

Technical Data Sheet

Physical Properties

Property	VPC-50 NM	Test
R-Value	3.7 @ 1"	ASTM C 518
Core Density	0.5 LB / Cubic Foot	ASTM D 1622
Open Cell Content	> 97%	ASTM D 6226
Sound Transmission Coefficient	41	ASTM E 90
Noise Reduction Coefficient	0.1	ASTM C 423
Water Vapor Transmission - Permeance	21 Perms at 1"	ASTM E 96
Air Impermeable	< 0.02 (L/s-m ²) @ 0.75"	ASTM E 283
Tensile Strength (PSI)	5.19 PSI	ASTM D 1623
Dimensional Stability	< 5%	ASTM D 2126
UL Environment (Greenguard Gold)	Meets criteria	VOC Emissions

Building Code Certifications/Fire Test Data

Evaluation Service Report	Intertek	CCRR-0409
Evaluation Service Report	ICC - FBC Supplement	Florida Building Code - Building Florida Building Code - Residential
Building Types	Approved	I, II, III, IV, V-B: Nonstructural Insulation material
Flame Spread	ASTM E84	Class I < 20
Smoke Development	ASTM E84	Class I < 400
NFPA 259	Pass: Standard fire test method for evaluation of fire propagation characteristics of exterior non-load bearing wall assemblies containing combustible components.	
NFPA 285	Pass: Standard fire test method for evaluation of fire propagation characteristics of exterior non-load bearing wall assemblies containing combustible components.	
NFPA 286	Pass: Standard fire test method for evaluation of fire propagation characteristics of exterior non-load bearing wall assemblies containing combustible components.	
NFPA 286 AC377 APPENDIX X	Pass: Complies with the applicable requirements of ICC-ES AC377 Appendix X for use in attics and crawlspaces without a prescriptive ignition barrier.	

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 ½" is a code prescribed 15-minute thermal barrier. The following intumescent coatings when installed per manufacturer specifications are approved as thermal barrier alternatives for VPC-50 NM:

Approved Intumescent Coatings

DC315™	Manufactured by: International Fireproof Technology, Inc
	Application Rates: 20 Wet Mills - 13 Dry Mills
No. 60-60A	Manufactured by: Flame Control Coatings
	Application Rates: 14 Wet Mills - 9 Dry Mills

Product Use and Design

VPC-50 NM is a two component, light density, one to one by volume spray applied polyurethane foam. VPC-50 NM does not require mixing or agitation of the resin prior to application. To produce VPC-50 NM requires the use of an "A" component (ISO) and a blended "B" component (RESIN), which contains ZERO ozone depleting blowing agents. VPC-50 NM is an insulation system designed for use in residential applications. Use in lieu of more traditional forms of insulating materials such as fiberglass, cellulose or other loose fill products. Typical areas where spray polyurethane foam is applied are exterior walls, interior walls, vented attics, un-vented attic assemblies between floors, and ceilings.

Ignition Barrier

VPC-50 NM meets the requirements of ICCES AC377 Appendix X for use in attics and crawlspace without a prescriptive ignition barrier.

Approved Intumescent Coatings

DC315™	Manufactured by: International Fireproof Technology, Inc
	Application Rates: 4 Wet Mills - 3 Dry Mills

Application Parameters

Storage Temperature	50°F - 80°F
In Use Temperature	85°F - 90°F
Ambient Air Temperature	45°F - 110°F
Substrate Temperature	45°F - 110°F
Moisture Content of Substrate	Less than 19%
Maximum Lift Per Pass	Not to Exceed 6"

Equipment Settings

Pre-Heaters: (A) Component - Iso	120°F - 140°F
Pre-Heaters: (B) Component - Resin	120°F - 140°F
Hose Heat	120°F - 140°F
Fluid Pressure	1,000 - 1,500 PSI - Dynamic
Mixing Ratio	1:1 By Volume
Recommended Mix Chamber/ Module Size	10-15 Lbs./Minute (i.e. 01-GRACO AR4242)

These are recommended "Initial" Settings. Settings may vary based on the type of equipment used and the substrate temperatures at the time of the application.

Additional Information

Flushing Procedure

Before VPC-50 NM is introduced to any equipment, purge any previous material from your system. Turn off and disconnect air to all transfer pumps. Remove the drum pumps from the ISO and Resin drums and wipe pumps and dip tubes clean. Ensure Resin drum pump housing is emptied. Place the drum pumps and dip tubes in Victory Polymers' ISO and VPC-50 NM drums. Reconnect or turn on the air to the drum pumps. Use the drum pumps to purge the ISO and Resin supply and recirculation hoses back to their respective drums or into containers for reuse. One to two gallons of material are normally purged, depending on hose length. When finished and changing into another system, **flush the "B" Side (resin side)** with 3-4 gallons of water.

Thermal Barrier

IRC and IBC codes require that SPF be separated from the interior of a building by an approved fifteen (15) minute thermal barrier, such as 1/2" gypsum wall board or equivalent, installed per manufacturer's instructions and corresponding code requirements. There are exceptions to the thermal barrier requirement: (1) Code authorities may approve coverings based on fire tests specific to the SPF application. For example, covering systems that successfully pass large scale tests may be approved by code authorities in lieu of a thermal barrier; (2) SPF protected by 1" thick masonry does not need a thermal barrier. Certain materials that offer protection from ignition, called "ignition barriers," may not be considered as thermal barrier alternatives unless they comply with NFPA 286 or other similar full-scale tests. Applicators should request test data and code body approvals or other written indications of acceptability under the code to be sure that the product selected offers code-compliant protections.

Safety and Handling

Respiratory protection is **MANDATORY!** Victory Polymers requires that supplied air and a full-face mask be used during the application of any spray applied foam system. Contact Victory Polymers Corp. for a copy of the Model Respiratory Protection Program developed by CPI or visit their web site at www.polyurethane.org. Persons with known respiratory allergies should avoid exposure to the "A" component. The "A" component contains reactive isocyanate groups. The materials must be handled and used with adequate ventilation. The vapors must not exceed the TLV (0.02 parts per million) for isocyanates. Avoid breathing vapors. Wear a NIOSH approved respirator. If inhalation of vapors occurs, remove victim from contaminated area and administer oxygen if breathing is difficult. Call a physician immediately. Avoid contact with skin, eyes, and clothing. Open containers carefully, allowing any pressure to be relieved slowly and safely.

Wear 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. Applicators should ensure the safety of the jobsite and construction personnel by posting appropriate signs warning that all "hot work" such as welding, soldering, and cutting with torches should take place no less than 35 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.

In Case of Spills or Leaks

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

In Case of Fire

Extinguishing Media: Dry chemical extinguishers such as mono ammonium phosphate, potassium sulfate, and potassium chloride. Additionally, carbon dioxide, high expansion (proteinic) 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 the application. Improper application techniques of this foam system must be avoided. This includes excessive thickness, off ratio material, and spraying into rising foam. The potential results of improperly applied materials may include but is not limited to excessive heat build-up and 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 this recommendation may result in a fire. It is recommended that a fire extinguisher be located in an easily accessible portion of the work area.

Disclaimer

The data presented herein are not intended for use by non-professional applicators, or those persons who do not 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.

It is the responsibility of the applicator to thoroughly understand all equipment technical information and safe operating procedures that pertain to spray polyurethane foam application.

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