ISO-FLEX® Factory Molded Textured Expansion Joint Sealing Systems

DESCRIPTION:

An ISO-FLEX® Factory Molded Textured Expansion Joint Sealing System consists of ISO-FLEX 880 two-part urethane sealant cured to standard dimensions under factory controlled climatic conditions, and ISO-FLEX 980 polymeric nosing, with traffic plates, primers, bedding and bond breakers as recommended by the manufacturer.

The factory molded seal is shipped to the job site in its cured state and installed in the field by adhering in place with ISO-FLEX 980, a high durometer, flexible polymeric nosing compound.

Traffic plates, ISO-FLEX primers and bond breakers are included in the installation process as recommended by the manufacturer to complete the installed system.

BASIC USE:

The system is designed for use in new construction and retrofit where watertight structural expansion joint performance is required. Systems are available for wheel and foot traffic and non-traffic installations.

Typical applications for the system include parking structures, stadiums, plazas, sewage and water treatment facilities, concrete roof decks and pedestrian bridges.

STANDARD MODELS AND SIZES:

Traffic Seal Model Numbers:
TS 30, TS 40, TS 60, TS 80, TS 100, TS 120
For use under wheel or foot traffic conditions. These systems include a traffic support plate under the seal, and are installed flush to the traffic surface.

Surface Seal Model Numbers:
SS 30, SS 40, SS 60, SS 80, SS 100
These systems are designed for surface installations and may or may not include a traffic support plate. Surface seals may be used in horizontal or vertical applications.

Wall Seal Model Numbers:
WS 30, WS 40, WS 60, WS 80, WS 100
These systems are designed for use in sealing expansion joints which may abut a wall. Wall seals may be recessed flush to the surface or installed directly on top of it. Traffic plates are not a part of the standard wall seal series.

In addition, standard details are available for special conditions such as column terminations, door thresholds, etc.

ADVANTAGES:

- Uniform thickness and modulus can be assured through quality control checks during the manufacturing process.
- Factory molding insures that problems common to field poured sealant such as uneven thickness, improper cure and bond breaker failure are eliminated.
- Available in UL approved, two hour rated configuration.
- Can be specially fabricated in custom colors.
- Special sizes are available upon request, including seals designed for seismic applications.

TECHNICAL DATA:

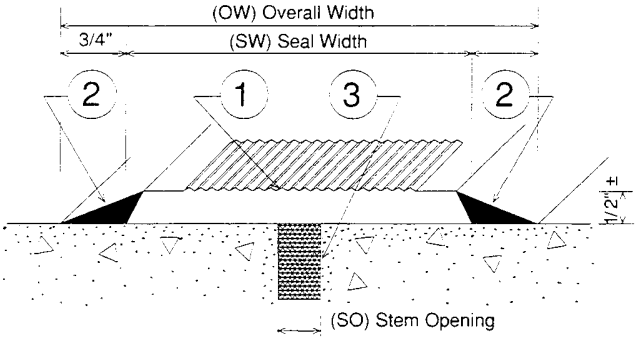
(Field Properties May Vary)

Property & Test Method	Results
ISO-FLEX 880 FACTORY MOLDED SEAL	
Movement Capability *ASTM C719*	+/- 16%
Tensile Strength ASTM D412	250 psi
Ultimate Elongation ASTM D412	700%
Shore A ASTM C661	30 +/- 5
Low Temperature Flexibility (@ -40 degrees F or -4.4 degrees C) ASTM D1790	Pass
Service Temperature Range	-40 to 150 degrees F (-4.4 to 65.6 degrees C)
ISO-FLEX 980 POLYMERIC NOSING	
Movement Capability *ASTM C719*	+/- 12%
Tensile Strength *ASTM D412*	950 psi
Ultimate Elongation *ASTM D412*	225%
Shore A *ASTM C661*	55 +/- 5
Weight Loss - Heat Aging *ASTM C792*	< 2%
Peel Adhesion - Concrete	60 pli
Pot Life @ 75 degrees F (23.9 degrees C)	30 minutes
Shelf Life @ 75 degrees F (23.9 degrees C)	6 months in sealed containers
Cure Time @ 75 degrees F (23.9 degrees C) *ASTM C920*	24 hours
Low Temperature Flexibility *(@ -40 degrees F or -4.4 degrees C)* *ASTM D1790*	Pass
Service Temperature Range	-40 to 150 degrees F (-4.4 to 65.6 degrees C)

NOTE:
TECHNICAL DATA, shown above, is based on performance of new material only. Once applied, material properties are likely to be affected over time due to environmental factors such as aggressive UV exposure and/or extreme temperatures.

SURFACE SEAL

SS Model Series
For non-wheel traffic applications in vertical or horizontal planes.



1. ISO-FLEX SS Series Polyurethane Seal
2. ISO-FLEX 980 Polymeric Nosing
3. Compressible filler (Non-Asphaltic) provided during forming and left by concrete contractor

NOTES:

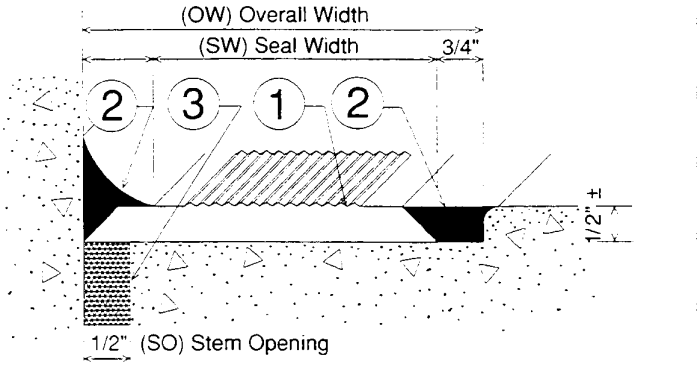
A. Traffic Plates may also be used with the Surface Seal Series as appropriate. In a manner similar to the Traffic Seal Series.

B. Slight Dimensional Variation to be expected due to field conditions.

Model	SS30	SS40	SS60	SS80	SS100
Overall Width	4-1/2"	5-1/2"	7-1/2"	9-1/2"	11-1/2"
Seal Width	3"	4"	6"	8"	10"
Blockout Depth	None	None	None	None	None
Max. Stem Opening	3/4"	1"	1-1/2"	2-1/4"	3"
Exp. Annual Movement	1/2"	3/4"	1"	1-1/2"	2"
Plate Size	None	None	None	None	None

WALL SEAL

WS Model Series
For Non-Wheel Traffic Applications at Wall/Deck Intersection



1. ISO-FLEX WS Series Polyurethane Seal
2. ISO-FLEX 980 Polymeric Nosing
3. Compressible filler (Non-Asphaltic) provided during forming and left by concrete contractor (Optional)

NOTES:

A. Wall Seals may also be surface applied, eliminating the need for a blockout.

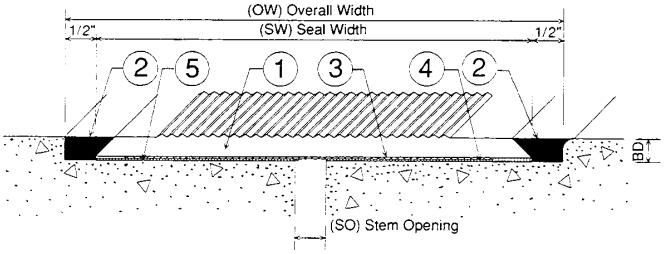
B. Traffic Plates may also be included as appropriate.

C. Slight dimensional variation to be expected due to field conditions.

Model	WS30	WS40	WS60	WS80	WS100
Overall Width	3-1/2"	4-1/2"	6-1/2"	8-1/2"	10-1/2"
Seal Width	3"	4"	6"	8"	10"
Blockout Depth	1/2"	1/2"	1/2"	1/2"	1/2"
Max. Stem Opening	3/4"	1"	1-1/2"	2-1/4"	3"
Exp. Annual Movement	1/2"	3/4"	1"	1-1/2"	2"
Plate Size	None	None	None	None	None

TRAFFIC SEAL

TS Model Series



1. ISO FLEX TS Series Polyurethane Seal
2. ISO-FLEX 980 Polymeric Nosing
3. Continuous 6061 T6 Aluminum Traffic Support Plate adhered to bedding one side. Bond breaker under one side.
4. ISO-FLEX Polyurethane bedding
5. Bond Breaker

NOTES:

A. Concrete contractor to provide blockout free of voids and honeycomb.

B. Concrete contractor go provide 1/4" R. Tooled edge along form at driving surface.

C. Concrete Bed to be in the same plane both sides of opening.

D. Slight dimensional variation to be expected due to field conditions.

Model	TS30	TS40	TS60	TS80	TS100	TS120
Overall Width	4"	5"	7"	9"	11"	13"
Seal Width	3"	4"	6"	8"	10"	12"
Blockout Depth	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"
Max. Stem Opening	3/4"	1"	1-1/2"	2-1/4"	3"	3"
Exp. Annual Movement	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"
Plate Size	2-1/4" x .06	3-1/2" x .06	5" x .09	6-1/2" x .09	8" x .125	8" x .125

LIMITATIONS:

Successful installation of the ISO-FLEX Factory Molded Textured Expansion Joint Sealing System is subject to many variables, as noted in the following list.

Note:

- The textured seal can be subjected to damage from snowplows, and other types of scraping equipment if care is not taken.
- Use under heavy trucks, buses or high speed traffic is not recommended.
- Standard size seals have been developed for various movement conditions. Movement in excess of the design limits may result in failure.
- The system will function best when installed at the mean annual temperature range.
- The textured seals perform best when vertical deflection, or shear movement is limited through the use of load transfer devices or appropriate bearings.

PRECAUTIONS:

To ensure safe installation of the ISO-FLEX Factory Molded Textured Expansion Joint Sealing System, please refer to the Material Safety Data Sheets (MSDS) that accompany each product shipment.

DESIGN DATA:

The first step in designing for use of an ISO-FLEX Factory Molded Textured Expansion Joint Seal is to determine the expected annual movement in tension to which the joint sealant will be subjected. To determine the width of the seal, the following factors must be considered:

- Annual temperature variation: A minimum of 100 degrees F (55 degrees C) is usually assumed for heavy, reinforced structures. Lighter one-story structures or structures having exposed structural steel will usually exhibit even greater annual temperature changes and movement.
- Joint spacing (The average amount of structure distance between joints).
- Additional movement due to shrinkage, creep or elastic shortening of concrete, particularly in post-tensioned structures.
- Possible impact loading.
- Longitudinal shear.

INSTALLATION:

Procedures for installation of the product are provided by the system manufacturer. The recesses to receive the seal are normally provided by others in accordance with recommendations of the system manufacturer.

MAINTENANCE:

In the event of damage, textured seal may be repaired in the field using methods approved by the manufacturer.

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ISO-D MOLD-EX-JNT
Printed in U.S.A. 496
#I200