



## DESCRIPTION

Quadrant Urethane Technologies QuadFoam® 500 system is a two component, 1 to 1 by volume, spray applied, semi-rigid polyurethane foam. QuadFoam® 500 is 100% water blown. QuadFoam® 500 is a 0.5 LB open-cell material and is excellent for insulating, air sealing and noise reduction. It contributes to providing a self-adhering, seamless building envelope that reduces air, dust, pollution, and pest infiltration. It is designed for use in interior commercial and residential construction applications and is compatible with most common construction materials.

QuadFoam® 500 has been tested and approved in accordance to AC 377 (NFPA 286) Appendix X with 3 dry mils of DC 315 ignition barrier from International Fireproof Technology, Inc. and 5 dry mils of No-Burn Plus XD ignition barrier from No Burn, Inc.

## ADVANTAGES

- Reduces Energy Consumption
- Controls Air Infiltration
- Good Sound Barrier/Noise Reduction
- Controls Moisture Infiltration
- Structural Properties
- Ease of Application
- Improves Indoor Air Quality
- Zero ODP

For proper use of this Quadrant Urethane Technologies insulating materials or any polyurethane foam, please refer to the application information and any of the following codes or guidelines:

- API Fire Safety Guidelines for Use of Rigid Polyurethane and Polyisocyanurate Foam Insulation in Building Construction (AX230)
- ICC, International Building Code, (IBC), Section 2603
- International Residential Code, (IRC), Section R314

## TYPICAL PHYSICAL PROPERTIES

Properties as Supplied	A	B
Specific Gravity @ 70°F	1.24	1.10
Viscosity (Brookfield) cps	250	300
Properties as Cured		
Core density ASTM D-1622	0.5 pcf	
Tensile Strength ASTMD-1623	5.0 psi	
R-value at 1 inch ASTM C-518	3.72	
Moisture Permeability ASTM E-96	9.8 perm/inch @ 3/2" thickness	
Open Cell Content ASTMD-1940	> 97.65%	
Dimensional Stability ASTM D-2126	< 15%	
Sound Transmission Coefficient ASTM E-90	50 (STC)	
Noise Reduction Coefficient ASTM C-423	.7	
Compressive Strength Parallel ASTM D-1621	.95 psi	
Flammability ASTM E-84 at 4 inches	Flame Spread	<10
	Smoke Dev.	< 250

NOTE: The above values are average values obtained from laboratory experiments and should serve only as guidelines. Free rise core density should not be confused with overall density. Overall densities are always higher than free rise core densities and take into account skin formation, thickness of application, environmental conditions, etc.



## **QUADFOAM® 500**

### **APPLICATION INFORMATION**

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#### **STORAGE AND USE OF CHEMICALS**

Cold chemicals can cause poor mixing, cavitation or other process problems due to higher viscosity at lower temperatures. Storage temperatures should be 65-85°F for several days before use and should not exceed 90°F. Do not store in direct sunlight. Keep drums tightly closed when not in use and under dry air or nitrogen pressure of 2-3 psi after they have been opened. Shelf life is six months from date of manufacture when stored in original unopened containers at 50-85°F.

#### **SAFE HANDLING OF LIQUID COMPONENTS**

Use caution when removing bungs from containers as contents may be under pressure. Loosen the small bung first and let any built up gas escape before completely removing. Avoid prolonged breathing of vapors. In case of chemical contact with eyes, flush with water for at least 15 minutes and get medical attention. For further information refer to "MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal" publication AX-119 published by the Alliance for the Polyurethanes Industry, Arlington, VA.

#### **EQUIPMENT AND COMPONENT RATIOS**

QuadFoam® Insulation systems should be processed through commercially available spray equipment designed for that purpose.

QuadFoam® 500 B-side is connected to the resin pump and the QuadFoam® 500 A-side is connected to the isocyanate pump. The proportioning pump ratio is 1 to 1 by volume. The pre-heater and hose temperature should be set at 115-145°F and able to maintain +/- 5°F.

#### **APPLICATION GUIDELINES**

QuadFoam® 500 is suitable for application to most construction materials including wood, metal, masonry and concrete. All surfaces to be sprayed with foam should be clean, dry and free of dew and frost. All metal to which the foam is to be applied must be free of oil, grease, etc. Six inches should be the maximum thickness of each layer. Allow ten minutes between each pass to allow for cooling. Multiple layers can be applied to reach the desired thickness and R-value.

Substrate temperature at the time of QuadFoam® 500 application should be between 25-120°F, the warmer the surface, the better the adhesion. For service temperatures in the range of 120-180°F, the substrate to be sprayed should be 120°F or above at the time of spraying.

As with all Spray Polyurethane Foam systems, improper application techniques should be avoided. Examples of improper techniques include, but are not limited to, excessive thickness of SPF, off ratio material and spraying into or under rising foam. Potential results of improperly installed SPF include dangerously high reaction temperatures that may result in fire and offensive odors that may or may not dissipate. Improperly installed foam must be removed and replaced with properly installed SPF.

SPF insulation is combustible. High intensity heat sources such as welding or cutting torches must not be used in close proximity to any polyurethane foam.

#### **FINISHED FOAM PROTECTION**

The finished surface of the sprayed polyurethane foam should be protected from the adverse effects of sunlight's ultraviolet rays, which can cause dusting and discoloration. Protective coatings designed for use with polyurethane foams are available from Quadrant Urethane Technologies Products.

#### **HEALTH & SAFETY**

Due to the reactive nature of these components, vapors and liquid aerosols present during application and for a short period thereafter must be considered – and appropriate protective measures taken – to minimize potential risks from overexposure through inhalation, skin, or eye contact. These protective measures include: adequate ventilation, safety training for installers and other workers, use of appropriate personal protective equipment and a medical surveillance program. A 24 hour minimum re-occupation period is required for existing structures and or retrofit applications.

#### **CODE COMPLIANCE**

Building codes may require the installation of an approved thermal and or ignition barrier between the foam insulation and the occupied space such as ½-inch gypsum board or other tested and approved materials. Refer to specific building codes and or code officials for details. Contact Quadrant Urethane Technologies for specific alternate approvals for QuadFoam® 500. QuadFoam® 500 has been tested and approved in accordance to AC 377 (NFPA 286) Appendix X with 3 dry mils of DC 315 Ignition Barrier from International Fireproof Technology, Inc. and 5 dry mils of No-Burn Plus XD Ignition Barrier from No Burn, Inc.

The information herein is to assist customers in determining whether our products are suitable for their applications. Customer assumes full responsibility for quality control, testing, and determination of suitability of product for its intended use or application. Quadrant Urethane Technologies warrants only that the material shall meet its specifications; this warranty is in lieu of all other written, expressed or implied warranties and Quadrant Urethane Technologies expressly disclaims any warranty of merchantability, fitness for a particular purpose, or freedom from patent infringement. Accordingly, buyer assumes all risks whatsoever as to the use of the material. Buyer's exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the purchase price of the material. Failure to adhere to any recommended procedures shall relieve Quadrant Urethane Technologies of all liability with respect to the material or the use thereof.