

SECTION 07120

FLUID-APPLIED WATERPROOFING

1 GENERAL

1.1 SUMMARY (NOT APPLICABLE)

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 208	(1982) Insulating Board (Cellulosic Fiber), Structural and Decorative
ASTM C 726	(1988) Mineral Fiber and Mineral Fiber, Rigid Cellular Polyurethane Composite Roof Insulation Board
ASTM D 412	(1987) Rubber Properties in Tension
ASTM D 471	(1979) Rubber Properties - Effect of Liquids
ASTM D 746	(1987) Brittleness Temperature of Plastics and Elastomers by Impact
ASTM D 2240	(1986) Rubber Property - Durometer Hardness
ASTM E 96	(1990) Water Vapor Transmission of Materials

FEDERAL SPECIFICATIONS (FS)

FS TT-S-0027E	(Rev. E; Am. 3) Sealing Compound: Elastomeric Type, Multi-Component (for Caulking, Sealing, and Glazing in Buildings and Other Structures)
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1.3 SUBMITTALS

Government Approval is required for submittals with a "GA" designation; submittals having and "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01300 SUBMITTALS:

SD-06 Instructions

Fluid-Applied Waterproofing; GA.

Manufacturer's instructions for installation of the fluid-applied waterproofing.

SD-13 Certificates

Materials; GA.

Manufacturer's certification of compliance attesting that the materials meet the requirements of the specification under which it is furnished.

SD-14 Samples

Membranes and Flashing Materials; GA.

Sample of membrane material, 8 ounces of each material. Flashing materials, 1 by 1 foot sample.

1.4 DELIVERY AND STORAGE

Materials shall be delivered to the job site in the manufacturer's original, unopened packages, clearly marked with the manufacturer's name, brand name, and description of contents. Membrane and flashing materials shall be stored in clean, dry areas.

2 PRODUCTS

2.1 WATERPROOFING MEMBRANE

Waterproofing membrane shall be one of the following:

2.1.1 One-Component Membrane

A one-component polyurethane rubber based liquid membrane material, self bonding type, compounded specifically for the application methods to be used, not less than 97 percent solids and 6 month shelf life in the uncured state, tested by the manufacturer to comply with the following requirements for the cured membrane:

Tensile Strength (ASTM D 412)	60 psi, minimum
Elongation (ASTM D 412)	400 percent, minimum
Hardness, Shore A (ASTM D 2240)	5 to 30
Water Absorption (ASTM D 471)	maximum 1.0 percent for

21 days at 75 degrees F

Low Temperature Brittleness (ASTM D 746)	-40 degrees F
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2.1.2 Two-Component Membrane (Alternate)

A two-component, bitumen modified, moisture cured urethane waterproofing system, conforming to the following requirements:

Elongation (ASTM D 412)	750 percent, minimum
Tensile Strength (ASTM D 412)	175 psi, minimum
Adhesion Strength, unprimed concrete (FS TT-S-0027)	15 psi
Recovery from 350 Elongation (ASTM D 412)	95 percent
Tear Resistance (ASTM D 412, Die C)	60 psi
Water Absorption (ASTM D 471) 75 degrees F	2-5 percent for 6 months at
Water Vapor Transmission at 100 degrees F (ASTM E 96)	0.01 metric perms * cm
Low Temperature Brittleness (ASTM D 412)	Elongation 500 percent at -20 degrees F
High Temperature Aging, elongation change after 336 hours at 180 degrees F (ASTM D 412)	Decreased from 730 percent to 400 percent
Hardness in 336 hours at 75 degrees F (ASTM D 412)	30 Shore A horizontal 45 Shore A vertical
Service Temperature (ASTM D 2240) +150 degrees F	-40 degrees F to

NOTE: *Metric perms = gm/M (24 hours) (mm Hg)

2.2 PRIMER AND JOINT SEALANT

Primer and joint sealant shall be as recommended by the manufacturer of the fluid-applied waterproofing liquid compound.

2.3 ELASTIC SHEET FLASHING

Elastic sheet flashing shall be as recommended by the manufacturer of the fluid-applied waterproofing liquid compound. The elastic sheeting shall be a black polyvinyl chloride resin alloyed with plasticizers and other modifiers, formed into flexible sheets having 60 to 80 Shore A hardness, 2000 psi strength, 250 percent elongation, -20 degrees F brittleness temperature, and shall be a minimum of 50 mils in thickness.

2.4 INSULATION BOARD

ASTM C 208, construction grade, 1/2-inch thick, asphalt saturated and coated; ASTM C 726, 7/16-inch thick; or prefabricated membrane board 1/4-inch thick, consisting of asphalt-saturated felt laminated under pressure to

both sides or with felt laminated on the bottom and fiberglass mat laminated on top with a mineral-filled asphalt core.

3 EXECUTION

3.1 SURFACE PREPARATION

Surfaces to receive waterproofing shall be cleaned of foreign matter and shall be surface dry at the time waterproofing is applied. Surfaces to receive waterproofing shall be primed only if recommended by the manufacturer.

3.2 APPLICATION

Fluid-applied waterproofing shall be uniformly applied with brushes, serrated squeegees, spray equipment, or trowels to a minimum thickness of 60 mils, in strict accordance with the instructions and recommendations of the manufacturer. Sheet type flashing shall be installed where indicated on the drawings with a rubber base adhesive as recommended by the fluid applied waterproofing manufacturer.

3.3 PROTECTION

Waterproofing against which backfill is to be placed shall be protected by a single thickness of insulation board. The insulation board shall be pressed on the membrane, with edges of the boards brought into moderate contact and joints staggered. Boards shall be carefully and neatly fitted around projections and shall cover the entire surface of the waterproofing. Waterproofing not covered with insulation boards shall be protected as necessary to prevent damage from subsequent building operations.