

TECHNICAL DATA SHEET



Slow Rise (SR) Two-Component Froth

Handi-Foam® SR is a multiple purpose two-component polyurethane froth, that is designed within the international guidelines for protection of the ozone layer, and with respect to the Montreal Protocol, 1987, and other environmental guidelines, utilizing a non-flammable non-ozone depleting blowing agent to assist in the safety of the end user and the environment. The pre-pressurized, portable two-component froth foam systems are dispensed through the state-of-the-art Handi-Gun® two-component froth dispensing unit. The product designation "SR" stands for "Slow-Rise" to indicate the slower expanding and curing properties, compared to traditional "quick-cure" two-component froth products.

Application Area

Handi-Foam SR is specifically designed for filling cavities, molds, fixtures or holes where a slower curing and expanding polyurethane foam system is required. The foam can be dispensed into clean and dry voids of various size to insulate, fill, seal, deaden sound and reduce vibration.

Properties

The patented and user-friendly II-100 SR and II-200 SR packaging system provides many unique advantages, including:

- factory-attached dispensing hoses. No need to attach hoses prior to use.
- handle is secured to tanks. No more handle popping out of the box.
- No more tanks falling out of the box when the box gets wet.
- easy to open box for immediate use.
- hoses extend from top of tanks. More reach. More stability.

Handi-Foam Slow Rise two-component froth systems will expand upon chemical reaction of A component and B component to a final volume that is 3 to 5 times the dispensed volume, in typical applications, and may be as much as 8 times the dispensed volume in specific applications, depending on various factors such as cavity size, ambient conditions, etc. The foam will cure to a semi-rigid closed cell foam upon the chemical reaction of component A (polymeric isocyanate) with component B (a polyol blend containing certain additives).

Handi-Foam SR adheres to almost all building materials with the exception of surfaces such as polyethylene, Teflon®, silicone, oils and greases, mold release agents, and similar materials.

Optimal application temperature is 75°F (24°C); however, may be dispensed into colder or warmer substrates, with slight effects on the foam characteristics. See the Product Storage section for temperature information. Cured foam is resistant to heat and cold, -200°F (-129 to +93°C), and to aging, but not UV rays (i.e. sunlight) unless painted, covered or coated. Cured foam is also chemically inert and non-reactive in approved applications.

Handi-Foam SR systems require no outside mechanical or electrical power source and are available in various refillable and non-refillable sizes to meet specific job application requirements. When dispensed,

the foam will create a seamless, continuous seal to insulate and protect against dust, pests, air infiltration, etc.

Preparation For Use

Application area must be dry, firm, free of loose particles, dust, grease and mold release agents. Protect surfaces not to be foamed. For pouring or mold filling applications, clamping of the mold is generally required to provide uniform support against foaming pressure. Extent of this clamping should be determined based on application and desired results. Consult the Handi-Foam SR User Manual (A13356) for more application information.

Shake disposable kits well *before* using.

Application/Use

Slow-Rise foam should be filled into cavities in excess of the theoretical "free-rise" volume. This is important in order that the foam is "packed" to a higher in-place density, thereby achieving optimum physical properties and dimensional stability. A calculated in-place density of 2 lbs./ft.³ (32 kg/m.³) is recommended and shown for specification purposes.

After following instructions for set-up, kits are ready to use. Attach appropriate hose to A and B tanks if needed. Open tank valves as directed. Materials are dispensed through the hoses and mixed in the disposable nozzle. With a nozzle attached to the two-component froth dispensing unit, dispense foam by squeezing the trigger. To interrupt or stop the foaming process, release the trigger. Once foaming process has stopped, the dispensing unit must be reactivated within 30 seconds or a new nozzle must be installed. Fresh foam may be applied in several stages to reduce overfilling of void or damage to non-rigid, confined cavities.

Product Storage

Store in cool dry area. Do not expose to open flame or temperatures above 120°F (49°C). Excessive heat can cause premature aging of components resulting in a shorter shelf life. Handi-Foam SR is reusable by following product instructions. For optimum results of refill systems, chemical temperature must be between 75-85°F (24-29°C). During colder months it may take up to a week or more to warm the chemicals to optimum temperature. Construction of a temperature controlled "hot box" is recommended for all applications in order to store the refill systems at a consistent, controlled temperature prior to and during use. Cured foam is non-toxic. **KEEP OUT OF REACH OF CHILDREN.**



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Technical Data

	FREE-RISE DENSITY	IN-PLACE DENSITY
DENSITY ASTM D-1622	1.75 lb./ft. ³ (28 kg./m. ³)	2.0* lb./ft. ³ (32 kg./m. ³)
K-FACTOR (PER INCH) ASTM C-518		0.168 BTU/(ft.) (h) (°F) (.024w./m.k.)
TENSILE STRENGTH ASTM D-1623		
Parallel		42 psi (286 kPa)
Perpendicular		28 psi (191 kPa)
COMPRESSIVE STRENGTH, ASTM D-1621		
Parallel @ 10%		14 psi (95 kPa)
Perpendicular @ 10%		15 psi (101 kPa)
SHEAR STRENGTH ASTM C-273		
Parallel		21 psi (142 k Pa)
Perpendicular		19 psi (128 k Pa)
DIMENSIONAL STABILITY ASTM D-2126		
Heat Age (+ 158 °F/ 70°C; 28 days)		-4.5%
Humid Age (+158°F/ 70°C; 100% RH; 28 days)		-1.0%
Cold Age (-4°F/ -20°C)		-0.3%
CLOSED CELL CONTENT ASTM D-2856		92%
ELONGATION		
Parallel		3.4%
Perpendicular		3.9%
TACK-FREE / EXPANSION TIME		60-90 sec.
CUTTABLE		5-10 min
FIRE RATING DIN 4102-1		B2

Tank Specifications

	Systems 150 & 250	Systems 550 & 950
Capacity	27 gal. (102 L.)	120 gal. (454 L.)
Dimensions		
Height	54" (137 cm.)	61" (155 cm.)
Diameter	15" (38 cm.)	30" (76 cm.)
Base	20 x 20" (51 cm. x 51 cm.)	30" x 30" (76 cm. x 76 cm.)
Empty Weight	120 lbs (54 kg.)	360 lbs. (163 kg.)
Filled Weight*	Sys 150: 265 lbs. (120 kg.) Sys 250: 350 lbs. (159 kg.)	Sys 550: 860 lbs. (390 kg.) Sys 950: 1190 lbs. (540 kg.)

*Filled tank weights are approximate for estimation purposes only. Actual gross weight is formulation specific and may be slightly higher or lower.

Approvals / Standards

Handi-Foam SR® systems meet the Coast Guard specification requirements for flotation in Title 33 code of Federal Regulations, paragraph 183.114 and meet the requirements of DIN 4102-1 for a "B2" building material.

Dispensing unit is patented under U.S. patent number 6,345,776. Other foreign and domestic patents pending.

ODP (Ozone Depletion Potential): Contains non-ozone depleting, non-flammable HFC propellant.

Theoretical Yield*

NON-REFILLABLE	2.0 PCF IN-PLACE DENSITY
II-100 SR P10709	7.6 ft. ³ (.22 m. ³)
II-200 SR P10732	13 ft. ³ (.37 m. ³)
II-600 SR P10760	43.7 ft. ³ (1.24 m. ³)
REFILLABLE	
SYSTEM 150 SR P22045	128 ft. ³ (3.6 m. ³)
SYSTEM 250 SR P22245	213 ft. ³ (6.0 m. ³)
SYSTEM 550 SR P22445	458 ft. ³ (13.0 m. ³)
SYSTEM 950 SR P22645	787 ft. ³ (22.3 m. ³)

*Physical properties and yields are based on an in-place density of 2.0 lbs./ft.³ Actual yields may vary depending on in-place density, application, and ambient conditions. Consult technical information for recommended application procedures.

Important Note:

Use only in well ventilated areas or with certified respiratory protection. Wear impervious gloves, protective eyewear and suitable work clothing when using. Read all instructions and safety information (MSDS) prior to use of any product. The product contains no formaldehyde

Always read all operating, application and safety instructions before using any products from Fomo Products, Inc. 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 Fomo Products of all liability with respect to the materials or the use thereof. For additional information and location of your nearest distributor, call Fomo Products, Inc. +1 330.753.4585 or +1 800.321.5585, Outside Ohio.

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. This information supersedes all previously published data. Yields shown are based on theoretical calculations and will vary depending on ambient conditions and particular application. Read all product directions and safety information before use. Consult local building codes for specific requirements regarding the use of cellular plastics or urethane products in construction.

WARNINGS: Follow safety precautions and wear protective equipment as recommended. Consult Material Safety Data Sheet (MSDS) for specific information. Use only with adequate ventilation or certified respiratory protection. NIOSH approved positive pressure supplied air respirator is recommended if exposure guidelines may be exceeded. Contents may be very sticky and irritating to skin and eyes, therefore wear protective eyewear, impervious gloves, and suitable work clothing when operating. If liquid chemical comes in contact with skin, first wipe thoroughly with dry cloth, then rinse affected area with water. Wash with soap and water afterwards, and apply hand lotion if desired. If liquid comes in contact with eyes, immediately flush with large volume of clean water for at least 15 minutes and get medical help at once. If liquid is swallowed, get immediate medical attention. Products manufactured or produced from these chemicals are organic and, therefore, combustible. Each user of any product should carefully determine whether there is a potential fire hazard associated with such product in a specific usage. **KEEP OUT OF REACH OF CHILDREN.**

LIMITED WARRANTY: The Manufacturer warrants only that the product shall meet its specifications: THIS WARRANTY IS IN LIEU OF ALL WRITTEN OR UNWRITTEN, EXPRESSED OR IMPLIED WARRANTIES AND THE MANUFACTURER EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. The 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 replacement of the material. Failure to strictly adhere to any recommended procedures shall release The Manufacturer of all liability with respect to the materials or the use thereof. User of this product must determine suitability for any particular purpose, including, but not limited to, structural requirements, performance specifications and application requirements prior to installation and after product is applied.



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