



# Scotch-Weld™

## Expansion Joint Sealant

### DP-5105

Technical Data

June, 2009

**Product Description** 3M™ Scotch-Weld™ Expansion Joint Sealant DP-5105 is a rapid setting, two-component polyurethane packaged as 1:1 ratio liquids in dual cartridges. With the squeeze of the trigger, the components are automatically mixed and easily dispensed as bubble-free, controlled-flow, self-leveling liquids.

**Suggested Applications:**

- For sealing and stress-relieving large decks and concrete walkways
- For sealing and stress-relieving horizontal highway and bridge segments
- For sealing and stress-relieving horizontal bridge segments

**Building & Construction**  
**Maintenance & Repair**  
**Pool Maintenance & Repair**

#### Typical Properties

**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Test	Conditions	Test Method	Properties
Viscosity of Mixture	77°F (25°C)	HBDVI + CP	32,000 cps
Work Life	10 g, 1/4" thick	PEC	5 minutes
Tack-free Time	10 g, 1/4" thick @ 77°F (25°C)	PEC	1 hour
Full Cure Time	10 g, 1/4" thick @ 77°F (25°C)	PEC	24 hours
Hardness After Full Cure	24 hours @ 77°F (25°C)	ASTM D2240-91	35 Shore A
Lap Shear Strength	24 hours @ 77°F (25°C)	ASTM D1002-72	150 psi
Temperature Range	Continuous	PEC	-60°F (-51°C) to 250°F (121°C)

# 3M™ Scotch-Weld™ Expansion Joint Sealant DP-5105

**Installation**

**Building & Construction  
Maintenance & Repair  
Pool Maintenance &  
Repair**

**3M™ SCOTCH-WELD™ EXPANSION JOINT SEALANT**

**This material should be applied during dry weather conditions with a temperature between 65°F and 110°F (18°C and 43°C) and should not be applied where temperatures will fall below 40°F (4°C) during cure.**

**Section 1: Preparation**

**General Preparation of the Expansion Joint Channel:**

1. For existing expansion joints, remove all loose aggregate, dust, old caulks, grease or other compounds from the expansion joint.
2. Use a manual or mechanical rotary bristle brush to remove the major debris. Then use moisture-free and oil-free compressed air to blow out the fine dust.
3. If desired, mask off the areas surrounding the expansion joint for creating a well-defined and aesthetic appearance to the channel.

**General Preparation of the Dual Cartridge/Dispenser/Mixer Tip Assembly:**

1. Select the cartridge size required for the job.
2. Refer to the table below to determine how many feet of channel are filled for each cartridge size, channel width and channel depth. Do not apply to joints that are wider than one (1) inch.

<b>Crack Width</b>	<b>Crack Depth</b>	<b>Linear ft. per 1.7 fl. oz.</b>	<b>Linear ft. per 12 fl. oz.</b>	<b>Linear ft. per gallon</b>
1/4 in.	1/4 in.	3.9	28	297
1/2 in.	1/4 in.	2	14	148
3/4 in.	1/4 in.	1.3	9	95
1 in.	1/4 in.	1	7	74
1/4 in.	1/2 in.	2	14	148
1/2 in.	1/2 in.	1	7	74
3/4 in.	1/2 in.	0.6	4	42
1 in.	1/2 in.	0.4	3	32

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## **Installation** *(continued)*

3. Select the desired manual or pneumatic dispenser.
4. Select the mix tip.
5. Prepare the required number of cartridges.
6. Cut the blind-end off of the cartridge orifice, or remove the plugs.
7. Place the cartridge in the dispenser.
8. Dispense just enough material so that both components dispense equally.
9. Assemble the mix tip onto the cartridge.

## **Section 2: Procedures**

### **General Procedure for Filling Horizontal Grade Expansion Joints**

1. Embed the mixer tip at the deepest portion of the channel and dispense into the prepared channel.
2. Fill so the sealant comes level with the concrete or exterior grade elevation.
3. 3M™ Scotch-Weld™ Expansion Joint Sealant DP-5105 will self-level.
4. Scotch-Weld Expansion Joint Sealant DP-5105 will set within approximately 5 minutes and be essentially tack free within one hour.

At 75°F (24°C), a 1/4"-thick section sets and becomes tack-free within one hour.

**Note:** Thicker masses or substrates at higher temperature take less time to cure. Thinner masses or substrates at lower temperature take more time to cure.

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**Storage** This product has a shelf life of 6 months when properly stored in unopened packages at temperatures of 65°F to 85°F (18°C to 30°C). Do not expose to excessive cold or moisture.

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**Maintenance** No maintenance is required; however, if joints become damaged, simply reapply 3M™ Scotch-Weld™ Expansion Joint Sealant DP-5105.

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**Precautionary Information** Refer to Product Label and Material Safety Data Sheet (MSDS) for health and safety information before using this product. For environmental information, refer to MSDS. Always wear gloves, eye protection, appropriate respiratory protection, and work in a well-ventilated area. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

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**Technical Information** The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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Printed in U.S.A.  
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