

# TECHNICAL DATA SHEET



## Silent Seal SA Two-Component Expanding Sealant

**Silent Seal® SA** is a polyisocyanurate two-component expanding sealant 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. Silent Seal Systems are dispensed through the state-of-the-art Handi-Gun® two-component dispensing unit, providing unsurpassed quality and flexibility in end-use performance. Silent Seal SA is specifically formulated to exceed various international mining test standards. Silent Seal SA meets the South African Council for Scientific and Industrial Research (CSIR) flame, smoke and toxicity testing standards, and has LOBA approval as well.

### Application Areas

Silent Seal SA quickly and efficiently creates airtight seals on and around stoppings resulting in improved ventilation efficiency. Silent Seal SA may also be useful for additional applications, from an effective air sealant to a conventional product used to fill small holes and openings. It is specifically designed to spray onto flat or irregular surfaces and to fill small gaps and cavities.

### Properties

The optic yellow color of Silent Seal SA indicates it is the sprayed-in-place air sealant developed exclusively for mine applications. Some of the advantages of Silent Seal SA are:

- Factory-attached dispensing hoses. No need to attach hoses prior to use.
- Handle is secured to tanks. No more handle popping out of box. No more tanks falling out of the box when the box gets wet.
- Expands and seals in seconds. Cures in one hour.
- High optic yellow color. Makes visibility easy. See exactly where sealant is applied.
- Easy to open box for immediate use.
- Hoses extend from top of tanks. More reach and stability.
- Polyisocyanurate formulation for improved performance.
- Adheres to coal, slate, brattice, cement, wood and most other materials in mines.

Silent Seal SA also adheres to almost all common construction materials with the exception of surfaces such as polyethylene, Teflon®, silicone, oils and greases, and mold release agents.

Optimal application temperature is 75°F (24°C) but may be

sprayed onto colder or warmer substrates, with slight effects on the product's characteristics. The cured sealant is resistant to heat and cold, -200 - +200°F (-129 - +93°C) and to aging, but not to UV rays unless painted, covered or coated. Cured sealant is also chemically inert and non-reactive in approved applications.



Silent Seal SA requires no outside mechanical or electrical power source and is disposable. When properly applied, the sealant will create a seamless, continuous seal to insulate and protect against dust, air infiltration, etc.

### Preparation For Use

Substrate must be firm, free of loose particles, grease and mold release agents. Protect surfaces not to be sealed.

Shake kits *before* using.

### Application / Use

After following instructions for set-up, kits are ready to use. Valves must be in the upright position. Materials are dispensed through the hoses and mixed in the disposable nozzle. With the nozzle attached to the Handi-Gun two-component dispensing unit, dispense sealant by squeezing the trigger. To interrupt or stop the flow of sealant, release the trigger. Once the dispensing process has stopped, the dispensing unit must be reactivated within one minute or a new nozzle must be installed. Fresh sealant may be applied in several stages to avoid overfilling of void or damage to non-rigid, confined cavities. Cured sealant can only be removed mechanically.

**Important Note:** Use only in well ventilated area or with certified respiratory protection. Wear impervious gloves, eye protection, and protective clothing when using. Read all instructions and safety information (MSDS) prior to use of any product. The product contains no formaldehyde. Cured sealant is non-toxic. **KEEP OUT OF REACH OF CHILDREN.**

### Product Storage

Store in a 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. Silent Seal SA is reusable by following product information.

**Fomo Products, Inc.**  
A Member of the FLM Group of Companies  
management system registered to ISO 9001:2000



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## Technical Data

<b>DENSITY</b>		
ASTM D-1622	1.75 lbs/ft <sup>3</sup> ( 28 kg/m <sup>3</sup> )	
<b>K-FACTOR (Per Inch)</b>		
ASTM C-518 (initial)	$\frac{BTU}{(ft)(h)(^{\circ}F)}$ =0.15	$\frac{W}{mk}$ =.022
<b>R-VALUE (aged)</b>	6-7/inch	
<b>TENSILE STRENGTH</b>		
ASTM D-1623		
Parallel @ 7%	45 psi (310 k Pa)	
<b>COMPRESSIVE STRENGTH</b>		
ASTM D-1621		
Parallel @ 10%	21 psi (145 k Pa)	
Perpendicular @ 10%	12 psi (83 k Pa)	
<b>DIMENSIONAL STABILITY</b>		
ASTM D-2126		
HEAT AGE (120°F / 50°C, 10%RH)	+0.4%	
HUMID AGE (120°F / 50°C, 100% RH)	+6.1%	
COLD AGE (-40°F / -40°C)	+0.3%	
<b>CLOSED CELL CONTENT</b>		
ASTM D-2856	>90%	
<b>TACK-FREE / EXPANSION TIME</b>	10-25 seconds	
<b>CUTTABLE</b>	2-5 minutes	
<b>FIRE RATING</b>	Passed CSIR flame, smoke, and toxicity	
<b>CSIR</b>	Project# BF203-011 5600 5664	

## Approvals / Standards

Silent Seal SA conforms to or exceeds the following classifications, codes, and standards:

Meets South African Center for Scientific and Industrial Research (CSIR) flame, smoke and toxicity testing standards.

South African GME Approval  
LOBA Approval

Silent Seal SA packaging is patented under U.S. patent #6,182,868.

Handi-Gun is patented under U.S. patent #6,345,776. Other foreign and domestic patents pending.

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

## Theoretical Yield\*

<b>Product</b>	
<b>II-180</b>	
P10712SA	15 ft <sup>3</sup> (.42m <sup>3</sup> )
P10712	

\* Yields are based on theoretical calculations, for comparative purposes, and will vary depending on ambient conditions and particular application.

**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 safety glasses, impervious gloves, and adequate 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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