1 | Product Description and Application

A lightweight, abrasion and puncture resistant, engineered thermoplastic integral composite wall panel. The patented PolarX integral wall fuses a lower heavy-duty scuff band to the upper wall lining using Ridge's unique ultrasonic welding technology. The product resists corrosion, mildew, degradation, and can be easily cleaned. The reverse side features a bondable surface for adhesion to urethane foam systems and adhesives. Typical applications include refrigerated vans, insulated vans and container sidewalls, scuff, door liners, ceiling liner and sub-pan.

2 | Physical and Technical Data

		PolarX Subpan	*PolarX Upper Wall Linings*			*PolarX Lower Wall Scuff Linings*				
Property	Units	PP030	PP050	PP060	PP070	PP120	PP140	PP160	PP200	Test Method
Nominal Thickness	in	0.033	0.052	0.061	0.071	0.128	0.137	0.166	0.204	n/a
Nominal Weight	lb/ft^2	0.19	0.33	0.40	0.47	0.88	0.95	1.16	1.44	n/a
Puncture Strength	lb	340	517	711	830	1375	1500	1634	1803	RTM0001
Fiber Content* *Excluding surface films & scrim	$\%_{mass}$	63-65%								ASTM D3171
Density	lb/ft^3	0.05								n/a
Flexural Modulus* *maximum stiffness direction	msi	1.44								ASTM D790
Flexural Strength* *maximum stiffness direction	ksi	30								ASTM D790

3 | Material Specifications and Information

3.1 Composition | PolarX composite panels consist of continuous E-glass fiber reinforcement saturated in a polypropylene copolymer thermoplastic resin matrix backed with a polyester non-woven scrim for foam adhesion. The PolarX material composition meets the FDA and USDA/FSIS requirements for incidental or non-permanent food contact.

3.2 **Finished Panel Quality** | Panels are dual sided with a textured non-woven adhesion layer and a smooth glossy white finished side. Finished panel sizes are subject to the following tolerances unless otherwise specified:

Thickness (t):	±0.005" for t < 0.100" • ± 0.010" for 0.100" ≤ t < 0.180" • ±0.015" for t ≥ 0.180"
Weight:	±0.03 lb/ft² for t< 0.100" • ± 0.06 lb/ft² for 0.100" ≤ t < 0.180" • ± 0.08 lb/ft² for t ≥ 0.180"
Width (w):	w ≤ 48" ± 1/16" • w > 48" ± 1/8" • Integral Wall +1/4" / -1/8"
Length (L):	L ≤ 12' ± 1/8" • 12' ≤ L < 24' ± 1/4" • L ≥ 24' ± 1/2"
Standards:	Flat sheet widths up to 120"
	PolarX welded wall widths up to 120” wide
	Flat sheet and bulk coil up to 2000'
	PolarX Scuff Heights* • 12" • 18" • 24" • 36" • 48"

**PolarX scuff heights listed to represent the overall trailer dimensions including the floor mounted aluminum extrusion*

3.3 **Packaging and Shipping** | Depending on the nature of the order and required shipping method, PolarX 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.

3.4 **Fabrication and Installation Recommendations** | Safety: Always use safety glasses during fabrication of PolarX. 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: PolarX materials can be cleaned with mild detergents and water. Some solvents such as mineral spirits and acetone may be used, but it is recommended to test their effects on the surface of the material.

3.5 **Storage** | It is recommended to store PolarX materials indoors and keep dry for proper installation. Take care when handling and processing PolarX.

3.6 **Product Use and Liability** | PolarX 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 PolarX integral wall is protected under U.S. Patent #7,829,165.