

DESCRIPTION

ELASTAFLEX™ HP is a unique blend of aliphatic and aromatic polymer chemistry with greater color/gloss retention and is more UV resistant than aromatic polyureas*. ELASTAFLEX™ HP is a very economical 100% pure polyurea which exhibits very high tensile strength and elongation. ELASTAFLEX™ HP was stretched to twice the samples original length at 30 times per minute, more than 530,000 times before breaking.

FEATURES

- Manufactured with high pigment loading for enhanced color stability and gloss retention.
- Extended gel time for better flow-out providing a smooth, more uniform finish and better substrate penetration.
- Forms a monolithic membrane that can be handled and walked on within minutes from the time it's sprayed.
- ELASTAFLEX™ HP liner is very supple with minimal shrinkage.
- Compliant with FDA/USDA for incidental food contact.
- ASTM E84-97a and complies with NFPA and UBC Class 1 fire rating.
- 100% solids, no solvents, and zero VOCs.

RECOMMENDED USES

- Liner for concrete tanks, ponds, lagoons, reservoirs, dikes, tunnels, barges, etc.
- Roof coating used over metal, polyurethane foam, concrete, and certain single ply membranes.
- Coating for steel or other substrates exposed to corrosion.
- Encapsulation for EPS or other types of flotation materials.
- Replace or repair failed existing sheet membrane liners, steel tanks, silos, and pipes.
- In between slab waterproofing.
- Encapsulation of asbestos, lead paint, or other dry hazardous materials (Consult SPI).
- Earthen containment used with geotextile membranes.

COLORS

ELASTAFLEX™ HP is available in White, Manila, and Light Grey as well as our standard colors Sand, Medium Grey, and Black. Custom colors available upon request. Aluminized ELASTAFLEX™ HP is also available under the name ElastaFLEX ARC™. Note: ELASTAFLEX™ HP in continuous full-light exposure, white or very light colors will change over a period of time. Aliphatic urethane and other suitable topcoats can be used where long-term aesthetics are of critical importance.

TYPICAL PHYSICAL PROPERTIES*

Exposure Temperature**	-60° - 200°F (-50° - 93°C)
60 mils (1.5 mm)* 3,000 psi (20.85 MPa) dynamic pressure at the gun. Graco MP Fusion gun with 29/29 mixing module and .040 ceramtip.	
Tensile Strength ASTM D638	± 3,800 psi (26 MPa)
Elongation ASTM D638	± 700%
Hardness (Shore A) ASTM D2240-81	80 ± 3
Hardness (Shore D) ASTM D2240-81	29 ± 3
100% Modulus ASTM D412	650 psi (4 MPa) ± 10
300% Modulus ASTM D412	1,100 psi (8 MPa) ± 20
Tear Resistance ASTM D624	370 PLi (52.53 KN/m) ± 50
60 mils (1.5 mm)* 1,600 psi (11.12 MPa) dynamic pressure at the gun. Graco AP Fusion gun with 29/29 mixing module.	
Tensile Strength ASTM D638	± 2,800 psi (19 MPa)
Elongation ASTM D638	± 700%
Hardness (Shore A) ASTM D2240-81	80 ± 3
Hardness (Shore D) ASTM D2240-81	29 ± 3

CURING SCHEDULE

Gel	± 16 sec
Tack Free	± 33 sec
Post Cure***	24 hour
Recoat	0 - 12 hours

* All cured film properties are approximate since processing parameters, ad-mixture types, and quantities change physical properties of the cured elastomer. Elevated temperatures will accelerate the curing process and shorten the re-coat window.

** Test performed in a dry, static environment.

*** Complete polymerization to achieve final strength can take up to several days or weeks, depending on a variety of conditions or product type. All samples for above tests were force cured 48 hours or aged for more than three weeks. **It is recommended that the user perform their own independent testing.** Samples tested were neutral (untinted).

The samples for tests on this technical data sheet were sprayed with Graco HXP3. Proportioning machine primary heater and hose heat - 170°F (77°C).

TEST INFORMATION

FLAME SPREAD ASTM E108-07a	Class A Passed	
ABRASION RESISTANCE ASTM D4060 1000 g - 1000 cycles	H-18 wheel	110 mg loss
WEATHERABILITY (black) 3000 hours (QUV)	no evidence of failure	
MANDREL BEND ASTM D522-13	1/4" at -60°F Passed	

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.)	8.7 lbs. (3.94 kg)
Number of coats	1 - 2
Mix Ratio (by volume)	1 "A" : 1 "B"
Viscosity	A: 525 ± 50 mPa.s B: 375 ± 50 mPa.s
Shelf Life Unopened Containers @ 60 - 90°F (15 - 32°C)	12 Months

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

PACKAGING

This product is 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.

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 air specific 2" bung hole provided on all "B" drums. Care must be taken not to cross contaminate the individual components with the mixing equipment; for best mixing results, supply the SPI mixer with 25 cfm of air at 100 psi. Thinning is not required. Using any thinner may adversely affect product performance.

GENERAL APPLICATION INSTRUCTIONS

Apply ELASTAFLEX™ HP only to clean, dry, sound, surfaces free of loose particles or other foreign matter. ELASTAFLEX™ HP can be sprayed over a broad range of ambient and substrate temperatures.

It is recommended that ELASTAFLEX™ HP be sprayed in multi-directional (north/south - east/west) passes to ensure

uniform thickness.

Contact SPI technical service personnel for specific surface preparation for your application.

COMMON SUBSTRATES:

STEEL: 4-5 mil anchor profile is best for maximum adhesion and varies per application and conditions; adhere to proper SSPC standards.

WOOD: Apply polyurea onto a clean, dry, and sanded surface; free from burrs, splinters and loose debris. (It is recommended to prime wood and other porous surfaces before application of heated, fast-set polyureas to reduce pin holing).

CONCRETE: Prepare concrete in accordance with SSPC/NACE Standards and SPI Concrete Prep Guide.

NOTE: It is recommended that existing surfaces be power washed with 2500—3500 psi water pressure to enhance adhesion of ELASTAFLEX™ HP. If there is a possibility of surface contamination, scrub with a solution of 1/4 tsp Dawn detergent and 1 tbsp of vinegar, per 1 gallon of warm water. Follow with a thorough water rinse. If there is oxidation on the surface of the existing substrate; it must be removed prior to application of ELASTAFLEX™ HP. Removal of oxidation can be done via mechanical methods to insure the ELASTAFLEX™ HP has a sound substrate to adhere to. The use of SPI Prep Wipe™ solution will tack up the existing polyurea coating and help promote bonding of the ELASTAFLEX™ HP.

On all above listed substrates and others, please contact SPI Sales or Technical Support for more information specific to your application, including industry standards such as SSPC and NACE. **Adhesion tests are always recommended prior to application.**

PROCESSING EQUIPMENT & SETTINGS

MACHINES:

GRACO (Gusmer, Glass-craft)	<ul style="list-style-type: none"> • A-25* • A-XP1 • E-10 HP • E-20* • E-30* • E-XP1 • E-XP2 • H-20/35 Pro • H-25* • H3500 • H-40* 	<ul style="list-style-type: none"> • H-50* • HV-20/35 • H-XP2 • H-XP3 • Reactor2 E-XP2 • Reactor2 H-XP2 • Reactor2 H-XP3 • Reactor2 E-30* • Reactor2 H-30* • Reactor2 H-40* • Reactor2 H-50*
PMC	<ul style="list-style-type: none"> • GH-25* • GH-40* • PA-25* • PAX-25 • PH-2* • PH-25* 	<ul style="list-style-type: none"> • PH-40* • PHX-2 • PHX-25 • PHX-40 • PMCA-20
SPRAY FOAM EQUIP & MFG	<ul style="list-style-type: none"> • 5/12K* • 6/6K* 	<ul style="list-style-type: none"> • 6/12K
*2,000 psi machines		

GUNS:		
GRACO (Gusmer, Glass-craft)	<ul style="list-style-type: none"> • Fusion AP • Fusion MP • GAP Pro • GX7-DI • GX-8 Pro 	<ul style="list-style-type: none"> • GX7-400 • P2 • P2 Elite • P2 Elite "C" • D7
PMC	<ul style="list-style-type: none"> • AP-2 	
SPRAY FOAM EQUIP & MFG	<ul style="list-style-type: none"> • Boss 	

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 1700 psi (11.72 MPa) dynamic pressure at the gun with heating capabilities to 175°F (79°C) will adequately spray ElastaFLEX™ HP.
- Pre-heater temperature 160-170°F (71-77°C).
- Machines capable of producing a higher dynamic psi may be required depending on the service environment the ELASTAFLEX™ HP will be exposed to. Consult with SPI technical service personnel for additional information.
- Proportioning machine primary heater temperature 160-170°F (71-77°C).
- Hose temperature 160-170°F (71-77°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.
- Do not use mixing chambers with output greater than 1.5 gallons per minute. Consult SPI technical service personnel for additional information.

If you own a machine that is not listed above please contact your SPI representative for information and instructions.

LIMITATIONS

ELASTAFLEX™ HP is for professional use only. User must be proficient in the application of ELASTAFLEX™ HP and the use of the high pressure heated plural component equipment used to apply it.

ELASTAFLEX™ HP must be stored at temperatures between 60–90°F (15–32°C).

Liquid temperature in containers/drums during application 70–100°F (21–38°C).

Apply ELASTAFLEX™ HP 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.

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

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

Undried air exposed to liquid components will reduce physical properties of the cured coating.

Note: The material supplied is two components (Component "A"/Component "B") used to formulate this product. This quality and characteristics of the finished polymer is

determined by the mixture and application of the two components.

For the most up to date technical data sheet and/or safety data sheet visit our website at www.specialty-products.com.

GENERAL SAFETY, TOXICITY, & HEALTH

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 INT'L 1-703-527-3887.**

WARNING: Contact with skin or inhalation of vapors may cause an allergic reaction. Causes eye damage/irritation. 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.

CLEAN UP: Use DPM, or NMP.

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

EYE PROTECTION: Safety eye wear 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 complying with applicable health and safety standards shall be worn when handling this product. Cover as much of the exposed skin area as possible with appropriate clothing. Refer to safety data sheet (SDS).

RESPIRATORY PROTECTION: Harmful if inhaled and may cause allergy or asthma symptoms. Ensure adequate ventilation. If the respirator is the sole means of protection, use a full-face supplied respirator. Use respirators and components tested and approved under appropriate government standards such as OSHA 29CFR 1910.134, NIOSH (US), or CEN (EU). 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.



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WARRANTY & DISCLAIMER

VF Specialty Products 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. VF Specialty Products 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. VF SPECIALTY PRODUCTS MAKES NO WARRANTY OF MERCHANTABILITY OF THE PRODUCT OR OF FITNESS OF THE PRODUCT FOR ANY PARTICULAR PURPOSE. VF Specialty Products makes no warranty as to the quality of any product modified, supplemented, tinted, or altered in any way after it leaves the manufacturing plant. VF Specialty Products 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 VF Specialty Products 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 VF Specialty Products replace any nonconforming product at no cost to buyer, is conditioned upon buyer notifying VF Specialty Products or its distributor in writing of such defect within thirty days of the discovery of such defect. VF Specialty Products 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 change without notice. The information herein is believed to be reliable, but unknown risks may be present. VF Specialty Products makes no warranties, expressed or implied, including patent warranties or warranties of merchantability or fitness of use, with respect to products or information set forth herein. Nothing contained herein shall constitute permission or recommendation to practice any invention covered by a patent without a license from the owner of the patent. Accordingly, the buyer assumes all risks whatsoever as to the use of these materials and buyer's exclusive remedy as to any breach of warranty, negligence, or other claim shall be limited to the purchase price of the materials. Failure to adhere to any recommended procedures shall relieve VF Specialty Products of all liability with respect to the materials and the use thereof.

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