 mm Thickness: ± 3.0 mm

Notes: The dimensional tolerances shown above are prior to the application of architectural finishes.

#### SURFACE INFILTRATION CHARACTERISTICS

PERMEABLE PAVERS	PERCENT OF SURFACE OPENING (%)	JOINT WIDTH	INITIAL POST-CONSTRUC- TION INFILTRATION RATE <sup>1</sup>
ANTIKA <sup>2</sup>	Variable	Variable	993 in./hr (25 227 mm/hr)
AQUASTORM <sup>2</sup>	38.4	1 %" (41mm)	2 395 in./hr (60 842 mm/hr)
BLU 60 mm (6X13) <sup>3</sup>	4.8	%2" (7mm)	570 in./hr (14 475 mm/hr)
BLU 60 mm & BLU 60 (6x13) <sup>3</sup>	4.5	%2" (7mm)	570 in./hr (14 475 mm/hr)
BLU 80 mm (6x13) <sup>3</sup>	4.8	%2" (7mm)	570 in./hr (14 475 mm/hr)
BLU 80 mm & BLU 80 (6x13) <sup>3</sup>	4.5	%2" (7mm)	570 in./hr (14 475 mm/hr)
HYDRA	8.3	½" (13mm)	605 in./hr (15 345 mm/hr)
MIKA <sup>2</sup>	7.8	5⁄8" (15mm)	909 in./hr (23 094 mm/hr)
MISTA random <sup>1</sup>	6.3	3/16" (4mm) to 9/16" (14mm)	610 in./hr (15 505 mm/hr)
OXFORD	7.3	3/8" (10mm)	NA
PURE <sup>2</sup>	5.0	³⁄₅" (10mm)	726 in./hr (18 440 mm/hr)
TRAVERTINA RAW <sup>2</sup>	7.8	5⁄8" (15mm)	793 in./hr (20 150 mm/hr)
VALET <sup>2</sup>	5.9	%2" (7mm)	400 in./hr (10 160 mm/hr)
VILLAGIO <sup>1</sup>	8.0	3%" (9mm) to 9/16" (15mm)	896 in./hr (22 750 mm/hr)

<sup>1</sup> Measurements were taken at various sites in conformity to the standard ASTM C 1701-09  $\,$ 

#### OTHER PERMEABLE POSSIBILITIES



BLU 60 mm & BLU 60 mm (6x13) SLAB



AQUASTORM PAVER



ANTIKA PAVER



BLU 80 mm & BLU 80 mm (6x13) PAVER

(page 31 to 35)

(page 98)

(page 59)

(page 60 to 64)



MISTA RANDOM PAVER

VALET PAVER



VILLAGIO PAVER

(page 86)

(page 89)

(page 91)

<sup>&</sup>lt;sup>2</sup> Measurements were taken at various sites in conformity to the standard ASTM C 1781.

<sup>&</sup>lt;sup>3</sup> A min. of 4.5% opening surface requires 75% of Blu 6x13 and 25% of Blu. Combinations with other products could be possible, contact your local representative for more information.

#### SEGMENTAL PERMEABLE PAVEMENT

#### INSTALLATION OUTLINE



#### 01 DATA COLLECTION

- A. Determine the size, shape, and intended use of finished areas (i.e. residential driveway, secondary commercial parking, etc.).
- B. Classify sub-grade soils.
- C. Document all existing conditions (i.e. fixed points, existing grades, site contours, etc.).
- D. Document soil type, location, and elevation of below grade and overhead utilities both public and private.
- E. Ensure public utilities are marked through the use of a locating service.
- F. Determine the cross section design of the system based on soil type and application, showing proposed sub-grade and finished grade elevations and all geotextiles and drainage pipes needed for the construction.
- G. Establish the type, location, and elevation of relief structures if required (i.e. overflow pipe discharging to rain garden, etc.).
- H. Determine the curb or edge restraint type, elevation, and location.
- I. Choose a pattern appropriate to the application (traffic type and load).

#### 02 EXCAVATION

- A. Before digging, contact the concerned companies if wires or pipes are located in the area to be excavated.
- B. Excavation depth is determined from the foundation thickness according to the project specifications (foundation thickness is determined by a qualified engineer based on structural and hydrological analyses).
- C. Although the slope of the sub-grade will depend on the drainage design and infiltration type, a minimum slope of 0.5% (%e" per ft, or 5 mm per meter) is recommended.
- D. The distance that the excavated area should extend beyond the area to be paved should be one to 1.5 times the thickness of the foundation. This extra space will ensure the stability of the pavers near the edge and the edge restraints.
- E. Level the bottom of the excavated area with a rake.

Compaction will reduce the permeability of the sub-grade and it should be executed according to the project specifications. If compaction is not specified, care should be taken to maintain undisturbed soil infiltration during excavation and construction. Stabilization of the sub-grade may be required with weak, continually saturated soils, or when subject to high traffic conditions. If the compaction or stabilization of sub-grade is necessary, reduced infiltration may require drainage pipes within the sub-base to conform to storm water drainage requirements.

#### 03 GEOTEXTILE, IMPERMEABLE LINERS, AND DRAIN PIPES

- A. Use the geotextile specified and install it according to project specifications. The use of a woven geotextile with bi-axel strength that meets design criteria is recommended.
- B. Place the geotextile on the bottom and sides of the soil sub-grade. Eliminate wrinkles in the geotextile and ensure it is not damaged during construction
- C. Overlap of geotextile should be a minimum of 2' (600 mm) in the direction of drainage. Overlapping should be "shingle" style with respect to any slope direction and base stone distribution direction. Keep properly tensioned, eliminate wrinkles, and avoid damaging fabric (no spikes).
- D. If impermeable liners are required, install them according to project specifications and manufacturer's instructions. Impermeable liners are used when full exfiltration from the reservoir (sub-base and base) into the underlying sub grade is not allowed (no infiltration design). Perforated drainage pipes are usually required in no infiltration and partial infiltration designs.
- E. If drainage pipes are required, install them according to project specifications. The aggregate cover over drainage pipes should be at least 12" (300 mm) to protect them from damage during sub-base or base compaction.

#### SEGMENTAL PERMEABLE PAVEMENT

#### INSTALLATION OUTLINE

#### 04 SUB-BASE

For residential pedestrian applications, the sub-base may not be required and then only ASTM No. 57 (CSA 5-28) aggregate base layer with a minimum thickness of 6" (150 mm) can be used (use a thicker base for additional water storage). Refer to Base (see below 06).

When traffic load, soil conditions, and climate require greater than 12" (300 mm) of base or volume requirements for detention are higher, a sub-base may be required. Use sub-base ASTM No. 2 or No. 3 (CSA 40-80) meeting the following requirements:

- 90% fractured symmetrical particles
- · Less than 5% passing the 200 sieve
- · Industry hardness tested
- A. Moisten, spread and compact the ASTM No. 2 (CSA 40-80) aggregate sub-base in minimum 6" (150 mm) lifts (without distorting or damaging the geotextile) according to the project specifications.
- B. Make at least two passes in the vibratory mode followed by at least two passes in the static mode with a minimum 10 ton (9 metric ton) vibratory roller, until there is no visible movement of the aggregate. Alternately, a 13,500 lbf (60 kN) plate compactor can be used to compact the ASTM No. 2 (CSA 40-80) aggregate sub-base.
- C. Do not allow the compactor to crush the aggregate.
- D. Surface tolerance of the ASTM No. 2 (CSA 40-80) sub-base should be ± 2 ½" (64 mm) over 10' (3 m).

#### **05 EDGE RESTRAINT**

- A. Install edge restraint according to project specifications.
- B. Depending on the design, the top of the edge restraint can be hidden or exposed.
- C. Install Avignon, Belgik or Pietra edge units. Cast-in-place concrete or precast concrete curbs should be considered in vehicular use applications (commercial / industrial driveways, parking lots or streets).
- D. Edge restraint may rest on an open-graded or dense-graded aggregate base.

#### 06 BASE

- A. Moisten, spread and compact the ASTM No. 57 (CSA 5-28) aggregate base layer in one 4" (100 mm) thick lift.
- B. Make a minimum of two passes in vibratory mode followed by at least two in static mode with a minimum 10 ton (9 metric ton) vibratory roller, until there is no visible movement of the aggregate. Alternately, a 13,500 lbf (60 kN) plate compactor can be used to compact the ASTM No. 57 (CSA 5-28) aggregate base.
- C. Do not allow the compactor to crush the aggregate.
- D. Surface tolerance of the ASTM No. 57 (CSA 5-28) base should be ± 1" (25 mm) over 10' (3 m). Verify prior to setting bed installation.

#### **07 BEDDING COURSE**

- A. Moisten, spread and screed the ASTM No. 8 (CSA 2.5-10) aggregate bedding layer in one 2" (50 mm) thick lift.
- B. Surface tolerance of the ASTM No. 8 (CSA 2.5-10) bedding course should be ± %" (10 mm) over 10' (3 m).
- C. Construction equipment and pedestrian traffic on the screeded bedding course should not be permitted.

#### 08 PAVER

- A. Pavers should be placed in the pattern shown on the drawings. Lay units hand tight to designated laying patterns. Units have lugs to maintain consistent joint width.
- B. In sloped conditions, it is preferable to start laying from the bottom in an uphill direction.
- C. The minimum slope recommended for permeable pavement surface is 1%.
- D. Hydra pavers can be installed with a mechanical tool to expedite installation.
- E. When subject to vehicular traffic, cut units should not be smaller than 1/3 of a whole paver. When using cut pieces, maintain joint.
- F. In vehicular applications, pattern strength will increase if laying pattern is perpendicular to traffic flow.

#### SEGMENTAL PERMEABLE PAVEMENT

#### **INSTALLATION OUTLINE**

#### 09 JOINT FILL

- A. Fill the paver joint openings with ASTM No. 8 (CSA 2.5-10) aggregate (or No. 89, No. 9 depending on joint width). Sweep stone to fill joints. Surface must be swept clean prior to compaction.
- B. Compact with a minimum 5,000 lbf (22 kN) plate compactor (two passes minimum). The installation of a neoprene pad is recommended to protect the texture of the paving units.
- C. Do not compact within 6' (1.8 m) of unrestrained edges of the pavers.
- D. Apply additional aggregate to fill the joint openings if needed and compact.
- E. Surface tolerance of compacted pavers should be  $\pm$  %" (10 mm) over 10' (3 m).

#### QUANTITY CHART FOR PERMEABLE JOINTS

Approximate clean stone quantity in kg (lb) to cover an area of 1 m<sup>2</sup> (1 pi<sup>2</sup>) to fill between joints. It is recommended to always start with a small area.

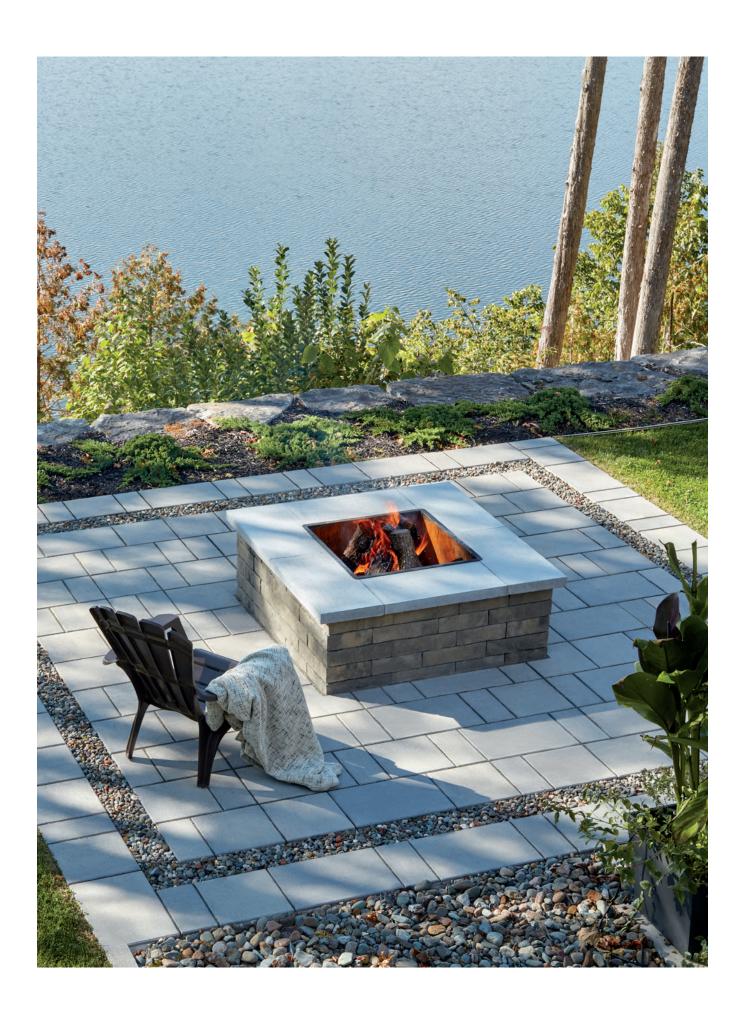
PRODUCTS	JOINT FILL MATERIAL	(lbs/sq. ft)	(kg/sq. m)
Antika	ASTM No. 8 (CSA 2.5 - 10) (1/4")	1.9	9.3
Aquastorm	ASTM No. 8 (CSA 2.5 - 10) (1/4")	12.2	59.5
Blu 60 mm & Blu 60 (6×13)	ASTM No. 9 (CSA 2.5 - 5) (1/8")	0.6	3.0
Blu 60 mm (6×13)	ASTM No. 9 (CSA 2.5 - 5) (1/8")	0.9	4.2
Blu 80 mm & Blu 80 (6×13)	ASTM No. 9 (CSA 2.5 - 5) (1/8")	0.8	4.0
Blu 80 mm (6×13)	ASTM No. 9 (CSA 2.5 - 5) (1/8")	1.2	5.7
Hydra	ASTM No. 8 (CSA 2.5 - 10) (1/4")	2.9	14.4
Mika	ASTM No. 8 (CSA 2.5 - 10) (1/4")	2.5	12.2
Mista random	ASTM No. 9 (CSA 2.5 - 5) (1/8")	1.0	5.0
Oxford	ASTM No. 8 (CSA 2.5 - 10) (1/4")	1.8	8.7
Pure	ASTM No. 8 (CSA 2.5 - 10) (1/4")	1.4	7.0
Valet	ASTM No. 9 (CSA 2.5 - 5) (1/8")	1.3	6.2
Villagio	ASTM No. 8 (CSA 2.5 - 10) (1/4")	2.1	10.2

Note: Gator Aqua Rock permeable stone (bagged) can be used to meet the ASTM No. 9 gradation.

#### 10 POST INSTALLATION PROTECTION

Prevent contamination of the porous (permeable) pavement system from fine aggregates and debris by maintaining erosion and sedimentation (E&S) measures at the perimeter.





# Table of Contents

# 6

- 6 General Care
- 7 Cleaning Basics
- 7 Don't forget about the joints
- **7** FirePit Burner Care

# What you need to know

# 9

- 9 Efflorescence and White Mineral Deposit
- 10 Colors
- 10 Protectants
- 11 Technologies
- 11 Winter Care

8

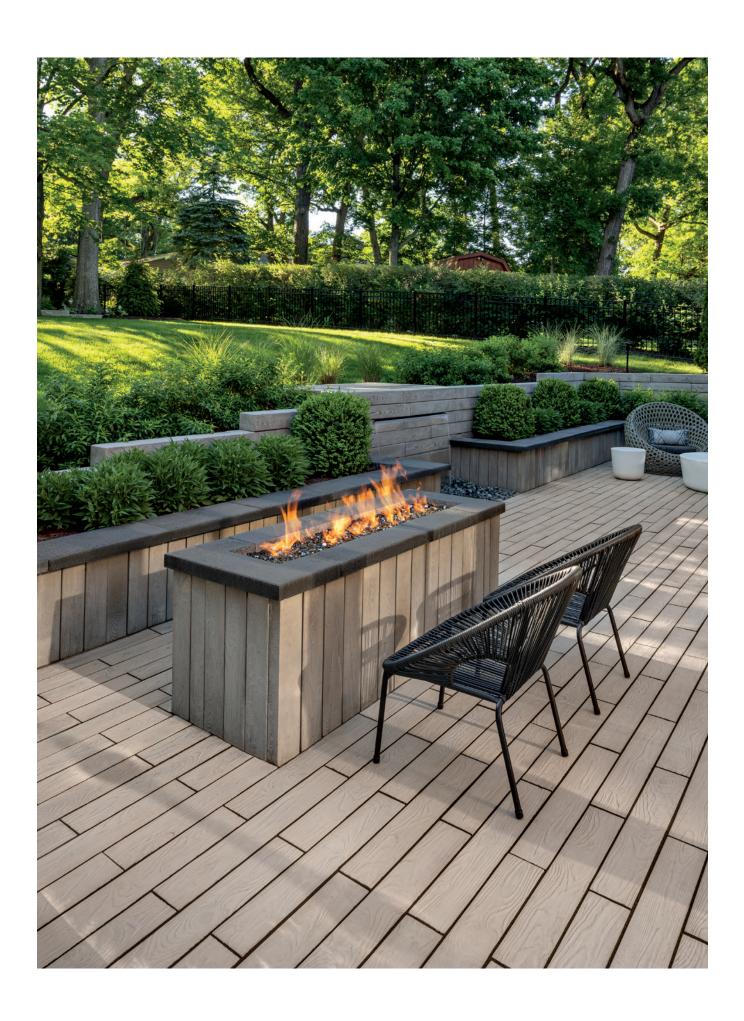
- 8 Foliage and Organic Debris
- 8 Rust
- 8 Food and Beverage
- 8 Oil and Grease

#### Need more assistance? Have more questions?

We have a team dedicated to ensuring your satisfaction.

To submit an after-sales support form, please visit: www.techo-bloc.com/client-support

For all other warranty related questions please email clientsupport@techo-bloc.com



# A message from our President

Thank you for choosing Techo-Bloc!

Now that your products have been installed, we want to ensure that you are setup and well educated on how to care for your investment so that you can fully enjoy their benefits. Although concrete stones are built to resist outdoor elements and require minimal upkeep, they still need some tender loving care from their owner. To ensure that the beauty of the product lasts, and to avoid any unexpected issues, the secret is simple: take care of them. Prepare them in the fall for winter and get them ready for summer in spring.

I personally have seasonal routines to keep them maintained all year long so that I can benefit from the longevity of my products for decades to come. To avoid organic staining, I sweep away the leaves from my pavement regularly. In areas that are prone to leaves falling, sweep more frequently and perhaps consider using a protectant on your pavers: this will help them be more stain resistant. In the winter,

I make it a point not to over salt them as this can burn the product and isn't great for our environment. In the spring, I lightly wash my pavement to remove all the debris and dirt that built-up under the snow over the winter. In the summer, I keep my paving stones neat by simply brooming and rinsing off built-up dirt or

food with a garden hose. A little effort goes a long way and will keep your products looking how they were destined to be.

We take pride in manufacturing the best products on the market, and want you to enjoy your investment to the very fullest. Take a few minutes to read through this guide. It will help you understand what to expect of concrete stones, how to care for them, and what goes into maintaining their beauty and integrity.

We hope you love your products as much as we love creating them.

Sincerely,

## Charles Ciccarello

PRESIDENT



# A standard of care



The care of high-quality concrete products is similar to that of any product exposed to the elements 365 days and nights per year. Just the way you get your home and yards ready for different seasons, the same applies to paving stones. They too require care. To get the most from your investments, take care of them and they'll take care of you.

It is contrary to Techo-Bloc's SOP (Standard Operating Procedures) to be involved in the care of a mature pavement or retaining structure. Care, as mentioned above, is the responsibility of the owner.

#### **GENERAL CARE**

The general care of your hardscape products is minimal, but important. Certain environmental circumstances may involve some additional care, but being consistent with the upkeep avoids more work in the future. Note that concrete is porous. When leaves fall onto your pavers, sweep them off to avoid organic stains. When you see dirt/clay on your pavement, take a minute to hose it off and keep it clean.

Mild cleaning using various household products such as detergents, water and product-specific chemicals is sometimes necessary (like cleaning patio furniture, a vehicle's chrome, plastic, or paint, etc.) to enhance their presence and charm. Protectants of all types are available for additional resistance against acid rain, stains and nature's worst. For questions on industry-specific cleaners and protectants, , you may visit https://www.alliancegator.com/ or reach out to your local distributor or contractor.

Not a DIYer? Contact a local professional. There are companies that specialize in the care of segmental concrete pavements and retaining walls that can be referred by your local distributor.

#### **CLEANING BASICS**

#### → HOW OFTEN

Clean your paved area when you see that it is necessary. Again, sweep off leaves regularly to avoid staining. Hose down your pavers to remove any dirt, clay, or debris that have stuck on. When the snow melts, a thorough, overall spring cleaning with a light product shampoo or dishwashing soap works best to get your pavers ready to enjoy.

#### → WHAT TO USE

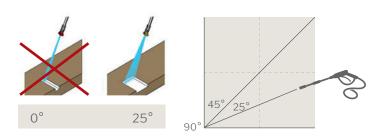
Cleaners are sold for different purposes. For maximum results, be sure to use professional or properly diluted household products. We recommend that you start with the mildest or least invasive cleaner and work your way toward a stronger one. Sometimes two or three applications of a mild cleaner is all you need. If you choose to use an industry cleaner, be sure to read and follow the labels carefully. We recommend Alliance Gator or Flexlock hardscape cleaning products.

#### → WHAT TO AVOID

Avoid wire brushes and strong acids like sulfuric and muriatic as this can do serious damage to a concrete paver. Acids should be limited to professional use only.

#### → ABOUT PRESSURE WASHERS

The improper use of a pressure washer may permanently etch the surface of your paving stones, steps or retaining walls. Pressure washers should be used by professionals only for the cleaning of your paved surface. The use of a syphon tip is highly recommended. Narrow tips may cause irreversible damage. Consider the use of cleaners and detergents in conjunction with a pressure washer to obtain the best results. Often, cleaning solutions are effective for stain removal and general care with very little water pressure required. Do note that a pressure washer should never be used on Wet Cast products.



Damage caused by the improper use of a pressure washer is not covered by Techo-Bloc's warranty.

#### DON'T FORGET ABOUT THE JOINTS

The joint or space between paving stones are the most vulnerable area, especially after a new installation. The two most common issues in jointing material are organics and erosion. We recommend that paving stone joints be filled with polymeric sand, joining compounds, or a joint stabilizing protectant on traditional sand joint.

Damp, shaded areas between stones are prone to moss and weed growth. Moss in your joints? Try using 3 parts water to 1 part chlorine bleach to remove it. Apply the mixture with a watering can or siphon sprayer, scrub with a nylon brush and rinse. To minimize the problem, consider professional advice to correct the moisture that encourages the growth of moss. Commercial products do exist that can help remove moss, mold and mildew such as Alliance Gator M3 Cleaner. This product also inhibits new growth.

When using a garden hose to clean the joints of a paved area, direct the hose diagonally at the surface on a 30-degree angle. Never direct the hose parallel to the joints as the strength of the water stream may be too harsh and may dislocate the joining material.

#### FIREPIT BURNER CARE

The purpose of the fire pit burner sleeve is to provide protection to your concrete product against direct flames within your fire feature.

Although this product is engineered to withstand a certain level of heat, it is possible that the painted surface may experience chipping and rust development over time. This occurrence is not indicative of a defect, but rather a natural effect of exposure to fire.

As a solution, we suggest utilizing a high-quality, high heat enamel spray paint to touch up your fire pit sleeve as needed. This will help to maintain its aesthetic appeal and protect against further deterioration.

# Managing stains

#### How to avoid them, how to remove them.

#### **FOLIAGE AND ORGANIC DEBRIS**

Concrete is a porous material that can absorb pigments from leaves, petals and buds from trees/shrubs. Organic stains can be tough to remove if they stay on the pavers beneath the snow or when left on damp surfaces for a period of time. We recommend that you sweep away dead leaves regularly. If you live in an area that is prone to more foliage, consider protecting your paved area.

Using a protectant can make your pavement more stain resistant and easier to keep clean. (See page 10 for more information regarding protectants.) Note that there is no need to use a protectant with Klean-Bloc products as they are already sealed.

Organic Stain Remover also removes mildew, algae, kills moss and tough stains from tannins.

Depending on the product collection, remedies vary. See below our recommended solutions and directions on how to remove organic stains.

- → WET-CAST/NON KLEAN-BLOC PRODUCTS: Mix ½ liquid chlorine (pool shock) with ⅔ water and a small amount of ammonia free dish soap. Add together and mix in a plastic sprayer or bucket.
- $\rightarrow$  DRY-CAST PRODUCTS: Mix 1/2 household bleach with 1/2 water and a small amount of ammonia free dish soap. Add together and mix in a plastic sprayer or bucket.

Not sure if your product is
Wet-Cast (Stonedge collection) or
Dry-Cast (Techo-Bloc collection)?
Look out for the following symbols in our
Landscape Catalog and TechoSpec Book.

(D) Dry Cast Collection (W) Wet Cast Collection

#### **DIRECTIONS:**

- → Pre-soak area to be treated and let water absorb into pavers.
- → Apply cleaning solution in manageable areas at a time.
- → Scrub area with nylon brush or broom. For Wet-Cast, Klean-Bloc or natural stone products, use a microfibre cloth.
- → Rinse area and repeat as needed.

#### **NOTES:**

- → Clean in cool temperatures and out of direct sunlight.
- → Always test in a small inconspicuous area.
- → Don't allow soap to dry.
- → The goal is to remove the stain without harming the surface of the pavers. Therefore, patience and multiple applications may be required.
- → Do not attempt these solutions on Klean-Bloc or natural stone products. Simply use a mild, diluted dish-washing soap in warm water and a microfibre cloth.

#### **RUST**

Some fertilizers contain iron that can leave stains on the surface of your patio. After spreading lawn or plant fertilizer, be sure to sweep the surface of your pavement to prevent rust spots.

Rust stains from steel or iron, such as patio furniture, fertilizer or high iron content water (irrigation) can be removed using professional products such as Gator Rust Remover or household iron removers.

#### **FOOD AND BEVERAGE**

Food or beverages (like wine) spilled on the pavement should be removed quickly and the area should be rinsed with hot water immediately. Liquid dish soap or laundry detergent will remove most food and beverage stains on pavers. Mix a solution of the soap or detergent with hot water and gently brush the stain away with a cloth or a soft-bristled brush that you have dipped into the mixture.

#### **OIL AND GREASE**

Light oil and grease stains can generally be removed with an application of liquid dish soap. Directly apply the soap to the affected area and let sit for 20-30 minutes, scrub with a nylon brush and rinse with hot water. Re-apply and repeat until the stain is removed. If it is a fresh stain, lightly rub the area with a clean rag or paper towel.

If an area is heavily soiled, a professional product such as Gator Oil and Grease Removal <sup>®</sup> may be used. Please refer to product instructions.

# What you need to know

## EFFLORESCENCE AND WHITE MINERAL DEPOSIT

Efflorescence is a whitish residue that sometimes appears on the surface of concrete products.

#### **EFFLORESCENCE CAN OCCUR A FEW DIFFERENT TIMES:**

- → Present on the pallet upon delivery,
- → Immediately following installation,
- → A few weeks after installation.
- → A few months after installation.

It may appear randomly or in certain areas and will be more pronounced on dark colored pavers and walls. The white haze may give the impression that the color is fading. When wet, the white disappears, and the color of the pavers and walls is enhanced. When dry, the white haze reappears.

Occasionally, the salts from: cement, water, aggregate, and sand (concrete), bedding, base, and soil that are embedded are dislodged by water and transported (via vapor pressure or capillary action) to the surface where water evaporates, and salts are deposited. The deposited salt will dissipate naturally and weather and traffic off.

It is common in concrete and other masonry products that contain cement. Typically, efflorescence will stop developing in approximately 90 days but could take 18 to 24 months after the manufacturing process. The concrete is experiencing a natural process which is not harmful to Techo-Bloc products nor is it a defect.

There is no reason to be concerned that pavers and walls are damaged or defective. The concrete products are experiencing a natural process. Some projects experience this more, some experience it less. It is a condition in all cement-based and many other paving products.

#### Here are some examples of:







Mineral deposits on a payer



Efflorescence on a payer

#### → TESTING FOR EFFLORESCENCE

A way to test for efflorescence is to wet the surface. If the white residue disappears but reappears when dry, it is water soluble efflorescence. If the deposit is still visible when wet, it may be a different type of mineral deposit like lime or calcium. Those types of mineral deposits (although not detrimental to the product) should be cleaned by or professional grade product.

#### → RECOMMENDATIONS

Although Techo-Bloc does not recommend cleaning efflorescence, there are mild removers commercially available through local distributors.

Please note that improper use of efflorescence cleaners can risk damaging the product. This is not a prescribed method advised by Techo-Bloc and it may void your product warranty.

Most cleaners contain acid and detergents, be sure to follow all directions and environmental regulations. Careless or improper cleaning can result in injury, damage and discoloration of the concrete. Always conduct a test in an inconspicuous area or a leftover piece before applying any cleaner to the site. If uncomfortable cleaning this yourself, hire a professional contractor. Refer to your hardscape installer or dealer for referrals.

Recommended efflorescence cleaners: Gator Efflorescence Cleaner® or FlexLock Efflorescence Cleaner®. Concrete product manufacturers are unable to warrant against the presence of efflorescence.

Polymeric sand haze commonly called "poly haze" is often confused for efflorescence. Poly haze is the residue of polymer based jointing sand left on the surface of the pavement typically due to moisture on installation, improper application, or inadequate removal. To determine if it's poly haze use boiling hot water from stove or coffee maker on an inconspicuous unit. The stain will largely dissipate.

#### **COLORS**

#### → WHAT'S THE DIFFERENCE BETWEEN TONES & COLORS?

Products in the Wet-Cast Collection are created using a wet cast manufacturing process to closely resemble the sculpted attributes of natural stone. Natural ingredients are present within the recipe to allow for a range in tones, veining and textures from one stone to another. For an authentic look, each color option is composed of a variety of darker and lighter tones.

#### → MINIMIZING VISUAL IMPACT WHEN REPLACING UNITS

Replacing individual units may result in slight variations in color, texture, or finish — this is normal and expected due to natural weathering and manufacturing differences over time. To reduce the visibility of these differences, we recommend placing replacement units in less noticeable areas whenever possible.

Consider installing them:

- In corners or behind furniture
- In low-traffic zones such as under a deck or near a shed

Strategic placement can help maintain a consistent overall appearance.



#### **PROTECTANTS**

Applying a protectant to pavers, slabs and walls can help enhance the beauty of your products much like waxing a car.

Doing so can also help make the product be more stain-resistant. However, the quality of Techo-Bloc products are not compromised if a protectant is not applied.

Depending on your environment, it may be a good idea to protect your paved area. While this will not prevent stains, it will make it easier to clean. Think of it as a protective barrier. The stain sits on top of the protectant instead of penetrating into the concrete. Note that you must completely clean off debris and efflorescence off your paved surface before adding a protectant.

Although there are many different types of protectants on the market, there are two categories to remember.

#### HERE'S A BREAKDOWN:

# Penetrating Protectants Film Forming Protectants → Should be used in areas that are prone to stains, such as a grilling area or pavement surround by trees → Generally last 5-7 or 7-10 years → Penetrates deeper into the product if clean and dry → Better long term choice Film Forming Protectants → For aesthetic appearance → May enhance product color → Gives a wet look → Deepens or darkens color → Generally lasts 1-3 or 3-5 years → Does not penetrate deep into the product

#### WE STRONGLY RECOMMEND THAT YOU HIRE A PROFESSIONAL FOR THE APPLICATION OF A PROTECTANT.

Please consult your protectant manufacturer to find out how soon a protectant can be applied after your pavers have been installed. We recommend looking into Alliance and Flexlock protectants.

Please note that using the wrong protectant stripper can prematurely age the product.

#### **TECHNOLOGIES**

We believe that no one should have to compromise between style and durability when choosing landscaping products. This is why we work tirelessly to develop the best pavers, slabs and walls to revive your outdoor spaces. Ensuring they stand up through the test of time through the harshest of climates.

#### → THE KLEAN-BLOC REPAIR CAN

Products featuring our Klean-Bloc technology are factory sealed to provide consistent and vibrant color, while offering a complete protection against stains and efflorescence. To clean, simply use water with a broom to scrub away stains and debris.

Applying a protectant to this product collection is not necessary nor is it recommended.

#### → THE KLEAN-BLOC REPAIR CAN!

The Klean-Bloc Topcoat Repair Can is a two-part aerosol spray that is specially formulated to provide a durable, color matching repair that is easy to apply. Made specifically to touch up chipped or scratched surfaces of Techo-Bloc products made with Klean-Bloc technology.

This spray topcoat serves to mask the exposed concrete substrate and provide the same stain resistance properties as the factory seal.

#### Order now:

www.techo-bloc.com/shop/klean-bloc-repair-kit

#### Using the repair kit:

www.vimeo.com/techobloc/kleanbloc

#### **WINTER CARE**

Just like ready-mix concrete and asphalt pavements, Techo-Bloc pavers can be plowed and shoveled. Rock salt (sodium chloride, NaCl) is the least damaging deicer for concrete materials and should be used whenever possible. If a more effective, quicker acting deicer is necessary, consider the judicial use of calcium chloride (CaCl2). Magnesium chloride (MgCl2) and CMA are not recommended because they can chemically degrade all types of concrete, significantly increasing potential damage. The potential for damage from CMA increases with the amount of magnesium in the formulation. De-icing salts should be applied sparingly on areas that have snow or ice only (never directly on the product as this can damage the stones over time). Do not use products that contain a blend of chemicals.

When using a contractor for snow removal, it is recommended to verify that their equipment uses Teflon blades or rubber blades to avoid scratching the pavers. For permeable pavements, it is not recommended to use traction aid grit (for slip/skid resistance) as they can scratch the surface of the stones, clog the system and reduce permeability. Wet cast collection pavers can also be plowed and de-icing salted, wet-cast collection slabs cannot.

When preparing your outdoor paved area for the winter season (including the closing of your pool), keeping your products equally exposed to the elements is important. For example, a pool cover installed over a portion of the pool deck (i.e. pool coping and first few feet of paved surface) for months at a time will affect the product's exposure to light, the elements, dirt and debris. This may result in a difference in appearance over time. Uniform exposure to the elements will keep your project looking great for years to come.



### TECHO—BLOC

#### INSPIRING ARTSCAPES



#### USA

ATLANTA 3259 Powder Springs Rd, Powder Springs, Ga 30127

CALIFORNIA 805 S. Kilroy, Turlock, CA 95380

CINCINNATI 9950 Farr CT Cincinnati, oh 45246

DETROIT 2210 Scott Lake Rd. Waterford, MI 48328 ILLINOIS 8201 31st St. W Rock Island, IL 61201

ILLINOIS 101 Serena Ct Minooka, Minooka, IL 60447

INDIANA 2397 County Rd 27 Waterloo, IN 46793

MARYLAND 6710 Binder Ln. Elkridge, MD 21075 MASSACHUSETTS 70 East Brookfield Rd. North Brookfield, MA 01535

MINNESOTA 4375 170th St. W Farmington, MN 55024

NASHVILLE 3603 Central Pike, Suite B, Hermitage, TN 37076

NEW YORK 55-65 South 4th St. Bay Shore, NY 11706 NORTH CAROLINA

5135 Surrett Dr. High Point, NC 27263

OHIO 97 Industrial St. Rittman, OH 44270

PENNSYLVANIA 852 W. Pennsylvania Ave. Pen Argyl, PA 18072

PENNSYLVANIA 23 Quarry Rd. Douglassville, PA 19518

#### CANADA

MONTREAL 5255 Albert-Millichamp St. Saint-Hubert, QC J3Y 8Z8

CHAMBLY 7800 Samuel-Hatt St. Chambly, QC J3L 6W4

OTTAWA 581 Somme Street Gloucester, ON K1G 3Y3 TORONTO 10 Freshway Dr. Vaughan, ON L4K 1S3 TORONTO

2852 Cedar Creek Road

Ayr, ON NOB 1E0

SERVING OVER 750 SPECIALTY LANDSCAPE RETAILERS THROUGHOUT NORTH AMERICA. VISIT OUR WEBSITE TO FIND THE NEAREST ONE.

TOLL FREE: 1.877.832.4625 VISIT OUR WEBSITE: WWW.TECHO-BLOC.COM

PROUD MEMBER OF



