

W. R. MEADOWS MEL-DRAIN™ sheet drain products offers drainage solutions for paver deck applications as part of a complete waterproofing system. There are various paver deck system types and designs available, requiring selection and compatibility of products to be made by designers based on project specific application requirements. MEL-DRAIN sheet drain products for paver deck applications are available with compressive strengths ranging from 18,000 psf to 30,000 psf and offers various geotextile filter fabric options to meet a variety of paver deck system applications.

#### **PRODUCT RECOMMENDATIONS:**

Below are general product recommendations for various paver system designs. These recommendations are provided as a starting point for project-specific evaluation purposes. Product selection and suitability for specific application is the sole responsibility of the designer.

#### **Pedestrian Traffic Decks:**

- Sand-set pavers:  
MEL-DRAIN 9055 (4' x 50', 1.22 m x 15.24 m) or  
MEL-DRAIN 7922 (6' x 50', 1.83 m x 15.24 m)
- Grout-set pavers:  
MEL-DRAIN 9055 (4' x 50', 1.22 m x 15.24 m) or  
MEL-DRAIN 7955 (6' x 50', 1.83 m x 15.24 m)
- Tray system:  
MEL-DRAIN 9055 (4' x 50', 1.22 m x 15.24 m) or  
MEL-DRAIN 7955 (6' x 50', 1.83 m x 15.24 m)
- Pedestal system:  
MEL-DRAIN 9072 (4' x 50", 1.22 m x 15.24 m)

#### **Vehicular Traffic Decks:**

- Sand-set pavers with  $\geq 4"$  (101.6 mm) -thick sand bed: MEL-DRAIN 9072 (4' x 50', 1.22 m x 15.24 m)
- Grout-set pavers with  $\geq 4"$  (101.6 mm) -thick sand bed: MEL-DRAIN 9072 (4' X 50', 1.22 m x 15.24 m)
- Tray system with  $\geq 4"$  (101.6 mm) -thick sand bed: MEL-DRAIN 9072 (4' X 50', 1.22 m x 15.24 m)

Please contact W. R. MEADOWS Technical support for Data Sheets if you need additional information.

#### **PAVER SYSTEMS AND POINTS OF CONSIDERATION:**

Below are common paver system types and points for consideration during evaluation:

#### **Pedestrian Traffic Decks:**

- General:
  - Maximum static and dynamic surface loads must be determined
  - Maximum distributed and point loads to the drain mat must be determined
  - Some pedestrian traffic decks require emergency vehicle access, which must be accounted for in system design



# TECHNICAL BULLETIN

## MEL-DRAIN IN PAVER DECK APPLICATIONS

- Paver System Type:
  - Sand-set pavers:
    - Loose-laid pavers:
      - Surface loads may impart point loads to the drain mat. Typically not a restricting factor in pedestrian deck applications.
    - Interlocking pavers:
      - Surface loads typically impart a distributed load to the drain mat. Typically not a restricting factor in pedestrian deck applications.
  - Sand layer thickness:
    - Determined by the paver system designer. A 1" (25 mm) -minimum sand layer is recommended to help distribute the load and insure the paver and drain mat remain separated. Per Interlocking Concrete Pavement Institute Tech Spec Number 14 ("ICPI Tech Spec #14") design recommendations for bedding and joint sand for pedestrian applications, "The typical sand thickness is nominal one inch (25 mm)."
  - Sand layer composition:
    - Determined by the paver system designer. Per ICPI Tech Spec #14 design recommendations for bedding and joint sand for pedestrian applications, "The gradation of the bedding sand should conform to ASTM C33 or CSA A23.1 "FA 1". "It is important that no material (fines) pass the No. 200 (0.075 mm) sieve as the presence of this size of material will greatly slow the movement of water through the bedding sand...Limestone screenings or stone dust should not be used..."
- Grout-set pavers:
  - Surface loads typically impart a distributed load to the drain mat. Typically not a restricting factor in pedestrian deck applications.
- Tray system:
  - Area of tray in contact with drain mat must be determined in order to determine the loads imparted to the drain mat. The larger the surface area of the tray bottom, the more distributed the load will be. Typically not a restricting factor in pedestrian deck applications.
- Pedestal system:
  - Area of pedestal base in contact with drain mat must be determined in order to determine the loads imparted to the drain mat. The larger the surface area of the pedestal base, the more distributed the load will be. If greater load distribution to the drain mat is desired, rigid metal or plastic plates of sufficient size (larger than the pedestal base) may be placed below the pedestal base.



### Vehicular Traffic Decks:

- General:
  - Maximum static and dynamic loads must be determined
  - Maximum distributed and point loads to the drain mat must be determined
  - Maximum wheel loads must be determined
- For sand bed thickness  $\geq 4"$  (101.6 mm) (all paver system types)
  - Sand bed thicknesses of  $\geq 4"$  (101.6 mm) are typically sufficient to distribute the load to the drain mat and protect the drain mat from typical unstable surface conditions that may form over time.
- Sand layer composition
  - Determined by the paver system designer. Per ICPI Tech Spec #14 design recommendations for bedding material for vehicular applications, "Bedding materials for vehicular applications need to freely drain water so that they do not become saturated...An example is material conforming to the gradation of ASTM No. 9 or No. 89 aggregate."

