



Technical Data Sheet

3M™ VentureClad™ Insulation Jacketing System 1579GCW-E

Product Description

3M™ VentureClad™ Insulation Jacketing System is a heavy duty, zero permeability, all weather, multi-layered laminate coated with an aggressive cold weather acrylic adhesive. Superior resistance to weathering, UV and extreme environmental conditions. Designed for use as a vapor barrier for insulation cladding and jacketing applications. Available in both flat and embossed.

Product Features

- Superior adhesion in cold or hot and humid conditions
- Aggressive acrylic adhesive offers instant adhesion in temperatures as low as -10°F (-23°C)
- Zero permeability vapor barrier for insulation cladding and jacketing applications
- Reinforced for very high puncture and tear resistance to ensure long life and durability
- Flexible and strong
- Cuts and installs easily on-site, no special tools required
- Available in multiple colors

Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Typical Physical Properties

Attribute Name	Test Method	Value
Color		Natural Aluminum
Embossed		Yes
Puncture		218 N (49 lb)
Thickness		0.4 mm (16 mil)
Water Vapor Transmission	ASTM E96	0 US Perms

Typical Performance Characteristics

Attribute Name	Test Method	Dwell Time	Temperature	Value
180° Peel Adhesion	ASTM D3330	1 min	22 °C (72 °F)	73 oz/in ¹
Elongation at Break				60 %
Tensile Strength				260.938932 N/cm (149 lb/in)
Emittance				0.03

¹ 12 in/min (300 mm/min)

Attribute Name	Value
Long Term Temperature Resistance	149 °C (300 °F) ¹
Minimum Long Term Temperature Resistance	-40 °C (-40 °F) ¹

¹ Long Term (day, weeks)

Typical Environmental Characteristics

Chemical and Environmental Exposure

Acids	Acetic acid (all concentrations) 50% formic acid 10% hydrochloric acid 30% hydrochloric acid 10% and 35% hydrofluoric acid 10% nitric acid 65% and 100% nitric acid 30% and 85% phosphoric acid 20% sulphuric acid Sulphur dioxide gas, dry 80% and above sulphuric acid	Resistant Resistant Resistant Partially resistant Resistant Resistant Not resistant Resistant Partially resistant Resistant Not resistant
Aldehydes	Acetaldehyde Formaldehyde	Resistant Resistant
Aqueous Alkaline Solutions	Ammonium hydroxide Calcium hydroxide Sodium hydroxide	Not resistant Partially resistant Not resistant
Chlorinated Hydrocarbons	Carbon tetrachloride Chlorinated biphenyls Chloroform Trichloroethylene	Partially resistant Partially resistant Resistant Resistant
Esters	Ethyl acetate	Resistant
Hydrocarbons	Aliphatic hydrocarbons Benzene Gasoline (petrol) Mineral oils Toluene Xylene	Resistant Resistant Resistant Resistant Resistant Resistant
Miscellaneous Substances	Chlorine Hydrogen peroxide Oxygen Water*	Resistant Resistant Resistant Resistant
Other Organic Solutions	Acetone Diethyl ether Nitrobenzene Phenol	Resistant Resistant Not resistant Not resistant
Salt Solutions	Alkaline carbonates Bichromates Cyanides Fluorides	Resistant Resistant Resistant Resistant

*Chemical resistance info based in part on third party test data of the product backing.

Environmental Resistance

Good

Certifications/Standards

Certifications

Product	1579GNA	1579GCW	1579GCW-E	1579GCW-WM	1579GCW-WME
Color	Natural Aluminum	Natural Aluminum	Natural Aluminum	White	White
Embossed	No	No	Yes	No	Yes
Product Thickness	12.5 mils (0.32 mm)	15 mils (0.38 mm)	16 mils (0.40 mm)	15 mils (0.38 mm)	16 mils (0.40 mm)
Peel Adhesion	NA	87 oz/in (24 N/25 mm)	73 oz/in (20 N/25 mm)	102 oz/in (28 N/25 mm)	126 oz/in (35 N/25 mm)
Tensile Strength	155 lb/in (690 N/25 mm)	155 lb/in (690 N/25 mm)	149 lb/in (663 N/25 mm)	184 lb/in (818 N/25 mm)	184 lb/in (818 N/25 mm)
Elongation	35%	70%	60%	64%	64%
Chemical Resistance	Good	Good	Good	Excellent	Excellent
WVTR	0.00 perm	0.00 perm	0.00 perm	0.00 perm	0.00 perm
Service Temperature	-94°F to 300°F (-70°C to 149°C)	-40°F to 300°F (-40°C to 149°C)	-40°F to 300°F (-40°C to 149°C)	-40°F to 248°F (-40°C to 120°C)	-40°F to 248°F (-40°C to 120°C)
Puncture	41 lbs (182 N)	47 lbs (210 N)	49 lbs (218 N)	57 lbs (252 N)	57 lbs (253 N)
Emittance	0.03	0.03	0.03	0.8	0.8
Passes ASTM C1775 Specification for Laminate Protective Jacketing for Outdoor Applications		X	X		
ASTM E84 (Flame / Smoke Rating)		20 / 15	20 / 15	20 / 25	20 / 25
UL723 Classified Flame Smoke Rating (UL file #R10984)		25 / 60			
U.S. Coast Guard approval	X	X	X	X	X
IMO Resolution MSC.307(88) Annex 1, Part 5 and Part 2	X	X	X	X	X
IMO Resolution MSC 61 (67) Annex 1: Part 5	X	X	X	X	X

Storage and Shelf Life

Store under normal conditions of 4° to 27°C (40° to 80°F) and 40 to 50% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 18 months from date of manufacture.

Information

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ISO Statement

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