



PRODUCT SPECIFICATION

PRODUCT NAME

SEALECTION™ 500 is a spray-applied, semi-rigid thermal insulation which insulates and air seals in one step.

MANUFACTURER

The chemical components are manufactured by Demilec (USA) LLC, Arlington, TX.

PRODUCT DESCRIPTION

SEALECTION™ 500 is a two component, open cell spray-applied semi-rigid polyurethane foam plastic system, fully water-blown having a density of 0.5pcf (8kg/m³). The low density insulating cellular plastic is produced from the controlled reaction of polymeric isocyanate (Part A) and resin (Part B). The by-products of the reaction include carbon dioxide and steam which act as the blowing agent. The effective air-sealing capability of this product comes from the excellent adhesion of the polyurethane to most substrates.

APPLICATION

SEALECTION™ 500 is sprayed-applied on the job site using a fixed (1/1) volumetric positive displacement pump as identified in the application manual. This material is applied by authorized contractors using approved applicators trained in the art of proper installation. The foam plastic shall not be applied on wet substrate, or a substrate covered with frost or ice, loose scales, rust, oil or grease.

TECHNICAL DATA

Density

ASTM D 1622 0.47-0.50 lbs/ft³

Tensile Strength

ASTM D 1623 5.6 lbf/in²

ICC Evaluation requirement for tensile strength is 3 lbf/in² minimum.

Closed Cell Content

ASTM D 2856

ICC Evaluation requirement Closed Cell Content is less than 90%.

THERMAL PERFORMANCE

Thermal resistance (R Value) per inch

ASTM C 518 3.81 ft² h.°F/BTU in.

- 2x4 cavity R13
- 2x6 cavity R19

SEALECTION™ 500 does not settle, sag nor allow the free passage of air through the wall. The restriction of air movement through the wall allows more effective thermal performance R-value while preventing hot moisture laden air to condense at cold surfaces.

AIR PERMEABILITY/AIR BARRIER

The fine cellular structure and adhesion of the polyurethane plastic to most building materials of SEALECTION™ 500 inhibits the flow of air, thus creating an air impermeable insulation.

Air Leakage ASTM E 283

@ 25 mph 0.00013 ft³/s.ft²

Sustain Wind Load

@ 90 mph No Damage

Gust Wind Load

@ 160 mph No Damage

WATER VAPOR PERMEABILITY

SEALECTION™ 500 has a relatively low water vapor permeance. This material is not a vapor barrier and does not entrap moisture in building materials. The low air permeability prevents the movement of moisture laden air to cold surfaces causing condensation. Only in northern climates a vapor barrier may be required.

ASTM E 96 Water Vapor Transmission

(Dry Cup) 2" 3.6 perms

WATER ABSORPTION

All open cell foams will absorb water and shall not be placed in areas with direct contact to liquid water. In the event that this product gets wet accidentally, it will eventually dry. Thermal performance of the product will be restored as soon as it is dry. Due to gravity, liquid water will drain through the SEALECTION™ 500.

ASTM D 2842 25-50%

BACTERIAL OR FUNGAL GROWTH

SEALECTION™ 500 provides no food source for bacteria or fungi.

ASTM C 1338 No Fungi Growth

ACOUSTICAL PROPERTIES

Performance in a 2"x6" wood stud wall at frequencies of:

125 250 500 1000 2000 4000 Hz

(ASTM E 90)

Sound Transmission Class (STC) **39**

17 29 37 45 47 48

(ASTM C 423)

Noise Reduction Coefficient (NRC) **.75**

.28 .56 .87 .69 .79 .77

SURFACE BURNING CHARACTERISTICS

SEALECTION™ 500 is a Class I insulation and it shall be separated from the inhabitants by a fifteen minutes thermal barrier. In attics and crawl spaces, the foam may be left exposed as stated in the ICC (ESR 1172). This product showed less flame propagation in the comparative crawl space and corner wall test than Kraft faced fiberglass insulation.

ASTM E 84 Tunnel Test 6" Thick Class I

Flame Spread 21

Smoke Developed 216

CAN/ULC-S102M 25<FC<500

ELECTRICAL WIRING

SEALECTION™ 500 has been evaluated with both 12 and 14 amp ROMEX wires without the temperature exceeding 125°F (50°C).

CORROSION

SEALECTION™ 500 does not cause corrosion to steel.

ENVIRONMENTAL/HEALTH/SAFETY

SEALECTION™ 500 contains no formaldehyde or ozone-destroying CFCs, HCFCs, or hydrocarbons. An off-gassing and toxicological assessment has been conducted by government experts, it was determined that the product would be unlikely to cause adverse health problems. This product is certified by the Environmental Choice® Program as an environmentally responsible material.

ECP-40 Building Materials: Thermal Insulation

AVAILABILITY

Through a network of Authorized Contractors using factory trained applicators.

WARRANTY

Demilec (USA) LLC warrants a minimum shelf life of six months of the chemical components of SEALECTION™ 500 when stored in unopened drums. When applied in accordance with the latest DEMILEC *Installer's Manual*), the product will meet the specifications as stated in the technical data sheet.

RELATED REFERENCES

SEALECTION™ 500 has been evaluated and listed by International Codes Council ICC (ESR 1172) and Canadian Centre for Material in Construction CCMC (#12697-R). All tests were conducted by certified independent laboratories.