



# SARAN™ 540 Vapor Retarder Film

SARAN™ 540 Vapor Retarder Film is composed of biaxially oriented polyvinylidene chloride (PVDC) that creates a durable and flexible jacketing material for mechanical insulation systems. SARAN 540 Film is designed specifically to help prevent water absorption and resist moisture vapor drive into the insulation. A permeance rating of 0.02 perms exceeds standard industry requirements for vapor retarders in cold service.

SARAN 540 Vapor Retarder Film is not a known nutrient source for mold or mildew.

## Applications

SARAN™ 540 Vapor Retarder Film is a high-performance, cost-effective vapor retarder used in many pipe insulation applications.

Typical applications for SARAN 540 Film include:

- Food and beverage facilities
- Chilled water piping and HVAC systems
- Transport pipelines
- Chemical condensation tanks
- Cold storage systems
- Refrigerated transport
- Pharmaceutical plants
- Petrochemical plants

Dow can provide general guidelines and recommendations on many typical applications for SARAN 540 Vapor Retarder Film. Call 1-866-583-BLUE (2583) or contact your local Dow representative for details.

SARAN Films are FDA- and USDA-compliant.

## SIZE

SARAN™ 540 Vapor Retarder Film is supplied either factory-applied on straight lengths of TRYMER™ or STYROFOAM™ pipe insulation or in easy-to-use rolls for field application.

Width: 35.5" (90 cm)  
Length: 375' (114 m)

## PHYSICAL PROPERTIES

SARAN™ 540 Vapor Retarder Film exhibits the properties and characteristics indicated in Table 1 when tested as represented.

Consultation with local code officials or design engineers/specifiers is recommended before application.

TABLE 1

Physical Properties <sup>(1)</sup> of SARAN™ 540 Vapor Retarder Film	
Property and Test Method	Value
Thickness, ASTM D374, mils, avg	4
Yield, ft <sup>2</sup> /lb, calculated	28.3
Permeance <sup>(2)</sup> , ASTM E96, perm	0.02
Ultimate Tensile Strength, ASTM D882, lb/in <sup>2</sup>	
MD	10,800
TD	16,000
Ultimate Elongation, ASTM D882, %	
MD	140
TD	88
2% Secant Modulus, ASTM D882, lb/in <sup>2</sup>	
MD	80,600
TD	54,900
Mullen Burst, ASTM D774, lb/in <sup>2</sup>	139
Puncture Resistance, TAPPI T803, ASTM D781, Beach units	244/236
Unrestrained Shrink, 100°C Air	
MD	10
TD	4
Surface Burning Characteristics <sup>(3)</sup> , ASTM E84	
Flame Spread	5
Smoke Developed	20
Service Temperature Limits <sup>(4)</sup> , °F (°C)	-40 to 250 (-40 to 121)
Color	White

(1) Data shown are typical values obtained from representative samples. This data may be used as a guide for design purposes, but should not be construed as specifications.

(2) 1 perm = 1 gr/hr/ft<sup>2</sup>/in•Hg @ 73°F, 50% R.H.

(3) This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Service temperature limits is defined as the temperature to which the jacket or coating may be subjected when applied over insulation. It does not refer to the operating temperature of the equipment, vessel or pipe. (Source: National Insulation Association)

For maximum film flexibility during installation, it is recommended that SARAN Film products be installed at ambient temperatures above 24°F (-4°C).

## Installation

SARAN™ 540 Vapor Retarder Film is compatible with all current installation methods for vapor retarder films. It can be installed at ambient temperatures as low as 0°F (-18°C). For maximum film flexibility during installation, it is recommended that SARAN Film products be installed at ambient temperatures above 24°F (-4°C). SARAN 540 Vapor Retarder Film has service temperature limits of -40°F to 250°F (-40°C to 121°C).

Because of the critical technical design aspects of many of the applications of SARAN 540 Vapor Retarder Film, Dow recommends that qualified designers or consultants design the total system. Detailed installation guidelines for SARAN Vapor Retarder Film and Tape products are available at [www.dowpipe.com](http://www.dowpipe.com).

## Availability

SARAN™ 540 Vapor Retarder Film is distributed through Dow's extensive Authorized Fabricator Network. For more information, call:  
1-866-583-BLUE (2583) (English)  
1-800-363-6210 (French)

## Technical Services

Dow can provide technical information to help address questions when using SARAN™ 540 Vapor Retarder Film. Technical personnel are available at:  
1-866-583-BLUE (2583) (English)  
1-800-363-6210 (French)

**THE DOW CHEMICAL COMPANY**  
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**For Sales and Technical Information: 1-866-583-BLUE (2583) (English); 1-800-363-6210 (French)**  
**[www.dowpipe.com](http://www.dowpipe.com)**

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COMBUSTIBLE: Protect from high heat sources. For more information, consult MSDS or call Dow at 1-866-583-BLUE (2583). In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

Building and/or construction practices unrelated to insulation could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.

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