



**POLYCOAT
PRODUCTS**
A Division of American Polymers Corp.

THEMECOAT® 3821-FR
*Two Component Modified
Polyurea Protective Coating
Technical Data Sheet*

DESCRIPTION

Themecoat® 3821-FR is a two component, 1:1 mix, fast cure 100% solids modified aromatic polyurea/polyurethane elastomeric system. It is designed, as a spray in mold elastomer for producing various flexible texture skins, as a spray in the mold or post finishing for protecting flexible foam systems and as a tough protective membrane for waterproofing various surfaces. The product must be applied with heated plural component spray equipment.

FEATURES

- ❖ Seamless
- ❖ Tough and Elastomeric
- ❖ Chemical Resistant
- ❖ Low Temperature Flexibility
- ❖ Abrasion and Impact Resistant
- ❖ High Build
- ❖ Quick Drying

TYPICAL USES

- ❖ Encapsulation of Fiberglass Bodies and Polystyrene Foams
- ❖ Decorations
- ❖ Tree Barks
- ❖ Architectural Shapes

COLOR

Neutral or Black. Custom colors are available upon request. Additional charges may apply.

PACKAGING

100 gallon kit: Side-A 50 gallons and Side-B 50 gallons.

COVERAGE

Themecoat® 3821-FR should be applied in thin passes to achieve desired thickness. Theoretical coverage for 1 mil thickness is one gallon per 1600 sq. ft..

APPLICATION

Themecoat® 3821-FR should be applied using a 1:1 plural component equipment capable of developing a minimum of 2000 psi (13.8 MPa) and heating the individual component to **170°F (77°C)** using an impingement gun.

Both Themecoat® 3821-FR Side-A and Side-B materials should be continuously agitated before and during application. Agitate at least 1 hour prior to application using heavy duty drum agitator.

Hose temperature should be maintained at **160-170°F (72-77°C)**. The Themecoat® 3821-FR material should be preheated to **75-80°F (24-27°C)**.

Themecoat® 3821-FR should be sprayed in multidirectional passes for a proper uniform thickness.

TECHNICAL DATA

Mix Ratio by Volume	1A : 1B
Pot Life	2-5 seconds
Tack Free Time	10-30 seconds
Recoat Time	0-12 hours
Viscosity at 150-160°F (66.5-71°C), Brookfield:	
Part-A	250 ± 50 cps
Part-B	400 ± 50 cps
Density (Side A & B Combined)	10.02 lbs/gal
Flash Point	>200°F
	>93.3°C
Hardness, ASTM D-2240	48 ± 5 D
Tensile Strength, ASTM 412-C	1200 ± 200 psi
	8.3 ± 1.4 MPa
Elongation, ASTM 412-C	100% ± 20%
Tear, ASTM 624-C	400 ± 30 pli
Service Temperature	-20°F to 250°F
	-29°C to 121°C

(Results based on lab drawn film)

SURFACE PREPARATION

Remove all contaminant, oil and grease from substrate.

STORAGE

Themecoat® 3821-FR has a shelf life of six (6) months from date of manufacture in original, factory sealed containers.

Part-A and Part-B drums must be stored above 60°F (15°C).

Avoid freezing temperatures.

Store drums on wooden pallets to avoid direct contact with the ground.

If stored for a long period of time, rotate Side-A and Side-B drums regularly.

LIMITATIONS

Do not open until ready to use.

Both Side-A and Side-B containers must be fitted with a desiccant device during use.

WARNING

This product contains Isocyanate and Curative Material.

Please read all information in the general guidelines, product data sheets, guide specifications and material safety data sheets (MSDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local Polycoat Products representative or visit our website for current technical data and instructions.

LIMITED WARRANTY

Polycoat Products warrants its products to be free of manufacturing defects and that they will meet Polycoat Products current published physical properties. Polycoat Products warrants that its products, when properly installed by a state licensed waterproofing contractor according to Polycoat Products guide specifications and product data sheets over a sound, properly prepared substrate, will not allow water migration for a period of one (1) year. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. There are no other warranties by Polycoat Products of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Polycoat Products shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Polycoat Products shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Polycoat Products reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

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