



TECHNICAL DATA SHEET

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1 | Product Description and Application

A lightweight, abrasion and puncture resistant, engineered thermoplastic composite wall panel and scuff. The product is FDA direct food contact compliant, hydrophobic, resists corrosion, mildew, degradation, and can be easily cleaned. Both sides features the Royal Watson® glossy white finish with BioStat® technology and the patent pending, Surlok®, adhesive bonding technology for adhering to other substrates. The HD Series products feature a woven reinforcement structure on the exterior surface to provide enhanced wear and abrasion protection. Typical applications include refrigerated and dry van trailers, truck body and container sidewalls, door liners, nose liners and ceiling liners. The product is also available as the patented integral wall where the lower heavy-duty scuff band is fused to the upper wall lining using Ridge's unique, patented ultrasonic welding technology, saving weight and cost.

2 | Physical and Technical Data

Property (Test Method)	Units	Subpan		Lining Options					HD Lining and Scuff Options						
		20 Series	30 Series	40 Series	50 Series	60 Series	70 Series	80 Series	80 HD Series	100 HD Series	120 HD Series	140 HD Series	160 HD Series	200 HD Series	
Nominal Thickness	in	0.018	0.024	0.032	0.044	0.052	0.060	0.076	0.074	0.090	0.110	0.130	0.153	0.189	
Nominal Weight	lb/ft ²	0.13	0.17	0.23	0.32	0.38	0.45	0.59	0.55	0.69	0.83	0.97	1.16	1.44	
Puncture Strength (RTM0001)	lb	351	517	632	838	990	1234	1287	1300	1410	1727	1980	2155	2778	
Fiber Content (ASTM D3171)	% _{mass}	Nominal 65% <small>*Excluding surface treatments</small>													
Density	lb/ft ³	84-92													
Flexural Properties (ASTM D790)		-	-	FLEXURAL STRENGTH PSI		42/26		FLEXURAL STRENGTH PSI		32/23		FLEXURAL MODULUS MSI		2.6/1.7	
				FLEXURAL MODULUS MSI		2.4/0.6		FLEXURAL MODULUS MSI							

3 | Material Specifications and Information

3.1 Part Number Specification | Continuous Coil: SPPPWWHHHH | Cut Sheet: SPPPWWHHHHLLL

Examples: S060WW039D3760, S140WS0120616H

SPPP Product Code Designates Dymond Ply®
 WW₁ Product Surface Specification
 HHHH₂ Width/Height Code
 LLLL Length Code

i.e., S060 = 60 Series, S140 = 140 HD Series
 WW = Royal Watson® on both sides
 i.e., 39.25"=039D , 12"=0120
 i.e., 376"=3760 , 616.5"=616H

Note 1: Custom colors and surfaces available depending on availability and volume

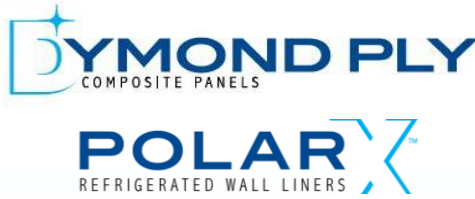
Note 2: Last character in these segments of the part number reference a fraction code below

A=1/16", B=1/8", C=3/16", D=1/4", E=5/16", F=3/8", G=7/16", H=1/2", J=9/16", K=5/8", L=11/16", M=3/4", N=13/16", P=7/8", Q=15/16", 0=0"

Example Specifications:

- "PolarX integral sonically welded wall manufactured and supplied by Ridge Corporation; consisting of a 60 Series upper wall sonically fused to a 140 HD Series XX" height lower scuff"
- "Dymond Ply 50 Series snap-in panel manufactured and supplied by Ridge Corporation"
- "Dymond Ply 50 Series surface mount panel manufactured and supplied by Ridge Corporation"
- "Dymond Ply 120 HD Series ceiling liner manufactured and supplied by Ridge Corporation"
- "Polar X 50 Series ceiling, nose, and door liners manufactured and supplied by Ridge Corporation"





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With Royal Watson® & Surlok®

- 3.2 Composition** | Polar X®/DymondPly® composite panels consist of continuous E-glass fiber reinforcement saturated in a polypropylene copolymer thermoplastic resin matrix contained within our proprietary Royal Watson® engineered surface treatments for adhesion and/or aesthetics. The Polar X®/DymondPly® material composition meets the FDA requirements for direct food contact, specifically section 1, subpart O.
- 3.3 Finished Panel Quality** | Panels have a smooth glossy white finish. Finished panel sizes are subject to the following tolerances unless otherwise specified:
- Thickness (t): $\pm 0.005"$ for $t < 0.100"$ • $\pm 0.010"$ for $0.100" \leq t < 0.180"$ • $\pm 0.015"$ for $t \geq 0.180"$
Weight: $\pm 0.03 \text{ lb/ft}^2$ for $t < 0.100"$ • $\pm 0.06 \text{ lb/ft}^2$ for $0.100" \leq t < 0.180"$ • $\pm 0.08 \text{ lb/ft}^2$ for $t \geq 0.180"$
Width (w): $w \leq 48" \pm 1/16"$ • $w > 48" \pm 1/8"$ • Integral Wall $+1/4" / -1/8"$
Length (L): $L \leq 12' \pm 1/8"$ • $12' \leq L < 24' \pm 1/4"$ • $L \geq 24' \pm 1/2"$ • $\pm 3/8"$ Bow over length
Squareness: $1/8"$ in $48"$ of width • $1/4"$ Diagonal variation up to $24' \pm 1/2"$ Diagonal variation over $24'$
Standards: Flat sheet widths up to $116"$
PolarX®/Dymond Ply®welded wall widths up to $120"$ wide
Flat sheet and bulk coil up to $2000'$
Dymond Ply®Scuff Heights • $12"$ • $18"$ • $24"$ • $36"$ • $48"$
Polar X®Scuff Heights • $10"$ • $16"$ • $22"$ • $34"$ • $46"$ (not overall scuff height from floor)
- 3.4 Packaging and Shipping** | Depending on the nature of the order and required shipping method, Polar X® /DymondPly® products are provided cut to size and in bulk coils. Product is shipped flat or coiled on wood pallets or flat bed wrapped by protective plastic and reinforced occasionally with Styrofoam, returnable plastic cores, or wood dunnage.
- 3.5 Fabrication and Installation Recommendations** | Safety: Always use safety glasses during fabrication of Polar X® /Dymond Ply™. Wear gloves and dust masks where applicable. Cutting/Drilling: Use carbide tipped and coated saw blades, router bits, and drill bits for best results. Cleaning: Polar X®/DymondPly® materials can be cleaned with mild detergents, water, and isopropyl alcohol mixtures. Other solvents may be used, but it is recommended to test their effects on the surface of the material. Power washers can be utilized with a minimum 40° fan wash tip with 2800 psi or less units. Adhesion to Polar X®/DymondPly® can be affected by the cleanliness of the Royal Watson® surface. The Surlok® bonding technology works best with polyurethane adhesives and foams. Clean surface with above guidance for best results.
- 3.6 Storage** | It is recommended to store Polar X®/DymondPly® materials indoors and keep clean and dry for proper installation. Take care when handling and processing Polar X®/Dymond Ply®.
- 3.7 Product Use and Liability** | Polar X®/DymondPly® linings and scuff provide a clean, smooth, white appearance, however, due to process limitations some small imperfections may be present. Most surface defects do not affect the functionality of the product. If an unacceptable defect, blemish, or contamination is found that falls outside the standard non-conforming specifications or agreed upon terms, contact Ridge Corporation immediately for verification of unacceptability. Ridge Corporation can only be held liable for the material and workmanship of the product and freight, but not any labor, handling, or installation costs incurred.

All information included herein is believed to be accurate and is supported by sound engineering testing and development. Ridge Corporation recommends the user test the material for their specific application in order to determine if the product will be functional. Ridge Corporation cannot be found liable for the use of the product or the information presented herein for any infringement by a third party as to the intellectual or industrial property or rights of others by the purchaser. The Polar X®/DymondPly® integral wall is protected under U.S. Patent #7,829,165.

