

Technical Data Sheet For IDS EPDM Membrane

PRODUCT DESCRIPTION

Basic uses: International EPDM Rubber Membrane is used in conjunction with totally adhered system, ballast system, bar system, bonded plate system and International Diamond's patented mechanically attached systems – Diamond 105 (non-penetrating) and Diamond Seal-A-Plate. International EPDM Rubber Membrane is designed for use as a commercial roofing cover.

- ◆ New roof construction
- ◆ Re-roofing over existing roofs
- ◆ Roofing over non-standard roof configurations
- ◆ Flashing and expansion joints.

Limitations: Only use adhesives recommended by the manufacturer. Avoid direct contact with hydrocarbon solvents, oil base, coal tar base, bitumen base, or plastic roof cements. Contact the manufacturer for recommendations on the membrane use with other chemicals.

Composition and Materials: EPDM (Ethylene, Propylene, Diene, Terpolymer) membrane.

Size: Factory fabricated sheets are available in .045 and .060 inch thickness. Standard widths range from 7 to 50 feet and lengths from 50 to 100 feet. Consult manufacturer for specific width and length combinations.

Weight: .045 = .289 lb./sq. ft.
.060 = .385 lb./sq. ft.
.045 FR = .311 lb./sq. ft.
.060 FR = .414 lb./sq. ft.

Color: Black only (consult manufacturer for color coating recommendations).

Standards: International EPDM Rubber Membrane can be used for UL, Inc. Class A assemblies and FM Class I-90 assemblies. Status varies, consult International Diamond Systems, Inc. for specific construction standards.

TECHNICAL DATA

See Table 1.

INSTALLATION

Installation procedures vary with specific job requirements. Detailed installation instructions for each system are included in International Diamond Systems, Inc.'s Specifications Manual. International Diamond provides technical training for approved contractors to provide them with proper installation details. All International Diamond Systems, Inc. jobs are inspected by an International Diamond technical representative prior to approval for warranty.

Preparatory Work: The International EPDM Rubber Membrane is to be installed over substrate which is clean, dry, smooth, free of sharp edges, loose and foreign material.

General Methods: Membrane Placement-Roll out the EPDM membrane and position it without stretching. Allow to relax for a period of 30 minutes.

Mechanical Attachment: International Diamond's Diamond 105 self-adhering fasteners are installed through the insulation and into the roof deck using ordinary hand tools. EPDM rubber membrane is then floated over the fasteners and broomed down to insure proper adhesion of the membrane to the self-adhering plates. A Diamond 105 System is completely non-penetrating. International Diamond's Seal-A-Plate fasteners are installed with ordinary hand tools after the EPDM membrane has been positioned over the insulation. Self-adhering cover tapes are then placed over each fastener and rolled down to provide a water-tight seal.

Bonding Adhesive (Where Applicable): Bonding Adhesive is applied to both membrane and substrate using a brush or roller. The adhesive is allowed to dry until slightly tacky to the touch. The membrane is then carefully rolled into place and brushed down to insure contact between the substrate and sheet.

Splicing: Overlapping seams are joined with either International Butyl Splice Adhesive and Lap Sealant or with International Seam Tape which does not require edge caulk. Spliced areas are cleaned prior to adhesive application to insure proper bonding.

Precautions: Avoid direct contact with hydrocarbon solvents, oil base, or plastic roof cements. Careless placement or movement of heavy equipment could result in membrane punctures.

AVAILABILITY AND COST

Availability: Available through International Diamond manufacturer representatives and distribution centers located throughout the United States.

Cost: Contact local International Diamond manufacturer’s representative or distributor.

WARRANTY

All International Diamond Systems, Inc. roof installations that require warranty must be installed by approved contractors and inspected by the manufacturer’s technical representative. Workmanship and Material warranties are available for periods from 5 to 20 years. Length, terms and conditions of the warranty coverage vary with the type of installation and materials used. Contact International Diamond for specific details.

MAINTENANCE

Minimal.

TECHNICAL SERVICES

Contact International Diamond Systems, Inc. for technical and sales information via toll free hotline (800) 248-1558 or via FAX (419) 382-3275.

Table 1

PHYSICAL PROPERTIES			
<u>Property</u>	<u>Test Method</u>	<u>Minimum ASTM Performance</u>	<u>Typical Values</u>
Thickness, min			
Sheet-overall	ASTM D 412	0.045 in (1.028 mm)	0.043 in (1.092 mm)
Tensile strength, min	ASTM D 412 (Die C)	1305 psi (9.0 MPa)	1425 psi (9.8 MPa)
Elongation, ultimate, min	ASTM D 412 (Die C)	300%	450%
Tensile set, max	ASTM D 412 Method A, (Die C)	10%	5%
Tear resistance, min	ASTM D 624 (Die C)	150 lbf/in (26.3 kN/m)	200 lbf/in (35.0 kN/m)
Brittleness point, max	ASTM D 2137	-49° F (-45° C)	-63° F (-53° C)
Ozone resistance, no cracks	ASTM D 1149	pass	pass
Heat Aging:	ASTM D 573		
Tensile strength, min	ASTM D 412 (Die C)	1205 psi (8.3 MPa)	1415 psi (9.7 MPa)
Elongation, ultimate, min	ASTM D 412 (Die C)	200%	290%
Tear resistance, min	ASTM D 624 (Die C)	125 lbf/in (21.9 kN/m)	180 lbf/in (31.5 kN/m)
Linear dimensional change, max	ASTM D 1204	±1.0%	-0.7%
Water absorption, max, mass%	ASTM D 471	+8, -2%	+1.8%
Factory seam strength, min	ASTM D 816, Method B 50 lbf/in (Modified)	(8.8 kN/m) or sheet failure	sheet failure
Weather resistance:			
Visual inspection	ASTM D 518	pass	pass
PRFSE, min	ASTM D 518	30%	63%
Elongation, ultimate, min	ASTM D 412 (Die C)	200%	290%

IDS membrane meets or exceeds the minimum requirements set forth by ASTM D 4637, and CGSB 37-P-52M, for Type 1, Class A, non-reinforced EPDM single-ply roofing membranes.

