

XIRTEC PVC & CORZAN CPVC

PVC Sch 40 – 1/2" - 24"
PVC Sch 80 – 1/4" - 24"
CPVC Sch 40 – 1/2" - 16"
CPVC Sch 80 – 1/2" - 16"



THE IPEX SYSTEM ADVANTAGE

IPEX vinyl process piping systems; a complete line of pipe, fittings and valves to meet all your process system requirements.

IPEX developed the Xirtec®140 (PVC) and Corzan® (CPVC) systems to meet industry demands for a complete Pipe, Valves and Fittings (PVF) package that is designed, produced and backed by a single manufacturer. These systems are engineered and manufactured to IPEX's strict quality, performance and dimensional standards, and therefore eliminate the problems inherent in purchasing and installing piping system components manufactured by several different companies.

IPEX high-performance vinyl systems are designed to meet the temperature, pressure and size requirements of piping systems used in chemical processes and other industrial applications. They feature outstanding resistance to photodegradation, creep stress and immunity to oxidation, and are exceptionally suited for use with a wide range of acids, alcohols, salts and halogens. The perfect extended service, low maintenance alternative to common and exotic metal systems.

Xirtec140 pipe and fittings and Corzan pipe are available in Schedule 40 and 80, IPS. Corzan fittings are available in Schedule 80.

APPLICATIONS

- Plant chemical distribution lines
- Water and wastewater
- Acid systems for refineries, pickling lines and plating shops
- Chlorine injection, chlorine dioxide and chloralkali plant piping
- Steel wire plants
- Battery manufacturing
- Bleach lines in textile and paper mills
- Alum and caustic handling systems
- Circuit board manufacturing
- Semiconductor
- Pharmaceutical
- Cooling water and cooling tower systems
- Tailing and slurry lines
- Washwater recovery systems
- Plant water supply
- Brine and seawater systems
- Fish farming
- Waterworks
- Aquariums and swimming pools
- Irrigation systems in golf courses, greenhouses, etc.

STANDARDS



ADVANTAGES

- 1 Lower Installation Costs, Easy Handling**

In addition to a lower material cost, Xirtec & Corzan pipe can significantly reduce labor and transportation costs on a typical installation. The reason? They are lightweight, easily handled, stored, cut and joined.
- 2 Extended Life**

Xirtec PVC and Corzan CPVC provide years of maintenance free service. Our materials will not rust, pit, scale or corrode on either interior or exterior surfaces. Thermoplastic piping systems in a variety of demanding industrial applications have operated successfully for over 45 years.
- 3 Superior Underground Performance**

Xirtec and Corzan CPVC are immune to damage from naturally corrosive soil conditions as well as electrochemical and galvanic corrosion. This is particularly advantageous in underground installations where galvanic reaction often causes damage to metal piping products.
- 4 Exceptional Chemical Resistance**

The IPEX vinyl systems, including pipe, valves and fittings, provide outstanding resistance to a wide range of chemicals such as most acids, alcohols, alkalies, salt solutions, halogens and more.
- 5 Improved Flow**

Xirtec and Corzan have a substantially lower Roughness Factor than metal and other materials, and since they do not rust, pit, scale or corrode, the interior walls remain smooth in virtually any service.
- 6 Potable Water Approved**

Xirtec140 polyvinyl chloride (PVC) and Corzan chlorinated polyvinyl chloride (CPVC) are suitable for use with potable water as listed with the National Sanitation Foundation (NSF) and CSA International.
- 7 Exceptional Temperature Range**

IPEX vinyl systems are designed to meet a broad range of service temperatures. Xirtec has a recommended maximum service temperature of 140°F (60°C) under pressure. Corzan has a maximum service temperature of 200°F under pressure with occasional exposure to boiling water (212°F / 100°C) in drainage.
- 8 Lower Thermal Conductivity**

With a low thermal conductivity factor, IPEX vinyl systems have less heat loss or gain, thus sustaining service temperature more efficiently than metal piping. As a result, pipe insulation is often not required.
- 9 Environmentally Responsible**

With energy conservation a prime concern, you can rely on the fact that IPEX's manufacturing process for Xirtec and Corzan piping materials requires less than half the energy needed to produce the equivalent size of carbon steel or steel alloy materials.



i DID YOU KNOW?

One of the outstanding characteristics of PVC is its resistance to ignition. This is demonstrated by its flash point of 730°F, compared to 400°F for wood chips.

CPVC offers an even greater fire safety profile than PVC. CPVC's ignition resistance is demonstrated by its flash point of 900°F, with a low flame spread as well.

HIGH PRESSURE CLEAR-GUARD CLEAR PVC PIPE

1/2" - 8"

Clear-Guard™

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.

ADVANTAGES

- 1 Sizes range from 1/2" to 8" Schedule 40 pipe
- 2 Standard 10 foot lengths
- 3 20 foot lengths available by special order
- 4 Certified to NSF-61
- 5 3,150 psi HDB – tested in accordance with ASTM D2837
- 6 Pressure and Vacuum service

APPLICATIONS

- 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 ...

STANDARDS



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

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.

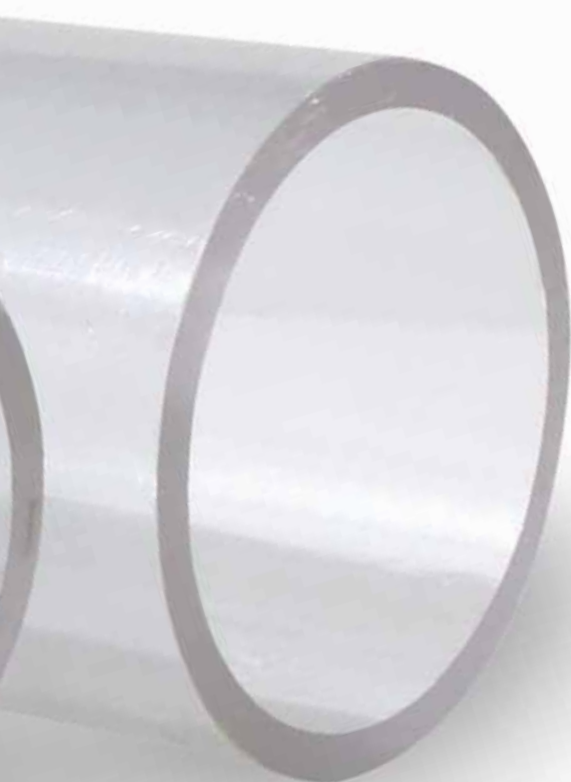
JOINING TECHNIQUES

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.

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



i DID YOU KNOW?

Clear-Guard™ has a higher Pressure Rating when compared to the competition clear product

IPEX Clear-Guard PVC 3150 = HDB* @ 73°F Pressure Rating			
Size	Product Code	IPEX Sch 40 clear	Competition Sch 80 clear
1/2"	22003	480	400
3/4"	22009	390	333
1"	22014	360	286
1-1/4"	22026	290	250
1-1/2"	22031	260	222
2"	22036	220	200
3"	22045	210	182
4"	22053	180	167
6"	22057	140	133
8"	22198	120	125

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

CORZAN® HP

The IPEX CORZAN® HP CPVC system has been specially developed with greater pressure and high temperature performance. IPEX CORZAN HP has a 25% higher pressure rating than the equivalent sized CPVC at 180°F. Both schedule 80 pipe and fittings are certified to NSF SE 8459. This specification requires CPVC pipe to meet or exceed a 24448 cell class and have an HDB of 4000psi at 72°F and 1250psi at 180°F. It also requires the CPVC fitting compound to have an HDB of 4000psi at 72°F and 1000psi at 180°F. This makes IPEX CORZAN HP the only CPVC system with pressure rated pipe AND fittings.

ADVANTAGES

- 1 IPEX Corzan HP** pipe possesses a 24448 cell class. That means that the impact strength and heat deflection temperature of our HP CPVC is superior compared to generic 23447 CPVC compounds.
- 2 IPEX Corzan HP** is approved by the US Coast Guard for use on US flagged ships. (Coast Guard Approval Number: 164.141/B35/0)
- 3 IPEX Corzan HP** utilizes the same solvent cement installation method as CORZAN CPVC and can be joined using CORZAN grade solvent cements and primers that meet or exceed the requirements of ASTM F656. Expansion coefficients, support spacing, and chemical resistance remain identical to IPEX CORZAN CPVC eliminating the for additional installer training.

APPLICATIONS

- Chemical processing
- Semiconductor and electronics
- Water treatment
- Industrial manufacturing
- Mining
- Power generation

MARINE & OFFSHORE APPLICATIONS

- Potable water
- Deck wash system – supply and drainage
- Desalinization and chemical waste treatment
- Black Water
- Brine
- Ballast treatment piping

STANDARDS



IPEX CORZAN HP meets or exceeds the requirements of:

- ASTM F441 and NSF SE 8459 for Sch80 pipe
- ASTM F439 and NSF SE 8459 for Sch80 fittings
- NSF 61

A large, dark grey IPEX CORZAN HP pipe and fitting assembly is shown. The pipe is vertical on the right side, with the text "IPEX CORZAN HP" printed vertically on it. A horizontal pipe connects to it from the left, with an elbow fitting. A small label on the fitting reads "IPEX CORZAN HP NSF SE 849".

IPEX CORZAN HP
NSF SE 849

CORZAN VS CORZAN HP

SCHEDULE 80 PIPE PRESSURE RATINGS

Operating Temp. Pipe / Fitting Size	70°F		120°F		180°F	
	Corzan psi	Corzan HP psi	Corzan psi	Corzan HP psi	Corzan psi	Corzan HP psi
1/2"	850	850	553	595	213	264
3/4"	690	690	449	483	173	214
1"	630	630	410	441	158	195
1-1/4"	520	520	338	364	130	161
1-1/2"	470	470	306	329	118	146
2"	400	400	260	280	100	124
2-1/2"	420	420	273	294	105	130
3"	370	370	241	259	93	115
4"	320	320	208	224	80	100
6"	280	280	182	196	70	87
8"	250	250	163	175	63	78



DID YOU KNOW?

Corzan® HP pipe and fittings is available up to 8" diameter, and boasts a 25 percent higher pressure rating than standard CPVC at 180°F (82°C). It is also the only fully pressure-rated schedule 40/80 piping system on the market today.

PRODUCT SELECTION CHART

PVC PIPE PRESSURE RATINGS

Sizes		Schedule 40 PVC			Schedule 80 PVC		
Diameter (in.)	O.D. (in.)	Wall Thickness (in.)	I.D. (in.)	*Max. Pressure 73°F (psi)	Wall Thickness (in.)	I.D. (in.)	*Max. Pressure 73°F (psi)
1/4	.540	–	–	–	.119	.302	1,130
3/8	.675	–	–	–	.126	.423	920
1/2	.840	.109	.602	600	.147	.526	850
3/4	1.050	.113	.804	480	.154	.722	690
1	1.315	.133	1.029	450	.179	.936	630
1-1/4	1.660	.141	1.360	370	.191	1.255	520
1-1/2	1.900	.145	1.590	330	.200	1.476	470
2	2.375	.154	2.047	280	.218	1.913	400
2-1/2	2.875	.203	2.445	300	.276	2.290	420
3	3.500	.216	3.042	260	.300	2.864	370
4	4.500	.237	3.998	220	.337	3.786	320
6	6.625	.280	6.031	180	.432	5.709	280
8	8.625	.322	7.941	160	.500	7.565	250
10	10.750	.365	9.976	140	.593	9.493	230
12	12.750	.406	11.888	130	.687	11.294	230
14	14.000	.438	13.072	130	.750	12.412	220
16	16.000	.500	14.936	130	.843	14.224	220
18	18.000	.562	16.809	130	.937	16.014	220
20	20.000	.593	18.743	120	1.031	17.814	220
24	24.000	.687	22.544	120	1.218	21.418	210

CPVC PIPE PRESSURE RATINGS

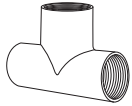
Sizes		Schedule 40 CPVC			Schedule 80 CPVC				Schedule 80 HP CPVC			
Diameter (in.)	O.D. (in.)	Wall Thickness (in.)	I.D. (in.)	*Max. Pressure 73°F (psi)	Wall Thickness (in.)	I.D. (in.)	*Max. Pressure 73°F (psi)	*Max. Pressure 180°F (psi)	Wall Thickness (in.)	I.D. (in.)	*Max. Pressure 73°F (psi)	*Max. Pressure 180°F (psi)
1/2	.840	.109	.602	600	.147	.526	850	213	.147	.526	850	264
3/4	1.050	.113	.804	480	.154	.722	690	173	.154	.722	690	214
1	1.315	.133	1.029	450	.179	.936	630	158	.179	.936	630	195
1-1/4	1.660	.141	1.360	370	.191	1.255	520	130	.191	1.255	520	161
1-1/2	1.900	.145	1.590	330	.200	1.476	470	118	.200	1.476	470	146
2	2.375	.154	2.047	280	.218	1.913	400	100	.218	1.913	400	124
2-1/2	2.875	.203	2.445	300	.276	2.290	420	105	.276	2.290	420	130
3	3.500	.216	3.042	260	.300	2.864	370	93	.300	2.864	370	115
4	4.500	.237	3.998	220	.337	3.786	320	80	.337	3.786	320	100
6	6.625	.280	6.031	180	.432	5.709	280	70	.430	5.709	280	87
8	8.625	.322	7.941	160	.500	7.565	250	63	.500	7.565	250	78
10	10.750	.365	9.976	140	.593	9.493	230	58	–	–	–	–
12	12.750	.406	11.888	130	.687	11.294	230	58	–	–	–	–
14	14.000	.438	13.072	130	.750	12.412	220	55	–	–	–	–
16	16.000	.500	14.936	130	.843	14.224	220	55	–	–	–	–

* Maximum pressure @

XIRTEC 140 PVC SCH. 40 WHITE

Dimension inches	Sch 40 WHITE Product Code	Universal Number
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Tee Fpt x Fpt x Fpt



Dimension inches	Sch 40 WHITE Product Code	Universal Number
1/2	035844	405005
3/4	035845	405007
1	035846	405010
1 1/4	035847	405012
1 1/2	035848	405015
2	035849	405020

90° Elbow Soc x Soc



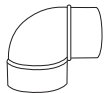
Dimension inches	Sch 40 WHITE Product Code	Universal Number
1/2	035519	406005
3/4	035520	406007
1	035521	406010
1 1/4	035522	406012
1 1/2	035523	406015
2	035524	406020
2 1/2	035525	406025
3	035526	406030
4	035527	406040
5	035528	406050
6	035529	406060
8	035530	406080
10	035928	406100
12	035929	406120

Fabricated 90° Elbow Soc x Soc



Dimension inches	Sch 40 WHITE Product Code	Universal Number
10	125522	406100F
12	125511	406120F
14	125513	406140F
16	125515	406160F
18	125518	406180F
20	125519	406200F
24	125520	406240F

90° Elbow Soc x Sp



Dimension inches	Sch 40 WHITE Product Code	Universal Number
10	235928	409100
12	235929	409120

Dimension inches	Sch 40 WHITE Product Code	Universal Number
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90° Elbow Soc x Fpt



Dimension inches	Sch 40 WHITE Product Code	Universal Number
1/2	035506	407005
3/4	035507	407007
1	035508	407010
1-1/4	035509	407012
1-1/2	035510	407015
2	035511	407020
2-1/2	035512	407025
3	035589	407030
4	035513	407040

90° Elbow Fpt x Fpt



Dimension inches	Sch 40 WHITE Product Code	Universal Number
1/2	035538	408005
3/4	035539	408007
1	035540	408010
1 1/4	035541	408012
1 1/2	035542	408015
2	035543	408020

90° Reducing Elbow Soc x Soc



Dimension inches	Sch 40 WHITE Product Code	Universal Number
3/4 x 1/2	035535	406101
1 x 1/2	035536	406130
1 x 3/4	035978	406131
1 1/4 x 1/2	235029	406166
1 1/4 x 3/4	235030	406167
1 1/4 x 1	035991	406168
1 1/2 x 1/2	235031	406209
1 1/2 x 1	235032	406211
2 x 1 1/2	035537	406251

90° Reducing Elbow Soc x Fpt



Dimension inches	Sch 40 WHITE Product Code	Universal Number
1/2 x 3/4	035514	407074
3/4 x 1/2	035515	407101
1 x 1/2	035516	407130
1 x 3/4	035517	407131
1 1/4 x 1	051007	407168
1 1/2 x 1	035594	407211
2 x 1 1/2	035518	407251