

# CLEAR-GUARD™ HIGH PRESSURE CLEAR PVC PIPE



Clear-Guard™

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- 1/2" to 8" Sizes
- Cost-Effective Multipurpose Solution for Many Different Piping Applications
- 360° Visibility for Inside Applications



We build tough products for tough environments®

# HIGH PRESSURE CLEAR-GUARD™ CLEAR PVC PIPE

IPEX is pleased to introduce a new, high pressure clear PVC pipe with Schedule 40 pressure ratings that are higher than competing Schedule 80 products. IPEX Clear-Guard™ Clear PVC pipe provides a cost-effective multipurpose solution for many different piping applications. The benefits of rigid Xirtec®140 PVC piping are well documented including light weight, flexibility, durability and exceptional corrosion resistance. These benefits with the addition of clarity are now available in our Clear-Guard Clear PVC pipe product. Our clarity provides 360° visibility for several applications including dual-containment, clean room and site glass applications.

With IPEX's new high pressure clear PVC pipe you can specify Schedule 40 clear pipe for applications where previously only Schedule 80 clear pipe would suffice. Our high pressure formulation, with a long-term hydrostatic design basis of 3,150 psi allows for better clarity and more versatility for various applications.

## FEATURES & BENEFITS

- Sizes range from 1/2" to 8" Schedule 40 pipe
- Standard 10 foot lengths
- 20 foot lengths available by special order
- Certified to NSF-61
- 3,150 psi HDB – tested in accordance with ASTM D2837
- Pressure and Vacuum service

**Clear-Guard™ has a  
Higher Pressure Rating when  
Compared to the Competition**



## APPLICATIONS INCLUDE



- Clear-Guard Dual-Containment Systems
- Dual-Containment for High Purity Tubing
- Leak Detection Systems
- Agricultural & Aquacultural Applications
- Chemical Processing/Blending
- Healthcare/Hospital Use
- Laboratory Applications
- Environmental Applications
- Sight Gauge Assemblies
- Displays/Exhibits
- Food & Beverage Processing and more ...

## IPEX Sch. 40 PVC Clear-Guard™ vs Competition

Size	Product Code	IPEX Clear-Guard™ PVC 3150 = HDB* @ 73°F	Competitors Clear PVC 2000 = HDB @ 73°F	
		Sch. 40 Pressure Rating	Sch. 40 Pressure Rating	Sch. 80 Pressure Rating
1/2"	22003	480	300	420
3/4"	22009	390	240	340
1"	22014	360	220	320
1-1/4"	22026	290	180	260
1-1/2"	22031	260	170	240
2"	22036	220	140	200
3"	22045	210	130	190
4"	22053	180	110	160
6"	22057	140	90	140
8"	22198	120	80	–

\* HDB = Hydrostatic Design Basis – the established stress value for a compound at a specific temperature

# Physical Properties – Property Value Test Method

## Compatibility & Pressure Rating

IPEX Clear-Guard Clear PVC pipe is produced from a rigid, virgin Polyvinyl Chloride (PVC) compound with a Cell Classification of 15334 per ASTM D1784. This material also enables Clear-Guard Clear PVC piping to carry a maximum service temperature of 140°F when appropriate temperature/pressure de-rating factors are applied.

As with our Xirtec140 PVC piping system our pressure ratings are dependent on the pipe diameter and the operating temperature of the system. As temperatures increase, the pressure rating of the system decreases. Refer to the table for de-rating factors on our Clear-Guard pressure ratings.

This material is compatible with Xirtec140 PVC pipe, fittings and valves, and can be joined into existing PVC systems using the appropriate solvent cement joining process.

Operating Temperature (°F)	Operating Pressure De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22



## Joining Techniques

IPEX Clear-Guard Clear PVC pipe is easily joined by the solvent cementing process, providing a quick, strong, leak-tight seal for pressure applications.

To maintain the system's clarity, IPEX recommends the use of a clear, medium-bodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. As an added advantage due to the product's transparency, joint integrity is readily identified during the solvent cement joining process.

Details on proper solvent cementing techniques are available and must be reviewed for proper assembly and joint integrity.



**MAXIMUM SERVICE TEMPERATURE**  
140°F

**CELL CLASSIFICATION**  
15334  
ASTM D1784

**SPECIFIC GRAVITY**  
1.32 g/cm<sup>3</sup> @73°F  
ASTM D792

**TENSILE STRENGTH**  
Yield 6,100 psi @73°F  
ASTM D638

**COEFFICIENT OF LINEAR EXPANSION**  
3.8 x 10<sup>-5</sup> in/in °F  
ASTM D696

**HEAT DISTORTION TEMPERATURE**  
150°F  
ASTM D648

**HARDNESS**  
Shore D 76  
ASTM D2240

### ⚠️ WARNING

AIR/GAS



**NEVER** use this product or other rigid PVC/CPVC piping products for the transportation or storage of compressed air or gases, nor the testing of these systems using compressed air or gases.

**Use of compressed air or gas in PVC/CPVC pipe, valves and fittings can result in explosive failures and cause severe injury or death.**

### ⚠️ CAUTION

Testing under actual use conditions is recommended.

IPEX Clear-Guard™ Clear PVC pipe contains minor UV inhibitors and is not recommended for outdoor use (direct exposure to sunlight). Direct exposure to sunlight will result in discoloration, loss of clarity, and loss of physical properties.

Standard threading or cut grooving cannot be conducted with IPEX Schedule 40 Clear pipe due to insufficient wall thickness.

**Clear-Guard™ Clear PVC pipe is designed for indoor applications where there is no significant exposure to ultraviolet sources or to direct sunlight.**

## SALES AND CUSTOMER SERVICE

IPEX Inc.

Toll Free: (866) 473-9462 (IPEX INC)

ipexna.com

### About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

Markets served by the IPEX Group of Companies include:

- Electrical systems
- Telecommunications and utility piping systems
- PVC, CPVC, PP, ABS, PEX, FR-PVDF and PE pipe and fittings (1/4" to 48")
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- PE Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems

Products manufactured by IPEX Inc.

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A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.

