

Mataspan®

OC2000 Series

Expansion Joint System

Product Description

Mataspan® OC2000 is a pre-compressed, self-expanding foam joint sealant with a highway grade silicone coating engineered to perform in primary horizontal applications such as road and bridge joints and airport runways. Mataspan OC2000 provides a primary seal and is watertight at the surface. It is specifically designed to provide a maximum seal in structures with shear and rapid movement. Mataspan OC2000 is manufactured at the highest quality level and is specially engineered for maximum performance in joints from 1/2" to 6". Mataspan OC2000-B is engineered for maximum performance in joints from 1/2" to 3".

Mataspan OC2000 consists of three construction elements: 1) a foundation of super-resilient micro-cell, cross-linked polyurethane foam that is a self-extinguishing, 2) a hydrophobic acrylic emulsion and, 3) a factory-applied silicone in traffic-grade black, highway grey or concrete grey (other colors are available by special order). It is supplied in 2-meter (6.5 LF) sticks at a high level of compression for ease of installation and superior performance of the joint seal. Custom sizes are available upon request.

Mataspan OC2000-SR options are manufactured with special reinforcing members near the silicone seal that protect the joint from potential damage of concentrated loads.



Applications

- Primary horizontal expansion joints with vehicular or pedestrian traffic.
- Road and bridge joints.
- Airport runways.
- Approach slabs.

Features and Benefits

- Monolithic foam with no unbonded laminations; promotes ease of installation and prevents infiltration of obstructions and contaminants.
- Allows for up to 100% (+/- 50%) movement from mean joint size.
- Advanced polymer impregnation without heavy fillers that reduce performance.
- True tensionless system.
- Designed for rapid cycling and thermal shock; accommodates rapid rates of joint movement.
- Non-invasive anchoring to the substrate.
- Permanently conforms to joint contours.

Physical Properties*

Precompressed Foam Joint

Property	Test Method	Value
Impregnation	N/A	Proprietary modified acrylic
UV Resistance	ASTM C793, G155	Pass- No cracking
Movement Capability	ASTM E1399	±50% from mean joint size
50% Compression Strength	ASTM D3574	13.9 kPa
75% Compression Set	ASTM D3574	5.51% (Original Thickness) 7.36% (Compressed Thickness)
Tensile Strength	ASTM D3574	116 kPa
Tensile Strength	ASTM D412	16.6 psi
Low Temperature Flexibility	ASTM C711	No visible deleterious effects
Tear Strength	ASTM D624	52.2 lb/in
50% Compression Strength	ASTM D545	0.517 psi
50% Compression Recovery	ASTM D545	98.96%
Water Absorption	ASTM D545	39.69%
Density	ASTM D545	9.890 lb/ft³

Field-applied Silicone sealant as cured, after 14 days @77° F (25° C), 50RH

Property	Test Method	Value
Hardness (Shore A)	ASTM C661	+15
Tensile Strength at Max Elongation	ASTM D412	200 psi
Tensile Strength at 100% Elongation	ASTM C1184	35 psi
Tear Strength, Die ("C")	ASTM D624	40 pli

Epoxy Adhesive

Property	Test Method	Value
Bond Strength	ASTM C882	> 3500 psi
Thermal Compatibility	ASTM D884	PASS No cracking or delamination
Gel Time	ASTM C881	>30 minutes @ 75 °F

** The values shown are based on system testing under laboratory conditions. Different field application conditions or lab equipment configurations may result in system value variances.*

Packaging

- 2-meter sticks compressed, blocked, and shrink wrapped
- Epoxy Adhesive and Silicone Sealants required for installation

Installation

Surface Preparation

- Verify that the joint is clean, sound and will provide an appropriate substrate for installation of the joint sealant. Material will not adhere to surfaces contaminated by oil or grease.
- Check material for the appropriate lengths, widths and depths. Joints must be sized by measuring every 5 to 7 feet (1.524 to 2.137 meters) to ensure gap opening is uniform and depth is sufficient for the supplied material.
- Lay out material in the order in which it will be installed.
- Apply a 1/16" to 1/8" coating of the supplied epoxy adhesive to both sidewalls of the joint to the depth of the sealant material plus 1/2" to ensure complete bonding.

Material Placement

- When fully prepared to install, open the sealant material by removing the shrink packaging and blocking.
- Remove the release liner on both sides of the material.
- Insert the material into the joint while pressing the material to the side of the joint.
- Apply flexible sealant to joint ends; apply firm pressure as sections are joined together.
- Recess the joint 1/4" to 1/2" below the surface.
- Once the joint is installed, run a 1/4" bead of the supplied silicone adhesive along both sides of the joint and over all seams and transitions for a clean, aesthetic finish. If field applied silicone is not installed, the system will not perform as designed, voiding all warranties expressed or implied.

Do not install when substrate or ambient temperatures are below 40 °F (4.5 °C) or above 95 °F (35 °C), or when raining or snowing. If ambient storage temperature is below 50 °F (10 °C), store material at a minimum of 68 °F (20 °C) for at least 24 hours prior to installation, regardless of temperature at location of installation.

Clean Up

- Remove any excess silicone left on the face of the surface of the material and substrate.
- Remove all waste materials from the jobsite; do not reuse waste material.
- Leave site to the satisfaction of the owner/manager.

The techniques involved may require modification to adjust to job-site specific conditions. Consult your FPT Infrastructure Sales Representative or FPT Infrastructure Technical Services for site conditions and requirements. For further installation details, see our General Preparation and Application Guidelines for "Mataspan Systems".

Limitations/ Shelf Life

Not intended for joints in continuously submerged water, in continuous contact with harsh chemicals, or in roofing applications or areas with occupied space.

Six (6) months shelf life when stored in a dry place in original, closed packaging in an enclosed area. Store off the ground and out of direct sunlight.

Warranty

FPT Infrastructure warrants its Products to be free of defects in materials but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, FPT Infrastructure makes no other warranty, expressed or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE with respect to FPT Infrastructure Products. FPT Infrastructure's sole obligation shall be, at its option, to replace or to refund the purchase price of the quantity of FPT Infrastructure Products proven to be defective, and FPT Infrastructure shall not be liable for any loss or damage.

Please refer to our website at fptinfrastructure.com for the most up-to-date Product Data Sheets.

NOTE: All FPT Infrastructure Safety Data Sheets (SDS) are in alignment with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) requirements.