QuadFoam® RetroSeal® 2.0
TECHNICAL DATA

Quadrant Urethane Technologies

QuadFoam® RetroSeal® 2.0 is "The No Heat Foam™" Insulation System designed for the latest in application and equipment technology, the Graco Reactor E-8p®. QuadFoam® RetroSeal® 2.0 should be applied when ambient conditions and substrates are within 55 - 120˚F, with best results within 65 - 95'f. QuadFoam® RetroSeal® 2.0 is a 2 pcf closed-cell material; Class 1 Fire rated 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. QuadFoam® RetroSeal® 2.0 utilizes an EPA approved, non-ozone depleting blowing agent. This spray foam has been specially formulated to meet the intent of the International Code Council (ICC) building codes and is used primarily as a moisture/vapor barrier, air barrier and thermal insulation on above and below grade interior and exterior applications.

QuadFoam® RetroSeal® 2.0 has been tested in accordance to NFPA 286 according to AC 377 Appendix X for Ignition and Thermal Barrier as noted; Ignition Barrier not required in accordance to ICC-ES AC 377 Appendix X June 2011; 15 Minute Thermal Barrier of 14 dry mills of DC 315 Coating required in accordance to ICC-ES AC 377 Appendix X June 2011.

Spray Foam Insulation Advantages

- Reduces Energy Consumption
- Controls Air Infiltration
- Vapor Retarder
- Controls Moisture Infiltration
- Structural Properties
- High R value Per Inch
- Improves Indoor Air Quality
- Structural Properties
- 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

Viscosity:	1175 +/- 50cps
W/G:	9.2 +/- .1 lb/gal
The fill weights:	Pt B – 40 pounds
	Pt A – 45 pounds

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Typical Physical Properties

Density ASTM D-1622	2.0 pcf
Closed Cell Content ASTM D-1940	< 90%
Tensile Strength ASTM D-1623	42 psi
R-value at 1 inch ASTM C-518	6.5 (90 day aged)
Moisture Vapor ASTM E-96	1.0 perm @ 1 in.
Air Permeance ASTM E-96	0.75 perm @ 2 in. 0.001 cfm/ft² @1 in.
Dimensional Stability ASTM D-2126	< 12%
Compressive Strength ASTM D-1621	25 psi
Flammability ASTM E-84 at 4 inches	Flame Spread < 25 Smoke Dev. < 450

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.

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APPLICATION INFORMATION

STORAGE AND USE OF CHEMICALS

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 1-2 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

Caution, contents may be under pressure. Loosen the small bung first and allow any pressure to release prior to removing. B-component may froth at elevated temperatures. 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

The mix ratio is 1 to 1 by volume. The pre- heater and hose temperature should be set at 105-135˚F,+/- 5˚F.

APPLICATION GUIDELINES

QuadFoam® 2.0 is suitable for application to most construction materials including wood, masonry, concrete, and metal. All surfaces to be sprayed with foam should be clean, dry; and free of oil, greases, dew and or frost. Application temperature range of 45-120˚F. Application Temperatures below 40˚F may require winter or cold weather foam grades. Do not exceed 4 inches application thickness for closed cell foam for each layer. Allow at least twenty minutes between each pass to allow for cooling. Multiple layers can be applied to reach the desired thickness and R-value.

As with all Spray Polyurethane Foam systems, proper application techniques must be followed. 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.

Foam insulation is combustible. Heat sources such as cutting torches, space heaters and welders must not be used in close proximity to any foam.

FINISHED FOAM PROTECTION

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

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. All OSHA, NIOSH and other regulations (as applicable) must be followed. See our website and MSDS for more information.

BUILDING CODES

Building codes 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 for details.

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Ignition Barrier not required in accordance to ICC-ES AC 377 Appendix X June 2011; 15 Minute Thermal Barrier of 14 dry mills of DC 315 Coating required in accordance to ICC-ES AC 377 Appendix X June 2011.

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The information herein is to assist customers in determining whether our products are suitable for their applications. The 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 or fitness for a particular purpose. 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.

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