XIRTEC® CPVC MADE WITH CORZAN® CPVC POTABLE COMPATIBILITY GUIDE

FIRST EDITION

IPEX
by aliaxis

Xirtec® CPVC made with Corzan® CPVC Potable Compatibility Guide

Xirtec® CPVC (Chlorinated-Polyvinyl Chloride)

1st Edition

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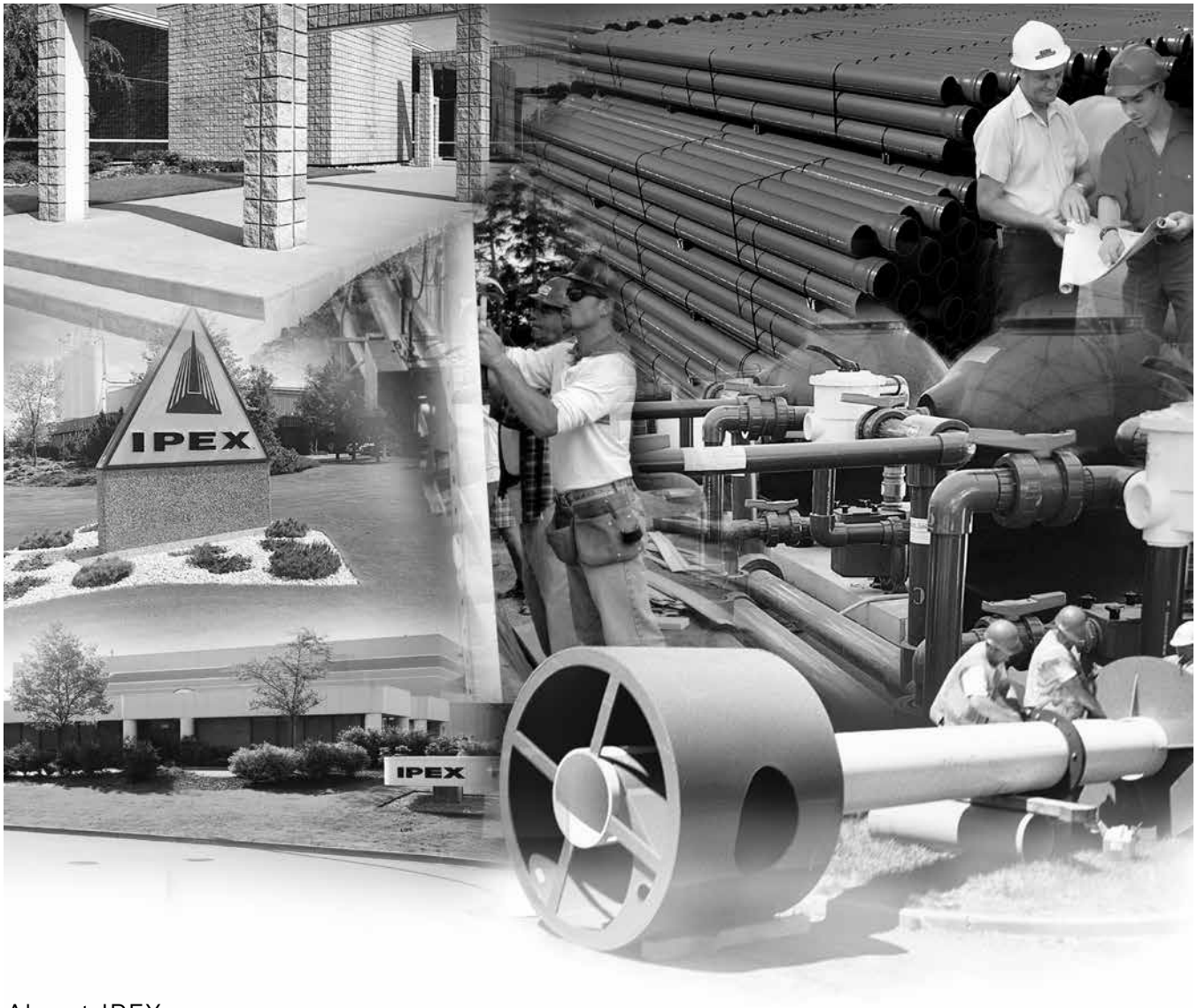
For information contact: IPEX, Marketing, 1425 North Service Road East, Oakville, Ontario, Canada, L6H 1A7



About IPEX

At IPEX, we have been manufacturing non-metallic pipe and fittings since 1951. We formulate our own compounds and maintain strict quality control during production. Our products are made available for customers thanks to a network of regional stocking locations from coast-to-coast. We offer a wide variety of systems including complete lines of piping, fittings, valves and custom-fabricated items.

More importantly, we are committed to meeting our customers' needs. As a leader in the plastic piping industry, IPEX continually develops new products, modernizes manufacturing facilities and acquires innovative process technology. In addition, our staff take pride in their work, making available to customers their extensive thermoplastic knowledge and field experience. IPEX personnel are committed to improving the safety, reliability and performance of thermoplastic materials. We are involved in several standards committees and are members of and/or comply with the organizations listed on this page.

For specific details about any IPEX product, contact our customer service department.

INTRODUCTION

Xirtec® CPVC made with Corzan® CPVC is a thermoplastic piping system that may be used for the distribution of potable water in the United States and where approved by authorities having jurisdiction (AHJ). Xirtec® CPVC is a registered trademark used under license. Pipe and fittings are manufactured using Corzan®* CPVC compound designed for the distribution of hot and cold potable water.

Understanding Safety Alert Messages

It is important to read and understand this manual. It contains information to help maintain safety and prevent problems. Improper installation or use of Xirtec® CPVC can result in personal injury and/or property damage. It is important to be aware of and recognize safety alert messages as they appear in this manual.

The types of safety alert messages are described below.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid personal injury or death.

WARNING

"**WARNING**" Indicates a hazardous situation which, if not avoided, could result in severe injury or death.

CAUTION

"**CAUTION**" Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

"**NOTICE**" Indicates a hazardous situation which, if not avoided, may result in system failure and property damage.

The use of the word "**NOTE**" signifies special instructions which are important but are not related to hazards.

*Xirtec® CPVC piping system is made with Corzan® CPVC compound. Corzan® is a registered trademark of the Lubrizol Corporation. Distributed in USA by IPEX USA LLC, Pineville, North Carolina.

NOTICE

The Corzan CPVC compound used to make Xirtec® CPVC pipe, valves and fittings can be damaged by contact with chemicals found in some construction products. Care must be taken to ensure that products contacting Xirtec® CPVC are chemically compatible.

Confirm chemical compatibility of Xirtec® CPVC products made with Corzan CPVC compound by checking with the FBC System Compatible Program[1] or the manufacturers of such common piping systems components as:

- Fire Stop Materials
- Pipe Insulation and Adhesives
- Heat Trace Cables
- Wear Pads or Other Rubber Components
- Thread Sealants

Contact an IPEX representative for any further consultation or clarification before using Xirtec® CPVC with another component.

The general information below gives an overview of chemical compatibility concerns for Xirtec® CPVC potable water piping. Please refer to the FBC System Compatible program at https://www.lubrizol.com/CPVC/FBC-System-Compatible-Program for the most up to date list of compatibility.

Solvent Cements and Primers — These products are designed for use in joining Xirtec® CPVC by way of solvent welding. The application of these products should be limited to the spigot-socket connection surfaces of a particular joint. Widespread or careless application of cement or primer to other parts of the piping system must be avoided. This may cause softening and weakening of structural areas of the piping system.

Flexible Wire and Cables — These products may contain plasticizers (also called softeners) which if in contact with Xirtec® CPVC may impose harm in the form of environmental stress cracking.

Rubber and Flexible Materials — For the same reasons as with flexible wires and cables, care must be taken when Xirtec® CPVC is installed in direct contact with gaskets, electrical tape, hanger padding, vinyl dipped metal parts and flexible hoses or tubes. Plasticizers contained in these substances may impose harm to Xirtec® CPVC when in direct contact.

Fungicides and Mold Inhibitors — If ever applying these products in close proximity to Xirtec® CPVC piping during water damage or mold cleanup, isolate the piping from these products by use of an external wrap or sleeve. Avoid direct contact of these products with Xirtec® CPVC.

Grease and Cooking Oils — If pipe is installed in a kitchen environment, avoid direct or airborne contact with grease or cooking oils.

Leak Detection Substances — Products such as dishwashing liquids with synthetic detergents along with odor emitting products such as colognes, perfumes or scented oils all must not come into contact with Xirtec® CPVC due to their high content of solvents which are potentially harmful to Xirtec® CPVC.

Proximity to Metal Piping — Some potentially harmful effects to Xirtec® CPVC from nearby installation of metallic piping include burning from contact with torches or molten material and solder flux, and incompatible thread sealants, residual oils, lubricants or leak detectors all of which may be commonly used on metal piping.

Paint — Only water-based latex paint may be used on Xirtec® CPVC should the piping ever need to be painted. DO NOT USE oil-based paints with Xirtec® CPVC.

Polyurethane Spray-On Foams — Some of these products have been tested to be compatible for direct contact with Xirtec® CPVC piping. However, the manner in which they are applied is important. To minimize heat applied to Xirtec® CPVC due to exothermic heat released by the foam, it is strongly recommended that foam be applied in a maximum layer thickness of 2 inches (50 mm) and that a time lapse of 10 minutes between application of layers is observed. Further information on these products may be obtained from the Spray Polyurethane Foam Alliance (SPFA).

If there are chemical compatibility uncertainties with Xirtec® CPVC, IPEX recommends isolating the suspected product from contact with Xirtec® CPVC pipe, valves or fittings.

Packing Oils and Pump Grease — Equipment containing packing oil and pump grease must be thoroughly flushed with water before connecting to an Xirtec® CPVC piping system.

[1] The FBC System Compatible Program is published and updated by Lubrizol Advanced Materials, Inc.

WARNING

- **NEVER** use or test Xirtec® CPVC pipe, fittings and valves with compressed air or other gases.
- **DO NOT** use air-over-water boosters.

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

WARNING

Follow all preparation and installation procedures.

WARNING

MAINTENANCE, AGING AND REPAIRS

ALWAYS refer to SECTION 4 of this Technical Manual before commencing any maintenance or repairs on any Xirtec® CPVC products. Failure to follow instructions may cause cracks or fractures to develop in Xirtec® CPVC products resulting in property damage and personal injury.

NOTICE

Xirtec® CPVC (1/2" - 6") may be used in hot and cold potable water distribution systems. All installation guidelines and recommendations found in this manual are for potable water applications. Volume 1 *Vinyl Process Piping Systems* of Industrial Technical Manual Series should be referenced for all other applications.

NOTICE

AGING OF CORZAN® TECHNOLOGY

Corzan®* Technology aging can result in changes to physical characteristics such as increased brittleness and the reduction in impact resistance. This is precipitated by prolonged elevated operating temperatures or prolonged exposure to UV light. Refer to SECTION 4 of this Technical Manual for further details.

CAUTION

Xirtec® CPVC must be installed at least 6" away from any external heat source with a surface temperature greater than 160°F.

CAUTION

Do not connect Xirtec® CPVC products directly to a hot water heater or boiler. When Xirtec® CPVC piping is connected to a gas-fired or electric water heater, use a metal nipple to ensure Xirtec® CPVC piping is a minimum 12" away from the appliance.

NOTE: Verify Code requirements prior to installation.

SUPPLEMENTAL INFORMATION — DO'S AND DON'TS

⚠ CAUTION

Refer to the contents of this Technical Manual for complete instructions and guidelines.

DO'S

- Read the manufacturer's installation instructions and install product accordingly
- Follow recommended safe work practices
- Use only PTFE (Teflon™) tape to seal threaded connections
- Make certain that gasket lubricants or fire-stop materials are compatible with Xirtec® CPVC product
- Keep pipe and fittings in original packaging until needed
- If pipe and fittings are stored outdoors, cover with a well-ventilated white tarp
- Follow handling and storage procedures
- Only use tools on Xirtec® CPVC pipe and fittings as described in this manual
- Cut the pipe ends squarely
- Deburr and bevel the pipe end with a chamfering tool before solvent welding
- Avoid puddling of solvent cement in fittings and pipe
- Make certain no solvent cement is on the mating faces of flanges, valves or unions, as well as the threaded portion of adapter fittings
- Ensure excess primer and solvent cement does not run inside pipe, fittings and valves
- Follow Xirtec® CPVC recommended cure times before pressure testing
- Slowly fill piping system with water and bleed the air from the system before pressure testing
- Use water hammer arrestors
- Allow for movement due to expansion and contraction
- Install Xirtec® CPVC at least 6" away from any external heat source with a surface temperature greater than 160°F.

DON'TS

- Don't use petroleum or solvent-based paints, sealants or lubricants
- Don't install adhesive tape, insulated wire, or cable in direct contact with Xirtec® CPVC product
- Don't use solvent cement that has exceeded its shelf life or has become discolored or jelled
- Don't thread or drill Xirtec® CPVC pipe
- Don't allow the primer and/or the solvent cement to run inside an Xirtec® CPVC valve
- Don't use solvent cement near sources of heat or open flame, or when smoking
- Don't pressure test until recommended cure times have elapsed
- Don't pressure test with air
- Don't cut pipe with dull or broken cutting-tool blades
- Don't use ratchet cutters
- Don't use Xirtec® CPVC product that's been stored unprotected outdoors and is faded in color
- Don't allow threaded rod to come in contact with the pipe, for example, threaded rods used to connect pipe hangers
- Don't connect Xirtec® CPVC products directly to a hot water heater or boiler.

NOTIFICATION TO JOBSITE BUILDING TRADES

THE FOLLOWING NOTICE SHOULD BE PRINTED AND POSTED AT THE JOBSITE.

NOTICE

Xirtec® CPVC Potable Water Piping System

Please read the following notice before beginning any activity which could come in contact with this system:

Xirtec® CPVC piping components may become damaged by certain substances and construction practices.

DO NOT stack, support, hang equipment, or hang flexible wire/cable, especially communications cable, or other material on the Xirtec® CPVC piping system.

ONLY system compatible materials including, but not limited to, solvent cements, caulks and sealants, as noted in the Xirtec® CPVC Technical Manual, should be used in contact with the Xirtec® CPVC piping system.

DO NOT expose Xirtec® CPVC products to incompatible substances, such as cutting oils, non-water based paints, packing oils (commonly found in pumps), traditional pipe thread paste and dope, fungicides, termiticides, insecticides, detergents, building caulks, adhesives tape, solder flux, flexible wire/cable (with special consideration for communications cabling), and non-approved spray foam insulation materials.

DO NOT expose Xirtec® CPVC products to open flame, solder, or soldering flux.

DO NOT drop, distort, or impact Xirtec® CPVC products or allow objects to be dropped on them.

DO NOT handle Xirtec® CPVC products with gloves contaminated with oils (hydrocarbons) or other incompatible materials.

Failure to follow this notice may cause cracks or fractures to develop in Xirtec® CPVC products resulting in personal injury and property damage due to leaks or flooding. The presence of any visible cracks may require partial or full system replacement. For additional information contact the general contractor or system installer.

Refer to the Xirtec® CPVC Potable Water Technical Manual & for Additional Xirtec® CPVC Product Information, contact IPEX at 800-463-9572 or visit ipexna.com

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SALES AND CUSTOMER SERVICE

IPEX U.S.A LLC
Toll Free: (800) 463-9572
ipexna.com

About IPEX by Aliaxis

As leading suppliers of thermoplastic piping systems, IPEX by Aliaxis provides our customers with some of the world's largest and most comprehensive product lines. All IPEX by Aliaxis 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 earned a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX by Aliaxis products are:

- Electrical systems
- Telecommunications and utility piping systems
- 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
- PVC, CPVC, PP, PVCO, ABS, PVDF and PE pipe and fittings

Xirtec® is a registered trademark used under license.
Xirtec® CPVC piping systems are made with Corzan® CPVC compounds.
Corzan® is a registered trademark of the Lubrizol Corporation.

This literature is published in good faith and is believed to be reliable. However it does not represent and/or warrant in any manner the information and suggestions contained in this brochure. Data presented is the result of laboratory tests and field experience.

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

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