# barkman<sup>\*</sup>

# Loading Practices

Avoid additional handling of the product prior to installation. By following the practices outlined in this document, the integrity and aesthetics of Barkman products can be ensured. Barkman will perform product loading and stacking onto the flatbed or trailer to the product's respective Standard Operating Procedure. It is the responsibility of the customer and carrier to review the provided practices.

#### 1

Verify that the product placement on the trailer is stable and that all dunnage (if applicable) forms a straight vertical line with one another. If the dunnage is not aligned, notify a Barkman forklift driver prior to strapping.



#### 2

Ensure the flatbed or trailer is level, smooth, dry and debris free. If applicable, locate the dunnage. Locate the "Strap Here" markings on the product. Place the strapping over top of the product in line with the dunnage.



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## 3

If the straps cannot be placed directly over the dunnage, they can be secured on the inside of the dunnage.



## 4

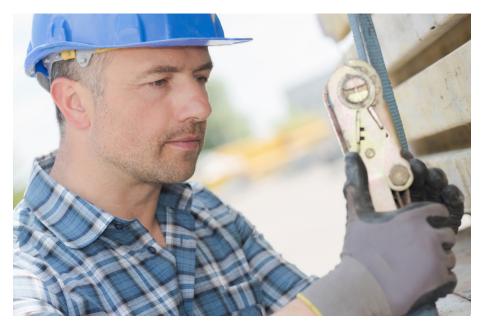
Avoid placing straps on the outside of the dunnage. Doing so will make the dunnage act as a pressure point which could cause cracking.

Do not place straps more than 4" away from the dunnage.



# 5

After travelling 80 kilometres (50 miles), check the straps for tightness and check whether the dunnage is still aligned vertically. Failure to verify dunnage and strapping alignment may result in damage.



# Unloading and Storage

#### **SERVICE AND ROAD CONDITIONS**

Ensure the service roads along the transportation route and the storage and installation area are level, smooth, dry and debris-free. These conditions will minimize the potential of damage due to uneven weight distribution.

#### **UNLOADING AND STORAGE**

Barkman slats are made to reach a high percentage of their design strength a few days after manufacturing. They will continue to cure after installation. However, they must be handled carefully to avoid shock loading and damage during the initial offloading and installation.

The integrity of the product is not compromised if minor chipping or cracking occurs. In order to maintain the aesthetic appearance of the slats and ensure minor cracking or chipping remains within tolerance, adherence to proper storage

and handling protocols should be followed. Additional handling or poor site and storage conditions may result in chipping and cracking that exceeds product tolerance. Damage from improper storage conditions or handling practices is not considered a manufacturing defect.

#### MAKING CLAIMS

It is essential to document issues on the Bill of Lading, and photograph damaged products when unloading. If you believe you've received a defective product, contact your carrier and forward your information and pictures to <a href="Quality@BarkmanConcrete.com">Quality@BarkmanConcrete.com</a>.

Ask your dealer for details of Barkman's <u>Product Claim Process</u>. In providing this information to Quality, please include a picture of the manufacturing label, as this will assist in the investigation process.

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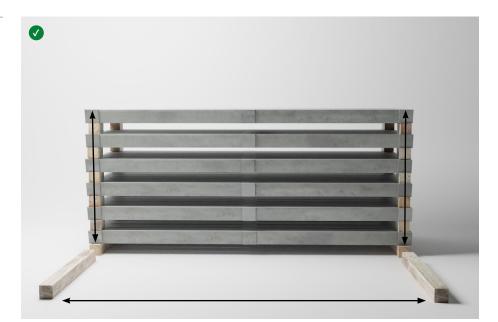
Individual pieces may contain dunnage in between the product. Maintaining the vertical alignment of the dunnage throughout the stack leading up to installation is essential. Product that is restacked or transported with misaligned dunnage will place unnecessary stress on the product and may cause cracking.



### 2

Adequately space the product to prevent incidental contact with slats or equipment. Store the product on compact, level ground to evenly distribute its weight and to avoid points of stress. On the ground, place timbers (e.g. 4"x 4") with spacing equal to the dunnage you are stacking.

As you stack, verify that the dunnage is aligned throughout the stack with the spaced timbers on the ground. Neglecting these ground conditions causes the product to sink and creates the conditions for point-loading, which will cause cracking that may exceed tolerance.



## 3

For product that does not have dunnage in between individual pieces, place timbers on the ground to align with L shaped dunnage.



# Stack Height and Dunnage Table

#### **SLAT HEIGHT AND DUNNAGE REFERENCE TABLE**

HOG GANG						
Thickness	Length	Pieces per bundle	Maximum Stack Height	Dunnage Location		
4"	5'11" or Shorter	4 Pieces	4 Bundles High	End Notch		
	6' or Longer	3 Pieces	4 Bundles High	2 <sup>nd</sup> Notch on the End		
6"	7' or shorter	4 pieces	4 Bundles High	Not Applicable		
	7'-9'11"	3 Pieces	4 Bundles High	Not Applicable		
	10' or longer	2 Pieces	3 Bundles High	Not Applicable		

FILTERCRETE, DRYSOW & GROWER SLATS						
Thickness	Length	Pieces per bundle	Maximum Stack Height	Dunnage Location		
4"& 6"	Not Applicable	Not Applicable	4 Bundles High	"L" Shape aligned with timber dunnage between stacks		

#### **FORKLIFT USE**

Ensure all lifting devices are operated within the equipment's load capacity to provide a balanced and level lift. When forklifts are used, outfit the forks and mast with protective rubber mats/slats to minimize abrasion and chipping. Fork placement must cover the full width and depth of the piece. The fork spread should be on the outer edge of the dunnage if possible. Do not attempt to move the product

if the forklift cannot accommodate the depth and spread. For these cases, consider using a spreader beam or sling.

Consider the terrain and travelling speed of the equipment during transportation to prevent product slippage or contact with objects or equipment. Again, ensure you are lifting within your equipment's load capacity. Do not transport more than three pieces at any time.

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# Hog Slat Installation

#### INSTALLATION

Lay the product on a smooth and level surface. If levelling is required, use shims that will not corrode or lose form over time. The walls or support beams should be free of dirt and debris, and checked that they are level and aligned along the bearing points. The recommended lintel or wall support is a minimum of 1 ½".

Variance in product dimensions due to concrete slump is typical. Depending on the facility's dimensions, grinding may be required near the facility's corners or when laying the final 10% of the layout. Modifying or altering the product in a way that exposes the rebar or reduces the concrete coverage around the rebar to less than 1" will not be covered for warranty. This includes boring or drilling holes or anchor points that are not contained in approved drawing.

If construction is ongoing, cover the product with plywood or planks to avoid damage. Treating areas around feeders with an epoxy to minimize chemical degradation from minerals and salts present within the feed is recommended.

#### **REPORTING ISSUES**

If chipping or cracking occurs, provide photos with the approximate width and length of the issue along with the manufacturing date tag. Forward the information to Quality@ barkmanconcrete.com. Minor chipping and cracking (less than manufacturing tolerance) can be repaired with patching compounds. Barkman will not provide guidance or structural



assessment of damaged product that exceeds their respective manufacturing tolerances. Use of a product that exceeds tolerance is at the installer's discretion and will void the warranty.

#### MAINTENANCE

Slats and the beams they rest on should be periodically inspected and monitored for shifting, wear or degradation. Each facility is unique, with varying livestock loads, upkeep, cleaning practices and environmental conditions. Barkman recommends performing regular slat and beam inspections to identify normal wear and diagnose potential issues

in advance so that contingencies for repair or replacement can be made if needed.

All concrete has the potential to crack over its lifespan. Your facility maintenance program can monitor cracks using a crack comparator to confirm if a crack width has increased and is trending out of tolerance to the manufacturer's specification. Wear patterns from animal traffic, waste, and water/feeders are typical and are not considered a manufacturing defect. Your Barkman Sales Representative will be happy to work with you to come up with a plan for these types of issues.

For detailed instructions on slat handing consult Barkman's **Slat Handling.pdf** 

Contact your Barkman Sales Representative **Ag@BarkmanConcrete.com**  Contact the Quality Assurance
Quality@BarkmanConcrete.com

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# Manufacturing Tolerances

#### **ACCEPTABLE CRACKING**

 0.3 mm marking is centred on the middle of the crack. Crack width is not visible on either side of the 0.3 mm marking.

These cracks are acceptable regardless of length, location and frequency unless it meets one of the criteria below.





#### **UNACCEPTABLE CRACKING**

- 2. Crack width is visible on either side of the 0.3 mm marking when marking is centred on the middle of the crack.
- **3.** Full depth crack (completely through the thickness and width of section).
- 4. Crack is lifting from the surface of the product.



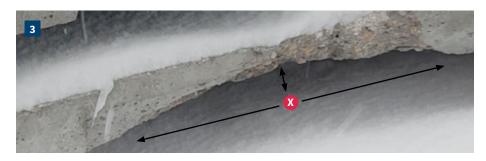


#### **UNACCEPTABLE CHIPPING**

- 1. Slots should be free from chipping
- 2. Chipping is greater than 1 ½" in length or width.
- 3. Chipping exceeds ½" in depth.







#### DIMENSIONS

Slats / Gangs / Filter Crete: +/- 1/4" All other Agriculture Products: +/- 1/8"

#### **CONDITIONS**

Barkman Slats and Gangs are engineered and manufactured to building specifications. Our product will meet your agriculture needs with superior-grade materials and design.

Throughout a product's lifetime, all concrete has the potential to experience chipping and cracking. As these minor chips and cracks

present themselves, there is no impact on the unit's strength or function. It is encouraged to schedule and perform a visual inspection of the product on a routine basis.

Contact your Barkman Sales Representative or Barkman's Quality Assurance department for repair or replacement consultation.

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