

TECHNICAL BULLETIN #7

ASTM D-1227 Designation Change

The American Society for Testing and Materials (ASTM) has changed the classification for specification ASTM D-1227 Type IV. ASTM has, in affect, eliminated the D-1227 Type IV classification. This elimination is a classification change only, and does not affect how or where the material is used. The Karnak materials affected by this change are Karnak #100AF Non-Fibered Emulsions, #220AF Fibered Emulsion and #920AF Fibered Emulsion Mastic. The new classifications are as follows:

PRODUCT	NEW ASTM D-1227 CLASSIFICATION
Karnak #100 Non-Fibered Emulsion	ASTM D-1227 Type III Class 1
Karnak #220AF Fibered Emulsion	ASTM D-1227 Type II Class 1
Karnak #920AF Fibered Emulsion Mastic	ASTM D-1227 Type II Class 1

Note: If there are any questions, please contact Karnak's Technical Service Department : 1-800-526-4236, or Fax requests to: 908-388-9422.

ASTM D-1227 Designation Change

This standard is used under the fixed designation D 1227, the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parenthesis indicates the year of last reapproval. A superscript epsilon (??) indicates an editorial change since the last revision or reapproval. This specification has been approved for use by agencies of the Department of Defense to replace MIL-R-3472A. Consult the DoD index of Specifications and Standards for the specific year of issue which has been adopted by the Department of Defense.

1. Scope

1.1 This specification covers emulsified asphalt suitable for use as a protective coating for built-up roofs and other exposed surfaces with inclines of not less than 4% or 42 mm/m (1/2 in./ft.).

1.2 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Document

2.1 ASTM standard: D2939 Test Methods for Emulsified Bitumens Used as Protective Coatings²

3. Classification

3.1 Type I, Class 1 - Emulsified asphalt prepared with mineral colloid emulsifying agents and containing fibers.

3.2 Type I, Class 2 - Emulsified asphalt prepared with chemical emulsifying agents and containing fillers or fibers including .

3.3 Type II, Class 1 - Emulsified asphalt prepared with mineral colloid emulsifying agents and containing fibers other than .

3.4 Type II, Class 2 - Emulsified asphalt prepared with chemical emulsifying agents and containing fillers or fibers other than .

3.5 Type III, Class 1 - Emulsified asphalt prepared with mineral colloid emulsifying agents, without fibrous reinforcement.

3.6 Type III, Class 2 - Emulsified asphalt prepared with chemical emulsifying agents, without fibrous reinforcement.

4. Physical Requirements

4.1 The emulsion shall be of suitable consistency for application above freezing, in relatively thick films by brush, mop, or suitable spray equipment without thinning with water or heating, and shall bond to either damp or dry surfaces.

4.2 The emulsion shall be of smooth, uniform consistency without separation or settlement in storage to the extent that it cannot be readily dispersed by ordinary stirring.

4.3 Types I and II emulsions, after stirring to homogeneity, shall be suitable for application by brush or mop in single coats of not less than 1.0 L/m² (2 1/2 U.S. gal/ 100 ft²) without rundown on inclines up to and including vertical.

4.4 Types I and II emulsions, after stirring to homogeneity, shall be suitable for application by proper spray equipment to produce a substantially self-leveling film of not less than 1.0 L/m² (2 1/2 U.S. gal/100ft²) without rundown on inclines up to and including 50% or 500 mm/m (6 in./ft).

4.5 Type III emulsion, after stirring to homogeneity, shall be suitable for application by brush or proper spray equipment at a rate of not less than 1.0 L/m² (2 1/2 U.S. gal/100 ft²) without rundown on vertical concrete surfaces with open-mesh fabric reinforcement.

4.6 The emulsion shall conform to the physical properties prescribed in Table 1.

5. Sampling and Test Methods

5.1 Sample the material and determine compliance with these specifications in accordance with Test Methods D 2939.

6. Inspection

6.1 Inspection of the material shall be made as agreed upon between the purchaser and the supplier as part of the purchase contract

7. Rejection and Rehearing

7.1 If the results of any test do not conform to the requirements of this specification, retesting to determine conformity may be performed as agreed upon between the purchaser and the supplier

8. Certification

8.1 Upon request of the purchaser in the contract or order a manufacturer's certification that the material was manufactured and tested in accordance with this specification together with a report of the test results shall be furnished at the time of shipment.

9. Packaging and Marking

9.1 Emulsion shall be suitably packaged to permit acceptance by the carrier and to afford adequate protection from the normal hazards of handling and shipment.

9.2 Each container shall be plainly marked with the name and brand of the manufacturer or supplier, the type of product, and the manufacturer's production code or lot number.

9.3 Each container shall be marked to indicate that the product was manufactured in accordance with specification D 1227.

10. Keywords

10.1 asphalt; emulsified; emulsified asphalt, roofing coating

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of the standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, West Conshohocken, Pa. 19428

Physical Properties of Emulsified Asphalt									
Property	Type I Class 1		Type II Class 1		Type III Class 1		Type I Class 2	Type II Class 2	Type III Class 2
	min	max	min	max	min	max	min	max	max
Weight per U.S. Gallon	8.2	8.7	8.2	9.0	8.2	8.7	9.2	9.5	
Weight per litre, g	980	1040	980	1080	980	1040	1100	1140	
Residue by evaporation, %	45	55	45	55	47	53	40	60	
Ash content of residue, %	5	20	5	25	---	8	30	50	
Water content, % A	45	55	---	55	---	53	40	60	
Flammability							no tendency to flash or ignite		
Firm set, h	---	24	---	24	---	24	---	24	
Heat test 100 ±3°C (212 ± 5°F)							no blistering, sagging, or slipping		
Flexibility 01 ± 1/2°C (32 ± 1°F)							no cracking or flaking		
Resistance to water							no blistering or reemulsification		
Direct flame test							coating shall char in place		