

Pan Polymer Product Specifications

What is DexElar?:

DexElar is a patented polymer that possesses outstanding rigidity. DexElar's unique qualities allow it to be formulated for a wide variety of applications, which can improve the performance of products we use every day. This innovative and propriety material provides the product engineers and designers at Resource Conservation Technologies, Inc. with the versatility to substitute traditional materials and recreate a variety of HVAC/R products in an entirely new way.

Extreme Temperature Durability:

DexElar is resilient enough to withstand extreme conditions between -20°F (-28.9°C) to 260°F (126.7°C). In addition, DexElar features a high thermo-deflection temperature, the point at which material begins to soften, which is between 290°F (143.3°C) and 310°F (154.4°C). The advanced polymer is also UL 94-5VA rated and ASTM E-84 Class C compliant. With a high melting point and self-extinguishing characteristics, DexElar is a safer and more reliable material of choice than traditional HVAC/R product materials such as polypropylene.

High Load Bearing and Tensile Strength:

DexElar is also an incredibly strong material. As one of the strongest materials available on the market today, DexElar is an extreme load bearer that provides high tensile strength with a tensile yield strength of 8,900 pounds per square inch (psi).

High Impact Resistance:

DexElar also provides a significant improvement over the impact resistance of plastic-like ABS polymer materials. DexElar has over 200 times the impact strength of normal glass and has 30 times the impact strength of Acrylic. The proprietary material's "Tough as Steel" resistance to cracking and/or breaking makes it ideal for applications where HVAC/R products may experience attempted vandalism or extreme punishment from the elements.

PROPERTY	ASTM METHOD	VALUE
Izod Impact	D-256	12.0 ft-lbs/in
Tensile Strength	D-638	8,900 psi
Tensile Modulus	D-638	315,000 psi
Flexural Strength	D-790	13,500 psi
Flexural Modulus	D-790	345,000 psi
Rockwell Hardness	D-785	112 R
Specific Gravity	D-792	1.20
HDTUL Unannealed (264 psi)	D-648	270 °F
Mold Shrinkage	D-955	0.005-0.007 in/in
Melt Flow Index	D-1238 (300°C/1.2kg)	5.0 g/10 min
Flammability	UL 94-5VA	HB (1.5 mm)