

GemSeal Crack-Flex Pro

DETAILED APPLICATION BULLETIN



PART 1 - GENERAL

1.1 SCOPE

This recommended practice covers the application of GemSeal Crack-Flex Pro, a high performance, polymer enhanced, hot applied joint and crack-sealing compound formulated with selected asphaltic resins, synthetic polymeric rubber, plasticizers, stabilizers, and a blend of organic and man-made reinforcing fillers. This construction-grade material is a one-part sealant that provides excellent results under extremely varying conditions. It is perfect for use in applications that are susceptible to heavy traffic, parked traffic, and extremes such as pedestrian foot traffic and vehicle power steering turns.

GemSeal Crack-Flex Pro is formulated to be used in a variety of climactic conditions such as resisting migration in hot temperatures and remaining flexible in cold temperatures.

1.2 REFERENCES

GemSeal CRACK-FLEX PRO meets or exceeds criteria in the following standards:

- A. American Society for Testing and Materials (ASTM)
 - D 6690 Specification for Concrete Joint Sealant
 - D-3405
- B. Federal Aviation Administration standard:
 - 1. FAA P-605
- C. AASHTO M-301

PART 2 – PRODUCTS/ MATERIAL

2.1 MATERIAL

- A. The contractor should use GemSeal Crack-Flex Pro in an oil-jacketed melter with constant mechanical agitation. These sealants are specially formulated for use where parking and foot traffic occur. Also formulated for non-tracking performance under these conditions.
- B. Hot applied elastomeric crack/joint sealant for asphaltic and concrete pavements.
- C. Physical Properties

Recommended Pour Temperature	Crack-Flex Pro 370°F to 390°F
Maximum Heating Temperature	400°F
Maximum Extended Heating	6 Hours
Penetration (150g/5 sec.)	90 max.
Flow at 140°F	3 mm max.
Softening Point Temperature	176°F min.
Bond - 50% Ext.	Passes
Asphalt Compatibility	Compatible
Concrete Compatibility	Compatible

D. Coverage Rates - Typical

Width	Depth	Pounds/100 lineal feet
3/8"	3/8"	6.9
3/8"	1/2"	9.3
1/2"	1/2"	12.3
1/2"	1"	24.7
3/4"	1/2"	18.6
3/4"	3/4"	27.8

PART 3 - EXECUTION

3.1 CONDITIONS

- A. Cracks and joints under one-quarter (1/4) inch width are not covered under this specification unless stipulated in writing by Architect/Engineer.
- B. If cracks and joints under one-quarter (1/4) inch or less are to be addressed, then they should be routed or saw cut.

3.2 EQUIPMENT

- A. Use an agitated oil-jacketed unit that has separate temperature gauges for both the sealant and the heat transfer fluid. The space between the inner and outer shells filled with high flash point heat transfer oil or other indirect heating means.
- B. The melter to be used must have constant agitation any time material is over 300°F.
- C. Melt only enough material for the day's activities. Once melted, additional material can be added as needed which also extends pot life.
- D. Material can be safely reheated within the sealant's service pot life.
- E. Installed melter safety equipment features must be in good operable condition.

3.3 INSPECTION

- A. Contractor shall examine the substrates and conditions under which materials are to be installed.
- B. All crack seal to be protected by appropriate traffic barriers, lighted if necessary, so located as to prohibit parking and traffic until all sealant has cured.

3.4 PREPARATION

- A. Apply sealant only to clean, dry, properly prepared cracks and joints.
- B. Remove vegetation and all incompressible materials from cracks and joints by means of compressed air or hot compressed air lance.

3.4 PREPARATION (cont.)

- Routing cracks prior to sealing has shown to add many years of service life to sealants especially in colder climate regions with extreme movements.
- C. Under ANY circumstances, compressed air used for cleaning MUST be oil free.
- D. Cracks and joints less than one-quarter (1/4) inch in width must be routed or saw cut to a minimum one-half (1/2) inch by one-half (1/2) inch in shape.
- E. Cracks may need to be prepared using specialized backing material after cleaning to maintain minimum 1 to 1 depth to width profile as specified by engineer or owner.

3.5 INSTALLATION

- A. At ambient temperatures below 40°F and above freezing, use a hot compressed air lance to achieve clean, dry, warm space for sealant installation.
- B. The use of a pump or wand system for sealant application is highly recommended. For best results, the sealant depth to width ratio should not exceed 2 to 1 (i.e. 2-inch deep to 1-inch wide).
- C. Cracks shall be filled from the bottom up to the top of the pavement surface.
- D. Excess or spilled sealant shall be removed from the pavement by approved methods and shall be discarded properly.
- E. Control thickness to a maximum one-eighth (1/8) inch above pavement surface.
- F. Finished sealed cracks and joints will be uniformly level to achieve flush to one-eighth (1/8) inch concave surface appearance.

3.6 COMPLETION

- A. Upon completion, all surplus material and debris shall be removed from the site.

PART 4 –SUPPLEMENTAL CONDITIONS

4.1 SAFETY

- A. Contractor shall be responsible for on-site safety of all their personnel, equipment, equipment rental personnel, and all associated subcontractors. Safety requirements shall comply with Code of Federal Regulations Title 29 Occupational Safety and Health Administration (OSHA) safety and health regulations for construction.
- B. Accident Prevention Responsibility
- It shall be the responsibility of the employer to initiate and maintain such programs as may be necessary to comply with applicable OSHA requirements.
 - Such programs shall provide for a Competent Person designated by the employer to instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to injury.

4.2 PERMITS

- A. Contractor is responsible for all necessary permits.

4.3 CODE COMPLIANCE

- A. Contractors shall comply with all Local, State and Federal applicable codes and regulations as pertaining to each facility.
- B. Provide materials in accordance with code requirements.

4.4 QUALITY ASSURANCE

- A. The contractor will take completion photos and have available upon request for up to one year.
- B. Upon request, contractor shall submit a letter stating that equipment used to heat the material meets requirements of this specification.
- C. Upon request, the contractor shall submit manufacturer's quality assurance results on products used.

LIMITED WARRANTY:

GemSeal Pavement Products warrants that for a period of one (1) year from date of purchase this product shall be free from manufacturing defects and shall meet or exceed performance standards listed in the technical data sheet for the product at the time of sale, if used as directed and within the stated shelf life. This Limited Warranty applies only if the product is stored, used, and applied over a properly prepared substrate in strict accordance with applicable specifications and instructions issued by GemSeal Pavement Products. The Limited Warranty will not apply if the product is altered, modified, or misused after it has left the control of GemSeal Pavement Products. GemSeal Pavement Products will not be responsible for defects caused by factors beyond its control, including but not limited to workmanship, application equipment, weather, acts of God, structural failure, condition or movement of substrate, improper additives, poor drainage, ponded water, improper maintenance, damage from snow removal equipment, and normal wear and tear. GemSeal Pavement Products does not warrant that the product or any method of use or application would be suitable for any particular site conditions.

All warranty claims must be submitted in writing, with proof of purchase, to the following address: 3700 Arco Corporate Drive, Suite 425, Charlotte, NC 28273. Unused portions of product must be returned upon request. Replacement of defective product or, at GemSeal Pavement Products' option, refund of the purchase price of defective product shall be the buyer's sole remedy under this Limited Warranty. In no event shall GemSeal Pavement Products be liable for any damages in excess of the purchase price of the defective product. This Limited Warranty does not cover labor costs for product application, replacement, or repair. GEMSEAL PAVEMENT PRODUCTS SHALL IN NO EVENT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOST SALES OR PROFITS, BUSINESS INTERRUPTION, DELAYS, PHYSICAL DAMAGE TO OTHER MATERIALS OR PROPERTY, OR LOSS OF USE OF PROPERTY.

THIS LIMITED WARRANTY IS PROVIDED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. GEMSEAL PAVEMENT PRODUCTS EXPRESSLY DISCLAIMS ANY OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No modification or extension of this Limited Warranty shall be valid unless given in writing and signed by an authorized officer of GemSeal Pavement Products. Sales personnel and product distributors are not authorized to modify or extend this Limited Warranty.

CAUTION:

Keep out of reach of children. Do not take internally. Avoid prolonged or repeated contact with skin or breathing of vapors. In case of contact with eyes, flush with plenty of water, and seek immediate medical attention. Use with adequate ventilation. Do not use in confined areas.

MANUFACTURING & CUSTOMER SERVICE:

Call (866) 264-8273 to find the nearest GemSeal location to purchase Crack-Flex Pro.

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