TECHNICAL DATA SHEET - TDS

LALLAFOM USA Sealguard 500 Series

Material Specification Criteria

SEALGUARD 500

LIGHT DENSITY • OPEN CELL FOAM • NO MIX • TYPE I,II,III,IV and V CONSTRUCTION

Sealguard 500 is a two component, light density, one to one by volume spray applied polyurethane foam. This product does not require mixing or recirculation. To produce Sealguard 500 requires the use of an "A" component (**Lallafom ISO**) and a blended "B" component (**Sealguard 500 RESIN**). Sealguard 500 is an insulation system designed for use in residential, commercial and industrial applications. Use in lieu of more traditional forms of insulating materials such as fiberglass, cellulose or other loose fill products. Sealguard 500 is a low VOC product allowing for 1 hour job site re-entry and 4 hour job site re-occupancy at applicable ventilation rates.

Sealguard 500 contains ZERO ozone depleting blowing agents.

Typical areas where Sealguard 500 spray polyurethane foam is applied:

EXTERIOR WALLS • INTERIOR WALLS • VAULTED or CATHEDRAL CEILINGS • BETWEEN FLOORS • CEILINGS

TYPICAL PHYSICAL PROPERTIES

PROPERTY	SEALGUARD 500 VALUE	TEST METHOD
R - Value	R-Value at 1 inch: 4.1	ASTM C518
Open-Cell Content	>96%	ASTM D2856
Core Density	Nominal 0.5 lb pcf	ASTM D1622
Air Permeance	< 0.02 L/s . m^2 at .75 inches	ASTM E283
Tensile Strength	5 psi	ASTM D1623
Water Vapor Transmission	1" - 22 Perms	ASTM E-96
Dimensional Stability 28 days @ 158°F, 97%RH	< 5%	ASTM D2126
ASTM Method E84 Class I	Flame Spread ≤25	Smoke Development ≤450

EU BUILDING CODE CERTIFICATIONS / FIRE TEST DATA

THERMAL CONDUCTIVITY	λm = (0,0353 - 0,0367) W / (m·K) λ90/90 = 0,037 W / (m·K)	EN 14315-1:2013
REACTION TO FIRE (INSULATION)	Class E	PN-EN 13501-1+A1:2010 / PN-EN ISO 11925-2:2010
REACTION TO FIRE (typical wood	Class B-s1,d0	PN-EN 13501-1+A1:2010 / PN-EN 13823+A1:2014
frame gypsum board assembly)	DOES NOT lead to flashover, no smoke, no dripping.	PN-EN ISO 11925-2:2010
WATER ABSORPTION	Wp ≤ 7,9 [kg / m2]	EN 14315-1:2013 / PN-EN 1609:2013-07
WATER VAPOR TRANSMISSION	μ = 7,67	EN 14315-1:2013 / PN-EN 12086:2013-07
DELAMINATION STRENGTH	[kPa] = 21,6	EN 14315-1:2013 / PN-EN 1607:2013-07
DURABILITY OF THERMAL CONDUCTIVITY DURABILITY OF REACTION TO FIRE	Do not degrade over time	
FLAME SPREAD	ASTM E84	Class I < 20
SMOKE DEVELOPMENT	ASTM E84	Class I < 400

THERMAL BARRIER: Current International Building Code (IBC) and International Residential Code (IRC) require that spray polyurethane foam be separated from the building interior by a code prescribed 15 minute thermal barrier or a code-approved alternative. Gypsum board at a minimum thickness of 1/2" is a code prescribed 15 minute thermal barrier. Intumescent coatings when installed per manufacturer specifications are approved as thermal barrier alternatives.

DURABILITY OF COMPRESSIVE STRENGTH:

Does not degrade over time

CE MARKING:

DURABILITY OF DELAMINATION STRENGTH:

Does not degrade over time

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APPLICATION PARAMETERS:

Storage Temperature	50°F-90°F	(10-32°C)
Substrate Temperature	40°F-120°F	(4-49°C)
Equipment Static Pressure Dynamic	1,100-1,500 psi	
Preheat Temperature (A&B/Hose)	125°F-135°F	(52-57°C)
Drum Temperature (prior to use)	80°F-90°F	(26-32°C)
Drum Storage Temperature (warehouse)	50°F-90°F	(10-32°C)

Material Shelf Life:
Properly stored unopened Sealguard 500 RESIN drums have a Six (6) month shelf life. Seal drums tightly after every use. Only combine Sealguard 500 resin with Sealguard 500 iso. Do not allow product to freeze. Other manufacturer's products should not be combined with Sealguard 500 Resin. Caution when changing from other manufacturer's products to Sealguard 500, follow recommended change over procedures.

Safety and Material Handling:
MANDATORY! Respiratory protection. Lallafom USA Systems requires that supplied air and a full face mask be used during the application of any spray applied foam system. Visit Lallafom USA internet website or CPI's website (www.polyurethane.org) for a copy of the Model Respiratory Protection Program developed by CPI. Wear approved respirator.
The "A" component contains reactive isocyanate groups. Persons with known respiratory allergies should avoid exposure to the A (ISO) component. Applicators should ensure the safety of the job site and construction personnel by posting appropriate signs warning of spray foam work in progress and that all "hot work" such as welding, soldering and cutting with torches should take place no less than 3 - 5 feet from any exposed foam. If "hot work" must be performed all spray polyurethane foam should be covered with an appropriate fire or welder's blanket and a fire watch should be provided. The materials must be handled and used with **adequate ventilation** the vapors must not exceed the TLV (0.02 parts per million) for isocyanate. Avoid breathing vapors. Wear approved respirator. If inhalation of vapors occur, remove victim from contaminated area and administer oxygen if breathing is difficult. Call a physician immediately. Avoid contact with skin, eyes and clothing. Always open containers slowly and carefully, allowing any pressure to be released slowly and safely. Wear appropriate chemical safety goggles and rubber gloves when handling or working with these materials. In case of eye contact, immediately flush with large amounts of water for at least fifteen minutes. Consult a physician immediately. In case of skin contact, wash area with soap and water. Wash clothes before reuse. Consult this product's SDS sheet for further information.

In Case of Spills or Leaks:

- Utilize appropriate personal protective equipment (PPE)
- Ventilate area to remove vapors
- Contain and cover spilled material with a loose, absorbent material such as oil-dry, vermiculite or sawdust.
- Shovel absorbent waste material into proper waste containers
- Wash the contaminated areas thoroughly with hot, soapy water
- Report sizable spills to proper environmental agencies

In Case of Fire: ***It is recommended that a fire extinguisher be located in an easily accessible portion of the work area.***
Extinguishing Media: Dry chemical extinguishers such as monoammonium phosphate, potassium sulfate and potassium chloride. Additionally, carbon dioxide, high expansion (protein) chemical foam or water spray for large fires. Positive pressure ventilation of the work area is recommended to minimize the accumulation of vapors in the work area during application. Improper application techniques for this foam system must be avoided including: excessive thickness, off ratio material and spraying into rising foam. The potential results of improperly applied materials may include, but not limited to: excessive heat build-up that may result in a fire or offensive odors (which may not dissipate with time) and/or poor product performance due to improper density of the applied material. Large masses of sprayed materials should be avoided. When large masses are generated they should be removed from the area, cut into small pieces and allowed to cool before disposal. Failure to follow these recommendations may result in a fire.

Suitable substrates:
Under favorable weather conditions, the semi-rigid spray polyurethane foam Sealguard 500 has a good adhesion to most constructions materials (concrete, brick, wood, steel). They must be clean (without dust or grease), dry and in case of metallic substrates, free of rust. If the adhesion is not acceptable under these conditions, a prior treatment like a primer may be necessary.

Nevertheless, due to the wide range of substrates and primers used in construction, it is not possible to guarantee perfect adhesion of this foam to all surfaces. It is therefore recommended to test adhesion in each case.

See our "Application Guide of Sealguard 500 Systems" for more detailed information about the general installation process and the suitable substrates.

Material Change Over / Flushing Procedures:
This procedure must be followed whenever changing from one SPF system to another. Before Sealguard 500 is introduced into any equipment previous material must be purged. Failure to do so can result in product issues. Care must be taken to not allow any other material into the Sealguard 500 RESIN. Shut off all heats and spray machine. Disconnect air to both transfer pumps and remove the resin drum pump. Wipe all areas of pump clean and invert pump over bucket to ensure drum pump housing is emptied. Place pump into new resin drum. Remove spray gun from coupling block. With shut off valves closed connect air to resin transfer pump. Open resin side shut off valve only and allow material to pump into a clean bucket. Purging will take between 2-5 gallons. Re-connect cleaned spray gun and all air to transfer pumps. Turn on spray machine and begin heating procedures.
Technical Assistance: For additional assistance please contact the Lallafom Polyurethane Systems Technical Services Department (888) 669-3626.

2:1 transfer pumps are recommended for material transfer from container to the proportioner.

CAUTION: Extreme care must be taken when removing and reinstalling drum transfer pumps so as NOT to reverse the "A" and "B" components.

DISCLAIMER: *To the best of our knowledge, all technical data contained herein is true and accurate as of the date of issuance and subject to change without prior notice. User must contact Lallafom Polyurethane Systems to verify accuracy before specifying or ordering. We guarantee our products to conform to the quality control standards established by Lallafom Polyurethane Systems. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of the product. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY LALLAFOM USA, INC. EXPRESSED OR IMPLIED STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.*