

DESCRIPTION

FULL METAL JACKET™ PLUS is an economical state-of-the-art, pure polyurea thermoplastic elastomer. It is designed for processing through medium pressure, heated, plural proportioning equipment. FULL METAL JACKET™ PLUS provides a resilient, tough, abrasion resistant monolithic membrane. This product is ideal as a protective liner for pick-up truck beds, truck trailers, and similar applications.

FEATURES

- 100% solids, no solvents, and zero VOCs.
- Fast-set: handle in one minute or less.
- It can be sprayed in temperatures as low as 40°F (4°C).
- High dry temperature stability to 250°F (121°C) with intermittent temperatures to 300°F (148°C).
- Fast gel time allows high build on overhead and vertical surfaces.

RECOMMENDED USES

- Bed liners for pickups, trailers, etc.
- Abrasion resistant coatings for dump trucks.
- Automotive undercoating material.
- Theatrical and theme EPS props protection.
- Encapsulation of floatation foams.
- Temporary building repair.
- Rust encapsulation on barges and tanks.
- Sound deadening material.
- Low cost rigid mold making material.
- Non-potable water containment applications.
- FRP alternative for structural molded parts.
- Horse trailer or animal transportation walls and floors.

COLORS

FULL METAL JACKET™ PLUS is available in SPI high pigment Black). Custom colors available upon request. Note: FULL METAL JACKET™ PLUS is an aromatic polyurea; therefore, as with all aromatic, color change, and superficial oxidation will occur. Aliphatic urethane and other suitable topcoats can be used where long-term color stability and increased longevity in full sun exposure are of critical importance.

PACKAGING

This product sold in standard 110 gallon drum and 550 gallon tote sets. Available in other container sizes, contact sales representative for further information. Non-standard containers may require a longer lead time.

DRY PROPERTIES*

Tensile Strength ASTM D638	± 3,200 psi (22 mpa)
Elongation ASTM D638	± 270%
Hardness (Shore A) ASTM D2240	97 ± 5
Hardness (Shore D) ASTM D2240-81	65 ± 5
100% Modulus ASTM D412	1,700 psi (12 mpa) ± 5%
300 % Modulus ASTM D412	2,800 psi (19 mpa) ± 5%
Service Temperature	-60° - +250°F (-50° - +121°C)

*All dry film properties are approximate since processing parameters, ad-mixture types, and quantities will change physical properties of the cured elastomer. All samples for above tests were force cured or aged for more than three weeks. It is recommended that the user perform their own independent testing.

CURING SCHEDULE

Gel	± 4 sec
Tack Free	± 8 sec
Post Cure**	12 hour
Recoat	0 - 12 hours

**Complete polymerization to achieve final strength can take up to several days or weeks depending on a variety of conditions. The samples for tests were sprayed with Graco HXP3 @ 2000 psi dynamic (14 mpa) Primaries/Hose Heat 170°F (76°C) MP Fusion gun

WET PROPERTIES

Solids by Volume	100%
Solids by Weight	100%
Volatile Organic Compounds	0 lbs./gal (0 g/l)
Theoretical Coverage DFT	100 sq. ft. @ 16 mils/gal
Weight per gallon (approx.)	8.9 lbs. (4.05 kg)
Number of coats	1 - 2
Mix Ratio (by volume)	1 "A" : 1 "B"
Viscosity (cps)	A: 250 ± 50 cps B: 350 ± 25 cps
Shelf Life Unopened Containers @ 60 - 90°F (15 - 32°C)	Six Months

Minimum material/container temperature for application is 70°F (21°C).

MIXING & THINNING

Thoroughly agitate the "B" components of this product prior to application. Use a SPI folding blade mixer, or equivalent equipment approved by SPI. Install mixer through the extra 2" bung hole provided on all "B" drums. Care must be taken not to cross contaminate the individual components with the mixing equipment. Thinning is not required. Using any thinner may adversely affect product performance.

GENERAL APPLICATION INSTRUCTIONS

Apply FULL METAL JACKET™ PLUS only to clean, dry, sound surfaces free of loose particles or other foreign matter. A primer may be required depending on type and/or condition of the substrate. Consult technical service personnel for specific primer recommendations and substrate preparation procedures. FULL METAL JACKET™ PLUS can be sprayed over a broad range of ambient and substrate temperatures. Contact technical service personnel for specific recommendations and pricing. As well as the availability of spray and auxiliary equipment. It is recommended that FULL METAL JACKET™ PLUS be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness. The polyol "B" component must be thoroughly power mixed each day, prior to use. Contact a SPI technician regarding proper mixing equipment. Follow the instructions attached to "A" and "B" containers.

RECOMMENDED EQUIPMENT SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 2000 psi (13.9 mpa) dynamic pressure with heating capabilities to 175°F (79°C) will adequately spray FULL METAL JACKET™ PLUS. These include Graco 20/35, 20/35 Pro, H-3500, HV 20/35, Reactor E-XP1, E-XP2, H-XP2, H-XP3, and SPI Gusmer 25/25. Gun models include Graco Fusion MP, Gap Pro, GX7-DI, and GX-8 Pro gun
- Pre-heater temperature should be at 160-170°F (71-

76°C).

- Hose temperature should be at 160-170°F (71-76°C). A hose thermometer inserted under the insulation near the gun should read a minimum of 145-155°F (63-68°C).
- Physical properties will be enhanced when sprayed at higher pressure (3000 psi or more), utilizing an impingement mix gun such as MP Fusion or GX7-DI gun.

LIMITATIONS

This product is for professional use only.

This product must be stored at temperatures between 60–90F (15–32C).

Apply product when surface and air temperatures are above 40°F (5°C) and the surface temperature is at least 5°F (3°C) above dew point and rising.

Note: The material supplied is a two component system (Component "A"/Component "B", which is used to formulate this product. The quality and characteristics of the finished polymer is determined by the mixture and application of the two components.

Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected. CO₂ pressure can develop. Do not attempt to use contaminated material.

GENERAL SAFETY, TOXICITY, & HEALTH

CLEAN UP: DPM, NMP, and Polyclean

Safety Data Sheets are available for this coating material. Any individual who may come in contact with these products should read and understand the S.D.S. CHEMTREC EMERGENCY NUMBER 1-800-424-9300

WARNING: Contact with skin or inhalation of vapors may cause an allergic reaction. Avoid eye contact with liquid or spray mist. Hypersensitive persons should wear protective clothes, gloves and use protective cream on face, hands and other exposed areas.

CONTAMINATION: Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected, carbon dioxide created pressure can develop. Do not attempt to use contaminated material.

EYE PROTECTION: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield.

SKIN PROTECTION: Personal protective equipment for the body should be selected based on the task being performed; the risks involved, and should be approved by an industrial hygiene specialist before handling this product. Chemical resistant gloves are recommended. Cover as much of the

exposed skin area as possible with appropriate clothing.

RESPIRATORY PROTECTION: Harmful if inhaled and may cause allergy or asthma symptoms. Use a respirator approved for isocyanates and organic vapors. If you are not sure, or not able to monitor levels, or if you are spraying in an enclosed/indoor area, use MSHA/NIOSH approved supplied air respirator. Consider the application and environmental concentrations when deciding if additional protective measures are necessary.

INGESTION: Do not take internally. It is believed that ingestion of polymeric isocyanates would not be fatal to humans, but may cause inflammation of mouth and stomach tissue.

WARRANTY & DISCLAIMER

Specialty Products, Inc. has no role in the manufacture of the finished polymer other than to supply its two components. It is vital that the person applying this product understands the product, and is fully trained and certified in the use of plural-component equipment. Specialty Products, Inc., an Alaska corporation, warrants only that the two components of this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product are dependent upon the proper mixture and application of the components by the applicator. There are no warranties that extend beyond the description on the face of this instrument. Failure to apply the product within the parameters stated on this document shall void the warranty. **SPECIALTY PRODUCTS, INC. MAKES NO WARRANTY OF MERCHANTABILITY OF THE PRODUCT OR OF FITNESS OF THE PRODUCT FOR ANY PARTICULAR PURPOSE.** Specialty Products, Inc. makes no warranty as to the quality of any product modified, supplemented, tinted, or altered in any way after it leaves the manufacturing plant. Specialty Products, Inc. does not warrant that this product is suitable for use as a liner for potable water containers. Use of this product in a potable water container could be hazardous to health if it is improperly processed or applied. The liability of Specialty Products, Inc. for any nonconformity of the product to its technical specifications shall be limited to replacement of the product. The sole exclusive remedy of buyer, which is to have Specialty Products, Inc. replace any nonconforming product at no cost to buyer, is conditioned upon buyer notifying Specialty Products, Inc. or its distributor in writing of such defect within thirty days of the discovery of such defect. Specialty Products, Inc. shall not be liable for any direct, incidental, or consequential damages resulting from any breach of warranty. The data presented herein is intended for professional applicators or those persons who purchase or utilize this product in the normal course of their business. The potential user must perform any pertinent tests in order to determine the product's performance and suitability in the intended application, since final determination of fitness of the product for any particular use is the responsibility of the buyer. The aforementioned data on this product is to be used as a guide and is subject to

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