TECHNICAL DATA SHEET

HANDIFOAM® CHANNEL FILL REFILL SYSTEM

LOW PRESSURE POLYURETHANE FOAM INFORMATION

Description	Low pressure, medium density, two-component pour-in-place (PIP) polyurethane foam system
Applications	Designed to fill cavities, hollow tubing, framing, channels, or casings
Preparation for use	Cavity must have minimal obstructions and have no existing insulation. Before using, determine the structural stability of the cavity walls, certain applications may require clamping or bracing to provide uniform support against foaming pressure.
Use	Warm/Cool Cylinders to 75-85°F (24-29°C). Follow instructions for set-up found in the operating instructions.
PPE	 Recommend using in a well-ventilated area with certified respiratory protection or a powered air purifying respirator (PAPR). Wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Read all instructions and SDS prior to use of any product.
Note	FOR PROFESSIONAL USE ONLY. Always check the local building code before use. Cured foam is inert and non-toxic.
Product Storage	See Temperature Chart on page 2
Temperature	See Temperature Chart on page 2
Return Instructions	Refer to SDS (Section 13) for instructions. The cylinders are shipped back to ICP Building Solutions Group, cleaned, refilled and redistributed. Return instructions can be found in the collar or on the side of the A-cylinder.
Shelf-life	6 Months System 8, 3 Months Systems 60 & 100.
Compatibility	Cured low pressure polyurethane foam is chemically inert and non-reactive in approved applications, and will not harm electrical wire insulations, Romex®, rubber, PVC, polyethylene (i.e. PEX) or other plastics. The product is not resistant to UV rays, if left exposed the product should be coated or painted.

TECHNICAL DATA	STANDARD	RESULTS
Density Core	ASTM D1622	2.0 lbs/ft^3 (33.7 kg/m^3)
K-factor- Aged 90 days 140°F (60°C)	ASTM C518	.145 BTU·inch/ft^2·h·°F
R-Value- Aged 90 days 140°F (60°C)	ASTM C518	6.9 at 1 inch thickness
Compressive Strength	ASTM D1621	23 lbf/in^2 (173 kPa)
Fungi Resistance	ASTM G21	No Growth
Dimensional Stability	ASTM D2126	+/- 5%
Gel Time		45-60 seconds
Tack-Free/Expansion Time	Tack-Free/Expansion Time	60-80 seconds
Closed-Cell Content	ASTM D2856	>90%
Cuttable		60-90 minutes
Perm Rating-Method A	ASTM E96	.71 perm @ 2 inch thickness
Fire Rating- Tested at 6" thickness With 3/16" steel tubes/channels.	ASTM E84	Flame Spread Index 0 Smoke Developed 85
Title 33	33 CFR 183.114	Meets the requirements for flotation

APPROVALS/STANDARDS/CLASSIFICATIONS

ASTM E84	Testing is specific for application. Testing was conducted at foam thickness of 6 inches and surrounding metal channel was 3/16" thick.

HIGH FLOW technology®

TEMPERATURE

Chemical Storage Temperature	Optimum 75-85°F (24-29°C) but not <60°F (16°C) or >90°F (32°C)
Outside Application Temperature	40-100°F (4-38°C)
Process Core Chemical Temperature	75-85°F (24-29°C) Warm/Cool tanks for a minimum of 1 day prior to use
Surface Temperature (Substrate)	40-100°F (4-38°C)
Cured Foam	-200°F to +240°F (-129°C to +116°C)

YIELD[1]

	Weight[1] (Per tank)	**Density 2.0**	**Density 2.25**	**Density 2.5**	**Density 2.75**	**Empty Tank Weight**
System 8 P77005	96.5 lbs (44 kg)	73.5 ft^3 (2.08 m^3)	65.3 ft^3 (1.85 m^3)	58.8 ft^3 (1.66 m^3)	53.5 ft^3 (1.51 m^3)	23 lbs (10.4 kg)
System 60 P77470	725 lbs (329 kg)	520 ft^3 (14.7 m^3)	462.2 ft^3 (13.1 m^3)	416 ft^3 (11.8 m^3)	378.2 ft^3 (10.7 m^3)	205 lbs (93 kg)
System 120 P77870	1278 lbs (580 kg)	950 ft^3 (26.9 m^3)	844.4 ft^3 (23.9 m^3)	760 ft^3 (21.5 m^3)	690.9 ft^3 (19.6 m^3)	328 lbs (149 kg)
		Density 3.0	**Density 3.25**	**Density 3.5**	**Density 3.75**	
System 8 P77005	96.5 lbs (43.8 kg)	49 ft^3 (1.39 m^3)	45.2 ft^3 (1.26 m^3)	42 ft^3 (1.19 m^3)	39.2 ft^3 (1.11 m^3)	23 lbs 10.4 kg)
System 60 P77470	725 lbs (329 kg)	346.7 ft^3 (9.8 m^3)	320 ft^3 (9.1 m^3)	297.1 ft^3 (8.4 m^3)	277.3 ft^3 (7.8 m^3)	205 lbs (93 kg)
System 120 P77870	1278 lbs (580 kg)	633.3 ft^3 (17.9 m^3)	584.6 ft^3 (16.5 m^3)	542.8 ft^3 (15.4 m^3)	506.7 ft^3 (14.3 m^3)	328 lbs (149 kg)

[1] Yield is based on density. We state our core density when describing the foam. A typical product application is to inject the foam into a mold, channel, or pipe, etc. Injection of foam into a cavity may result in higher in-place densities due to packing effects. These higher densities may result in lower yields.

Always read all operating, application and safety instructions before using any products. Use in conformance with all local, state and federal regulations and safety requirements. Failure to strictly adhere to any recommended procedures and reasonable safety precautions shall release ICP Building Solutions Group of all liability with respect to the materials or the use thereof. For additional information and location of your nearest distributor, call ICP Building Solutions Group 1 330.753.4585 or 1 800.321.5585.

NOTE: Physical properties shown are typical and are to serve only as a guide for engineering design. Results are obtained from specimens under ideal laboratory conditions and may vary upon use, temperature and ambient conditions. Right to change physical properties as a result of technical progress is reserved. Yields shown are optimum and will vary slightly depending on ambient conditions and application. This information supersedes all previously published data. The Customer is responsible for deciding whether products and associated TDS information are appropriate for customer's use.

WARNING:

ICP low pressure one-component polyurethane foam sealants and adhesives (OCF), low pressure spray polyurethane foams and foam adhesives (SPF), and low pressure pour-in-place polyurethane foams (PIP) are composed of diisocyanate, hydrofluorocarbon, hydrocarbon or hydrofluoroolefin blowing agent, and a polyol blend. The urethane foam produced from these ingredients will support combustion and may present a fire hazard if exposed to a fire or excessive heat about 240°F (116°C). Read all instructions, ICP Product Stewardship Guidelines and SDS (Section 8) prior to use of any product. ICP polyurethane products are for professional use only.

Before using any OCF, SPF or PIP product, read the SDS and instructions carefully before use (www.icpadhesives.com). **OCF Products:** wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Recommend using in a well-ventilated area. Avoid breathing vapors. **SPF/PIP Products:** wear protective glasses with side shields or goggles unless using a full-face respirator, nitrile gloves, and clothing that protects against dermal exposure. Recommend dispensing product in a well-ventilated area and with certified respiratory protection or a powered air purifying respirator (PAPR); however, well ventilated exterior applications may not need respiratory protection. It is the responsibility of the employer to complete a PPE evaluation and/or exposure assessment to determine if respiratory protection is required. Personal Protective Equipment can be purchased through ICP Building Solutions Group by ordering the Polyset® Contractor Safety Kit (F65251). The Contractor Safety Kit includes: nitrile gloves, contractor safety glasses, and a size Medium NIOSH-approved negative pressure half mask respirator.

Refer to each product's TDS for specifications, testing results, and other attributes. The customer is ultimately responsible for deciding whether products and associated TDS information are appropriate for customer's use. For professional use only. Building practices unrelated to materials can lead to potential mold issues. Material suppliers cannot provide assurance that mold will not develop in any specific system. Product uses a non-flammable compressed gas. Keep away from heat. Smoking and open flames, including hot work, should be prohibited in the vicinity of a foaming operation. Avoid contact with skin and eyes. May cause sensitization by inhalation and/or direct skin contact. Persons previously sensitized to Isocyanates may develop a cross-sensitization reaction to other isocyanates. Avoid prolonged or repeated breathing of vapor. Use in conformance with all local, state and federal regulations and safety requirements. Failure to strictly adhere to any recommended procedures and reasonable safety precautions shall release ICP Building Solutions Group. of all liability with respect to the materials or the use thereof. For additional information and location of your nearest distributor, call ICP Building Solutions Group 330.753.4585.

LIMITED WARRANTY and LIMITATION OF DAMAGES: ICP Building Solutions Group warrants only that the product shall meet ICP Building Solutions Group's specifications for the product when shipped by ICP Building Solutions Group. NO OTHER EXPRESSED OR IMPLIED WARRANTIES APPLY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OUTSIDE THE U.S. AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. Buyer and users assume all risks of use, handling and storage of the product. Failure to strictly adhere to any recommended procedures shall release ICP Building Solutions Group from all liability. The user of the product is responsible to determine suitability of the product for the particular use. The exclusive remedy as to any breach of warranty, negligence or other claim is limited to the replacement of the product. Liability for any indirect, incidental or consequential damage or loss is specifically excluded.

Cylinder Warranty Statement

ICP Building Solutions Group warrants that the cylinder is fit to dispense ICP Building Solutions Group foam products that are loaded into the cylinder by ICP Building Solutions Group. The sole remedy for any breach of warranty is replacement of the cylinder. NO OTHER EXPRESSED OR IMPLIED WARRANTIES APPLY AND ANY IMPLIED WARRANTIES OF MECHANTABILITY, NON-INFRINGEMENT OUTSIDE THE U.S. AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. The terms, conditions and warranties applicable to ICP Building Solutions Group's products dispensed from the cylinder are covered in other ICP Building Solutions Group documentation relating to that purchase. Liability for any indirect, incidental or consequential damage or loss specifically excluded. **Buyer must not make any changes to the cylinder or the cylinder components, including plumbing**. Any such change may produce dangerous results and cause damage or injury, including a loss of product stored in the cylinder. ICP Building Solutions Group is not responsible for damages or injuries resulting from any such changes. Those damages or injuries are Buyer's responsibility, and ICP Building Solutions Group may charge Buyer for the costs of any resulting cylinder damage or repairs. ICP Building Solutions Group also reserves the right to restrict future sales if the Buyer does not address safety concerns such as modified or missing plumbing, pressure relief valve activated or excessive cylinder pressure.

Magnum Heated Hose Warranty Statement

See the hose manufacturer's warranty regarding any warranty applicable to the hose. ICP Building Solutions Group makes no warranty regarding the hose and it is sold "AS IS" and ALL EXPRESSED AND IMPLED WARRANTIES ARE EXPRESSLY DISCLAIMED. Liability for any indirect, incidental or consequential damage or loss is specifically excluded.