

PVC-B Series

PVC Food and Sanitary Hose with Polyester Braid Reinforcement

This highly flexible and economical hose is ideally suited for the handling of food and beverages, as well as bulk pharmaceuticals and cosmetics. Manufactured from FDA materials, it is crystal clear to allow the monitoring of fluid flow. This lightweight hose is frequently used on liquid fill packaging machines. It is suitable for use in deionized water and potable water systems. It can be used as a pneumatic line or for breathing air lines.

PVC Advantage:

Sanitary - FDA approved materials meet or exceed **3A, USDA, and California Proposition 65** requirements. **NSF 51 and NSF 61** approved hose is also available.

Chemical Compatibility - PVC is resistant to a wide range of common industrial chemicals (consult with the factory for specific recommendations).

Compatible - PVC is suitable for general use in slaughtering, processing, transporting and storage areas in direct contact with meats or poultry food products prepared under Federal Inspection. It is silicone-free.

Fittings:

Over 40 standard fitting styles available, including; Flanged, Sanitary, JIC, NPT, Cam Lock, PFA Encapsulated, Solid Kynar and Polypropylene fittings. Standard material is 316 Stainless Steel. Non-Wetted fitting material is Epoxy Powder coated Carbon Steel. Fitting designs feature high performance smooth internal surface finishes exceeding **FDA, USDA, Pharmacopoeia class VI and 3A** standards. All collars are Stainless Steel.

Specifications:

Temperature Range: 25°F (-4°C) to 150°F (+65°C)

I.D. NOMINAL (in.)	O.D. NOMINAL (in.)	MAXIMUM WORKING PRESSURE (psi) @70°F (20°C)	MAXIMUM WORKING PRESSURE (psi) @122°F (50°C)	MINIMUM BEND RADIUS (in.)	APPROXIMATE WEIGHT PER 100 FEET (lbs)
3/16	0.375	250	150	1.6	4
1/4	0.438	250	150	2.5	6
5/16	0.531	250	135	3.0	8
3/8	0.594	225	125	3.5	9
1/2	0.750	200	100	4.5	13
5/8	0.891	200	100	5.5	18
3/4	1.031	150	85	7.0	22
1	1.300	125	75	8.5	30
1 1/4	1.620	100	55	11.0	46
1 1/2	1.938	100	50	14.0	64
2	2.490	75	35	18.0	94

Maximum working pressure decreases as temperature increases.

Rated pressures can only be obtained with proper coupling procedures

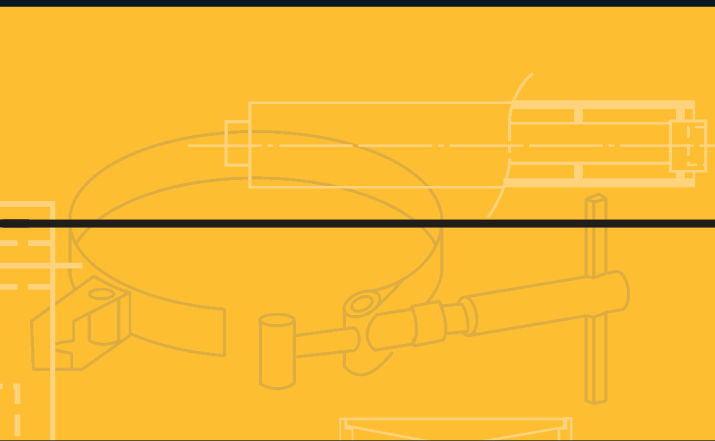


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15-Chemical Tubing PVC-CL-06-09-14-V001

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Double Containment Piping Systems



INDUSTRIAL SYSTEMS

YOUR INDUSTRIAL SPECIALIST

- Guardian™ Vinyl Double Containment Systems
- Clear-Guard Double Containment System
- CustomGuard® Double Containment Systems
- Encase™ Acid Waste PP Double Containment System
- Centra-Guard™ Electronic Low Point Leak Detection
- IPEX PAL-AT Cable Leak Detection



IPEX

We build tough products for tough environments®

Leaks are NOT an option



Certain environments demand *fail-safe* systems. No leaks. No risk. The professionals at IPEX understand the complexity of design and installation for demanding double containment applications. And, unlike other manufacturers of double containment systems, our specialists are part of a division of IPEX dedicated solely to the design, production and installation of state-of-the-art double containment systems. With more than 25 years of experience and success, we are the proven experts.

The IPEX family of double containment systems includes: Guardian™ PVC and CPVC, and Clear-Guard™ PVC pressure and drainage systems, CustomGuard® FRP and metal pressure systems, Encase™ PolyPro drainage systems, Centra-Guard™ and PAL-AT leak detection systems.

Safety and environmental concerns are top priorities on today's industrial agenda. Reduction of emissions, energy conservation and prevention of ground water contamination are some of the areas where regulations are increasingly defining an important line between utilization and exploitation of our planet's resources.

For most common chemical-waste or process applications, IPEX offers systems that are both simple yet highly advanced state-of-the-art technologies. These systems utilize pre-assembled components that guarantee reliability, ease of installation, fewer joints (UP TO 40-60% LESS THAN CONVENTIONAL SYSTEMS) and quick delivery. With material choices that include Xirtec® 140 PVC, Corzan® CPVC, flame and non-flame retardant PP, the Guardian and Encase systems can proficiently handle a vast majority of applications.

YOUR DOUBLE CONTAINMENT SPECIALIST

Guardian™

Clear-Guard™

CustomGuard®

Encase™

Centra-Guard™



By investing heavily in people and technology, IPEX has amassed years of expertise in design and fabrication of double containment systems. In addition, IPEX is the only manufacturer of double containment systems offering all of the following:

- A specialized and dedicated division dealing exclusively with double containment.
- The ability to manufacture double containment components in-house.
- A variety of materials including thermoplastics, thermosets, metallic and dissimilar systems.
- Both drainage and pressure systems.
- A patented system with 40-60% FEWER JOINTS than conventional systems.
- Both off-the-shelf and custom-designed systems.
- Electronic low point as well as cable leak detection systems.





Guardian™

For more than 25 years, Guardian™ systems have been the benchmark in pressure and drainage double containment. Guardian systems are available in tough industrial grade PVC and even tougher high temperature CPVC. Guardian's patented Centra-Lock design reduces the required joints by 40 - 60% COMPARED TO CONVENTIONAL SYSTEMS.

Material	Carrier	Containment
Xirtec 140 PVC	1/2" - 12"	2" - 18"
Corzan CPVC	1/2" - 12"	2" - 18"

Larger sizes are available from IPEX.



Made from PVC and Corzan® CPVC, these systems offer a complete selection of pre-tested modular components that are considered unmatched in the industry.

FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

SPECIFICATIONS

MATERIAL SELECTION

Xirtec®140 PVC and Corzan® CPVC are the chosen materials for the Guardian systems. IPEX controls not only the design and fabrication of the systems, but also the blending of the PVC resin, the extrusion and injection molding of most components. This unparalleled consistency of quality and resin as well as dimensional compatibility results in superior systems that are unmatched in the industry.

DESIGN

Guardian systems offer a complete selection of pretested modular components which are extremely easy to install. Our Centra-lok™ patented design allows IPEX to offer vinyl systems which average up to 40-60% FEWER OVERALL JOINTS AND UP TO 10% FEWER FIELD JOINTS COMPARED TO CONVENTIONAL SYSTEMS. Since joints are always the most common source of premature failures and leaks, it is easy to realize the immense impact the Centra-lok design has on maintenance, repair and installation costs. The patented ingenuity and simplicity of the Centra-lok design also IPEX systems, making Guardian the industry's most cost-effective vinyl system. As with all our containment systems, the IPEX patented Centra-

Guard™ electronic low point leak detection or cable leak detection systems are also available.

GENERAL

Each contained piping system shall consist of Xirtec®140 PVC primary piping system supported within a Xirtec®140 PVC secondary containment housing. Carrier fitting sizes 1/2" through 4" will use Centra-Lok [U.S. Patent No. 5,398,973] molded supports minimizing the number of field (factory assembled) fitting joints. Carrier sizes 6" and larger will use IPEX standard polypropylene fitting discs to support and centralize. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment may be readily drained and manually checked for leaks.

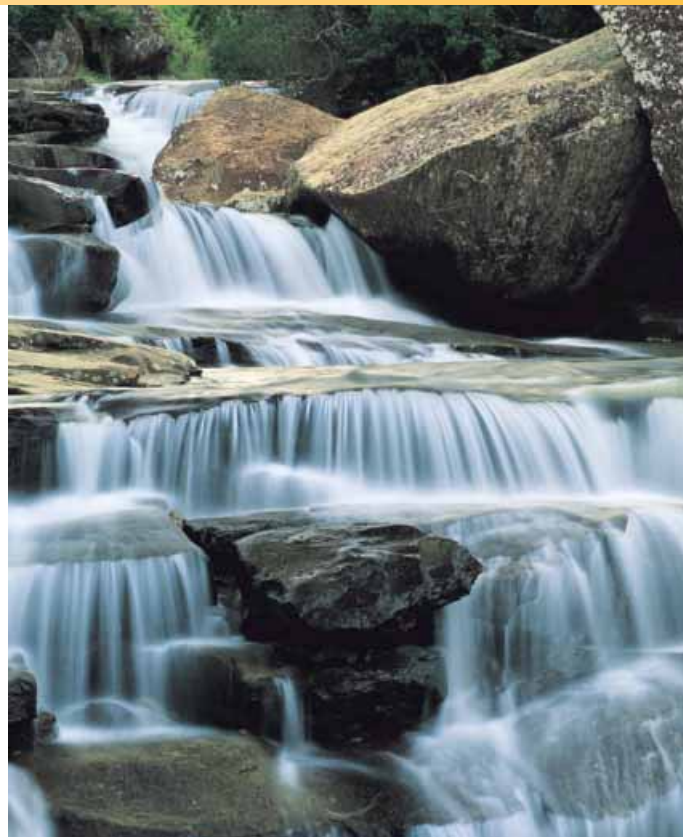
THE CLEAR-GUARD™ OPTION

Clear-Guard™

Clear-Guard™'s fail-safe, fully pressure rated clear containment system allows for easy detection of leaks and eliminates the risks associated with piping aggressive chemicals overhead. Clear-Guard utilizes Guardian's patented Centra-Lok fitting design, which reduces the required joints by 40-60% COMPARED TO CONVENTIONAL SYSTEMS. Fittings are available in clear or opaque containment fittings.

Material	Carrier	Containment
Clear-Guard PVC	-	2" - 8"

FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.



SPECIFICATIONS

MATERIAL SELECTION

Clear-Guard utilizes a fail-safe, fully pressure rated clear PVC that uses a solvent cement joining method identical to traditional vinyl pressure pipe. This eliminates the need for expensive caulking guns and epoxy adhesive for assembly. Clear-Guard can be used in conjunction with both Schedule 40 and 80 Xirtec140 PVC or Corzan CPVC primary pipe.

GENERAL

Each contained piping system shall consist of Xirtec 140 PVC or Corzan CPVC primary piping system supported within a Clear-Guard Schedule 40 clear PVC secondary containment housing. Carrier fitting sizes 1/2" through 4" will use Centra-Lok [U.S. Patent No. 5,398,973] molded supports minimizing the number of field (factory assembled) fitting joints.

Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment maybe readily drained and manually checked for leaks.



THE CUSTOMGUARD[®] OPTION

CustomGuard[®]

Custom-designed and fabricated double containment systems including dissimilar material systems, CustomGuard[®] is unlike other systems that try to run everything through the same material. Our specialists will recommend and provide the absolute best system for each individual application, looking not only at chemical compatibility but also at cost (material and installation), life expectancy and turn around time.

For applications with more demanding mechanical, chemical and/or thermal requirements, IPEX has developed our CustomGuard offering. CustomGuard includes a variety of different system choices ranging from Fluoropolymers (e.g. PVDF), Thermosets (FRP); and carbon and stainless steel to hybrid combinations. Applications that require such materials are obviously complex, each demanding expertise and specialized knowledge to design an effective system. The CustomGuard option includes material selection, design, specification support (if needed) and fabrication of pre-assembled spooled pieces to minimize installation time and field joints.

Material	Carrier	Containment
FRP/Metals/Dissimilar	1/2" - 20"	2" - 26"



Together with Encase and Guardian, Custom Guard sets IPEX apart from any other double containment system. Custom Guard is available in several different materials. Unlike other manufacturers, IPEX is not constrained by a limited material selection. This variety enables IPEX to provide customers with the best solution for their double containment needs.

SPECIFICATIONS

MATERIAL SELECTION

Carbon and stainless steel, copper, fiberglass (polyester and vinyl ester resins), PVDF, PP and dissimilar materials, are all available in CustomGuard[®] systems. This comprehensive offering, unmatched by any one company, gives IPEX the unique ability to examine just about any double containment requirement and truly offer the best suited, most cost-effective system. While other manufacturers have vested interests in recommending their one and only material/system, IPEX isn't confined by that limitation.

DESIGN

Drawing on more than 25 years of experience in double containment, IPEX has developed a variety of product-specific designs to maximize efficiency and reduce installation costs. As with all our containment systems, our own patented Centra-Guard[™] electronic low point or cable leak detection systems are also available.

GENERAL

Each contained piping system shall consist of a primary piping system supported within a secondary containment housing. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment may be readily drained and manually checked for leaks.

**FOR PRICING CONTACT
YOUR IPEX REPRESENTATIVE.**



Industrial Waste

YOUR DOUBLE CONTAINMENT & LEAK DETECTION SPECIALIST

Certain environments demand fail-safe systems. No leaks. No risk. The professionals at IPEX understand the complexity of design and installation for demanding double containment applications. And, unlike other manufacturers of double containment systems, our specialists are part of a division of IPEX dedicated solely to the design, production and installation of state-of-the-art double containment systems. With more than 25 years of experience and success, we are the proven experts.

The IPEX family of double containment systems includes: Guardian™ PVC and CPVC, and Clear-Guard™

PVC pressure and drainage systems, CustomGuard® FRP and metal pressure systems, Encase™ PolyPro drainage systems, and Centra-Guard™ leak detection systems.



Safety and environmental concerns are top priorities on today's industrial agenda. Reduction of emissions, energy conservation and prevention of ground water contamination are some of the areas where regulations are increasingly defining an important line between utilization and exploitation of our planet's resources.

For most common chemical-waste or process applications, IPEX offers systems that are both simple yet highly advanced state-of-the-art technologies.

Guardian™ Vinyl Double Containment Systems
Clear-Guard™ Specialty Double Containment Systems
CustomGuard® PP Double Containment System
Encase™ Double Containment Leak Detection System
Centra-Guard™



Double Containment Systems

We build tough products for tough environments®

Products are manufactured by IPEX Inc. Guardian™, Clear-Guard™, CustomGuard®, Encase™ and Centra-Guard™, are trademarks of IPEX Branding Inc.



At the heart of our patented Encase™ polypro system is its electrofusion fitting with a groundbreaking heavy-gauge resistance wire molded into the socket. The result is a premier system that offers considerable reduction of installation time and the highest quality leak free joints available.

Material	Carrier	Containment
PP	1-1/2" - 8"	4" - 12"



Encase is a polypropylene piping system that uses proven Enfusion joining methods to provide an easy-to-install, safe, reliable and cost-effective method to convey chemical waste under gravity-flow conditions.

ADVANTAGES

POLYPROPYLENE MATERIAL

- 30 YEARS of success in chemical waste applications
- High corrosion resistance
- Wide temperature range
- Excellent chemical resistance

SAME MATERIAL INSIDE AND OUT

- Eliminates differential expansion problems
- Chemical resistance is the same for the entire piping system
- System integrity is maintained in the event of a primary pipe leak

RESTRAINED SYSTEM

- Expansion anchor plates are installed on each fitting to control expansion
- No expansion loops necessary

FULL PRODUCT RANGE

- 1-1/2" to 8" primary sizes available
- Manufactured in both non-flame retardant as well as flame retardant material for above ground installation

DRAINAGE PATTERN FITTINGS

- Ensures smooth chemical flow.
- Enfield piping has been used for chemical waste for over 30 YEARS

MODULAR DESIGN

- Components are factory fabricated. The only site joining necessary is the fusion of couplings to pipes and fittings
- Reduces labor costs

FULL PRODUCT BACKUP

- Expert personnel are available to assist in every facet of the Encase product

FAST JOINING METHOD

- All site joints are made by electrofusion using an Enfusion Hand Held Unit.
- Quick and simple to make without the need for costly and cumbersome butt fusion machines
- Proven technology
- Narrower trench widths than for butt fusion, resulting in quicker and cheaper installation
- Joints can be made in the trench which reduces installation time
- Automatic microprocessor-controlled Enfusion unit ensures joint repeatability

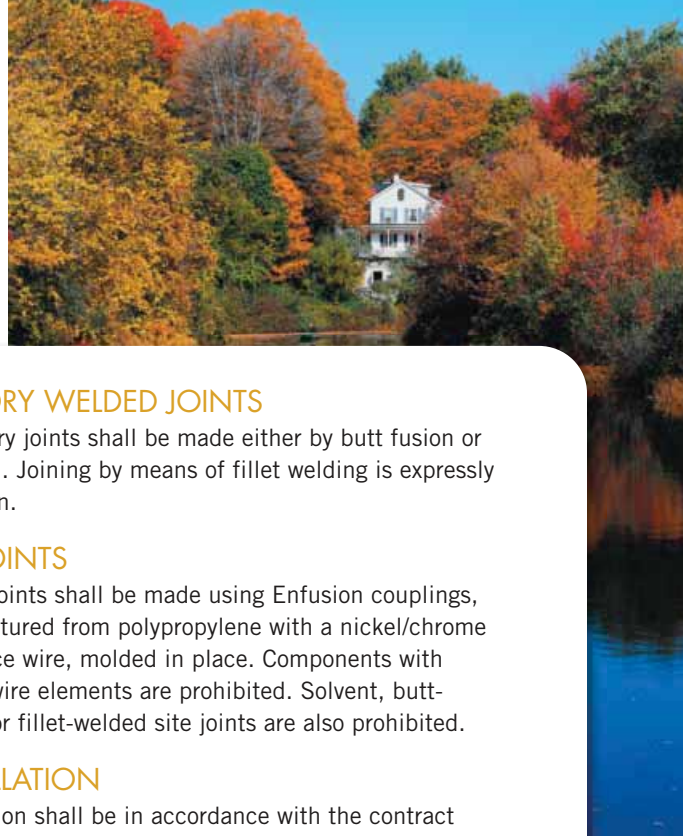
EASY SYSTEM TESTING

- The primary pipe can be inspected and tested prior to closing the secondary joint (impossible with butt-welded systems)
- Any suspect primary joints can be re-fused prior to final closure of the secondary pipe

LEAK DETECTION COMPATIBLE

- Encase is compatible with all common types of leak detection systems
- Upon request, pipe is furnished with knot-free twine to allow insertion of a pull rope for leak detection cable installation minimizing installation time.





SHORT FORM SPECIFICATIONS

GENERAL

Acid waste double containment drain lines shall be Encase, manufactured by IPEX, with no substitutions. Pipe and fittings shall be manufactured from Schedule 40 polypropylene and joined by the Enfusion method.

MATERIAL

Pipe, fittings, internal pipe supports and anchor plates shall be manufactured from Type 110 homopolymer or Type 210 copolymer polypropylene material as described in ASTM D4101.

PIPE AND FITTINGS – CONSTRUCTION

All pipe fittings shall be factory assembled and of unitized construction, with the primary and secondary components integrally anchored together to prevent movement of the primary pipe/fitting with in the containment pipe/fitting. All piping components shall be manufactured to Schedule 40 dimensions. The primary pipe shall be adequately supported by means of support plates welded to the primary pipe. Anchor plates shall be provided at each end of the pipe/fitting section to restrain pipe expansion. All anchor plates must be mechanically located in a machined recess on the inside of each secondary pipe/fitting and welded to both the primary and secondary pipe/fitting sections.

FACTORY WELDED JOINTS

All factory joints shall be made either by butt fusion or Enfusion. Joining by means of fillet welding is expressly forbidden.

SITE JOINTS

All site joints shall be made using Enfusion couplings, manufactured from polypropylene with a nickel/chrome resistance wire, molded in place. Components with copper wire elements are prohibited. Solvent, butt-welded or fillet-welded site joints are also prohibited.

INSTALLATION

Installation shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing code. The entire installation shall be installed in proper alignment and free of stress.

TESTING

The system shall be tested in accordance with the manufacturer's recommendations and the local plumbing code. The primary pipe shall be tested prior to making the secondary joints. If Secondary pipe cannot be hydro-tested, as determined by the engineer or authority having jurisdiction, then the use of nitrogen or air at a MAXIMUM 5 psi (gauge) shall be allowed. It is imperative that a working-pressure regulator be used during the pneumatic test to ensure that over-pressurization of the PVC, beyond 5 psi, cannot occur. The following must also be noted: Air or nitrogen under pressure is compressed and therefore poses a potential hazard. If a failure of the pipe or fitting occurs during such test, the air exits at the failure point and expands rapidly. This increase in velocity can cause the system to fail in a catastrophic mode. Therefore during such air test all personnel involved in the test or present in the test surrounding area must be aware of such a possibility and take all necessary precautions. Precautions include, but are not limited to, taking extreme care not to impact or damage the system in any way. Such procedure is a limited exception to IPEX standard policy which forbids the use of its rigid systems with any compressed gases.



ELECTRONIC LOW POINT LEAK DETECTION SYSTEM



FOR PRICING CONTACT
YOUR IPEX
REPRESENTATIVE.

Centra-Guard™

In many situations, double containment protection by itself may not be enough. In these applications it is critical that a leak is immediately detected and located.

Although many different leak detection systems are available on the market today, only the Centra-Guard™ patented electronic low point leak-detection system offers a combination of advanced features:

KEY FEATURES

- No cables to string during installation
- No false alarms due to condensation
- Non-intrusive, re-usable capacitive proximity sensors with sensitivity adjustment
- NEMA 4X enclosed microprocessor control panel with audible and visual alarms
- LCD screen continuously reads system status and reports alarms
- HMI push buttons allow for history, status, and test screens to be accessed
- Multi-level password protection
- Standard output relay for direct communication with plant control systems

Centra-Guard electronic low point leak detection offers versatility, customization and lower material, installation and maintenance costs when compared to cable leak detection.

OVERVIEW

The basic concept behind electronic low point leak detection is that a Double contained piping system is designed with leak detection zones. Leak detection zones are essentially a drip leg in the containment piping. Each zone is monitored by a sensor that raises an alarm to warn operators that a leak has been detected. The IPEX Centra-Guard leak detection system will identify the type of alarm (i.e. leak or cable break), zone, and time and record it in non-volatile memory as well as relay the signal to a plant control system. This allows operators to quickly rectify the situation. Centra-Guard is the only non-intrusive leak detection system available on the market today. The sensor never comes in contact with the media.

APPLICATIONS

Above-ground suspended pipeline applications, with sensors housed in a saddle-type clamp, as well as underground pipeline systems with drip leg assembly.

CABLE LEAK DETECTION

IPEX PAL-AT

IPEX PAL-AT cable leak detection is a microprocessor based system that offers continuous leak detection. The system is fully automated, and ideal for buried double containment piping applications that require exact leak location.

The IPEX PAL-AT continuous cable leak detection system compliments our Centra-Guard electronic low point leak detection system and adds extra versatility to our extensive double containment offering.

KEY FEATURES

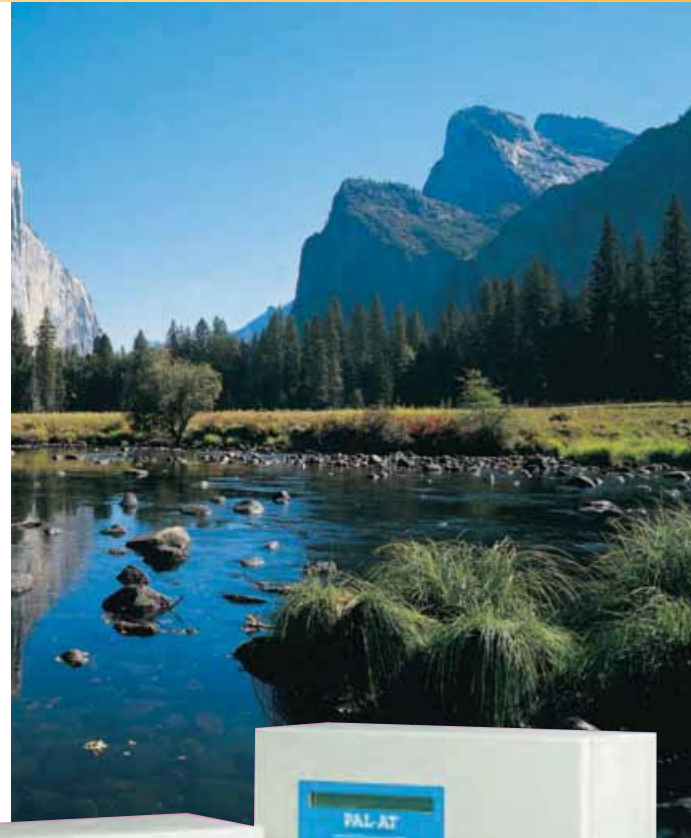
- Coaxial Sensing Cable with adjustable sensitivity
- Microprocessor based monitoring unit capable of monitoring 2000, 5000, or 7500ft of cable per sensor string
- Panel will identify the type of alarm (leak/break/short/probe) as well as location within 5 feet of the source
- Backlit LCD providing constant system data
- Continuous monitoring even after a leak is detected

OVERVIEW

The basic concept behind cable leak detection is that a monitor detects any changes in the electrical properties of the cable caused by contact with a liquid. The cable is pulled through the interstitial space of the containment piping. The monitor then raises an alarm in the plant to warn operators that a leak has been detected. The IPEX PAL-AT detection system will pinpoint the leak and report its location. This allows operators to quickly rectify the situation.

APPLICATIONS

Underground pipeline systems that require exact leak location detection.



FOR PRICING CONTACT YOUR
IPEX REPRESENTATIVE.

SAMPLE MATERIAL OPTIONS

CHOOSE FROM A WIDE RANGE OF SYSTEM OPTIONS

IPEX offers an extremely wide array of materials and sizes. You can specify virtually any piping material to create a system that contains whatever corrosive or hazardous substance your application handles. If you don't see what you need listed here, call us! Other systems or sizes may be available, or we may have suggestions for substitutions.

Carrier	SYSTEM Containment	Carrier SIZE inches
PVC 80	PVC 80	1/2 - 12
PVC 80	PVC 40	1/2 - 12
PVC 40	PVC 40	1/2 - 12
PVC DWV	PVC DWV	1-1/2 - 12
PVC 80	CS SCH 10	1/2 - 12
CPVC 80	CPVC 80	1/2 - 8
CPVC 80	PVC 80	1/2 - 12
CPVC 80	PVC 40	1/2 - 12
CPVC 80	CS SCH 10	1/2 - 12
NAT PP 80	PVC 80	1/2 - 2
NAT PP 80	PVC 40	1/2 - 2
RED PVDF 80	CPVC 80	1/2 - 2
RED PVDF 80	PVC 80	1/2 - 2
NAT PVDF 80	PVC 80	1/2 - 2
ENFUSION PP	PVC DWV	1/2 - 6
S40 A53B CS BW	PVC 80	1/2 - 8
S40 A106B CS BW	PVC 80	1/2 - 8
S80 A106B CS SW	PVC 80	1/2 - 8
S40 A53B CS BW	FRP	1/2 - 12
S40 A106B CS BW	FRP	1/2 - 12
S80 A106B CS SW	FRP	1/2 - 2
S40 A53B THRD	PVC 40	1/2 - 2
S40 A106 SMLS BW	PVC 40	1/2 - 8
S40 A53 BLK BS	PVC 40	1/2 - 8
S80 A53 BLK SW	PVC 80	1/2 - 2
S80 A53 BLK SW	FRP	1/2 - 2
S40 A53 BLK SW	S40 A53 BLK	1/2 - 2
S40 A106B CS SW	PVC 80	1/2 - 8
S80 A53B CS BW	PVC 80	1/2 - 8
S80 A106B CS SW	PVC 80	1/2 - 8
S40 A106 CS SW	FRP	1/2 - 2
S80 A53B CS BW	FRP	1/2 - 12
S80 A106B CS BW	FRP	1/2 - 2
S40 A53B THRD	FRP	1/2 - 2
S40 A53 BLK CS	S40 A53 BLK CS	1/2 - 12
S40 A53 BLK SW	PVC 40	1/2 - 2

Carrier	SYSTEM Containment	Carrier SIZE inches
S40 A53 BLK SW	FRP	1/2 - 2
S40 A53 BLK SW	PVC 80	1/2 - 2
S80 A53B CS SW	PVC 80	1/2 - 2
S10 T304L SS BW	PVC 80	1/2 - 8
S10 T304L SS BW	PVC 40	1/2 - 8
S10 T304L SS BW	CPVC 80	1/2 - 8
S10 T304L SS BW	FRP	1/2 - 12
S10 T304L SS BW	S10 T304L	1/2 - 12
S40 T316L SS BW	PVC 80	1/2 - 8
S40 T316L SS BW	CPVC 80	1/2 - 8
S40 T316L SS BW	FRP	1/2 - 12
S40 T304L SS SW	PVC 80	1/2 - 2
S40 T304L SS SW	PVC 40	1/2 - 2
S40 T304L SS SW	CPVC 80	1/2 - 2
S40 T304L SS SW	FRP	1/2 - 2
S10 T316L SS SW	PVC 80	1/2 - 2
S10 T316L SS SW	CPVC 80	1/2 - 2
S10 T316L SS SW	FRP	1/2 - 2
S40 T304L SS BW	PVC 80	1/2 - 8
S40 T304L SS BW	PVC 80	1/2 - 8
S40 T304L SS BW	CPVC 80	1/2 - 8
S40 T304L SS BW	FRP	1/2 - 12
S10 T316L SS BW	PVC 80	1/2 - 8
S10 T316L SS BW	CPVC 80	1/2 - 8
S10 T316L SS BW	FRP	1/2 - 12
S10 T304L SS SW	PVC 80	1/2 - 2
S10 T304L SS SW	PVC 40	1/2 - 2
S10 T304L SS SW	CPVC 80	1/2 - 2
S10 T304L SS SW	FRP	1/2 - 2
S10 T304L SS SW	S10 T304L	1/2 - 2
S40 T316L SS SW	PVC 80	1/2 - 2
S40 T316L SS SW	CPVC 80	1/2 - 2
S40 T316L SS SW	FRP	1/2 - 2
HARD COPPER	PVC 40	1/2 - 4
HARD COPPER	3000 FRP	1/2 - 4

Xirtec 140® PVC – Corzan® CPVC

1/2" – 24" (15mm – 600mm)

XIRTEC 140®: PVC Sch. 40 & 80 pipe & fittings systems.

CORZAN®: CPVC Sch. 80 pipe & fittings systems
cell classification 24448 & 23447



PROCESS PIPING SYSTEMS



Duraplus™ ABS Industrial

3/8" – 12" (10mm – 300mm)

Complete ABS pressure pipe, valves & fitting systems.



Enpure™

1/2" - 4" (15mm - 100mm)

High-purity polypropylene pipe, valves and fittings with a socket fusion joining system.



ACID WASTE SYSTEMS

Enfield™

1-1/2" - 12" (40mm - 300mm)

Electrofusion acid waste system consists of Polypropylene Schedule 40 & 80 IPS pipe and fittings.



Plenumline™

1-1/2" - 4" (40mm - 100mm)

Flame-retardant PVDF mechanical joint acid waste system suitable for return air plenum high-temperature corrosive chemical waste applications.



Labline®

1-1/2" - 4" (40mm - 100mm)

Mechanical joint acid waste system in polypropylene Schedule 40 & 80 IPS pipe (flame-retardant and non-flame-retardant) and fittings.



THERMOPLASTIC VALVES

Thermoplastic Valves

1/2" – 12" (12mm – 300mm)

IPEX offers a variety of manual & actuated valves in PVC, CPVC, PP, PVDF and ABS.



Duratec® Airline

3/8" – 1" (10mm – 25mm)

Composite pipe and fittings for conveying compressed air and inert gases.



COMPRESSED AIR

Duraplus™ Airline

1/2" – 8" (15mm – 200mm)

A high-impact, ductile ABS pressurized piping system for conveying compressed air and inert gases.



SPECIALTY PRODUCTS



Well Casings

2" – 16" (50mm – 400mm)

PVC corrosion-resistant, maintenance-free casings for well-drop-pipe and submersible pumps.



Ventilation Duct

6" – 24" I

(150mm – 600mm) Diameter

Seamless PVC and CPVC ventilation duct systems.



Grooved PVC Pipe

2" – 24" (50mm – 600mm)

Schedule 40, SDR 26 and SDR 21 factory-grooved PVC pipe.



SALES AND CUSTOMER SERVICE

Canadian Customers call IPEX Inc.

Toll free: (866) 473-9462

www.ipexinc.com

U.S. Customers call IPEX USA, LLC

Toll free: (800) 463-9572

www.ipexamerica.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 world's 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 IPEX group products are:

- Electrical systems
- Telecommunications and utility piping systems
- PVC, CPVC, PP, PVCO, ABS, PEX, FR-PVDF & 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

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



SOLVENT WELD

PLUMBING/IRRIGATION



*Building essentials
for a better tomorrow™*



SOLVENT WELD

PVC Solvent Weld Pipe

Meets ASTM D1785, D2241, D2665, D2729, D2949, D3034, & F891

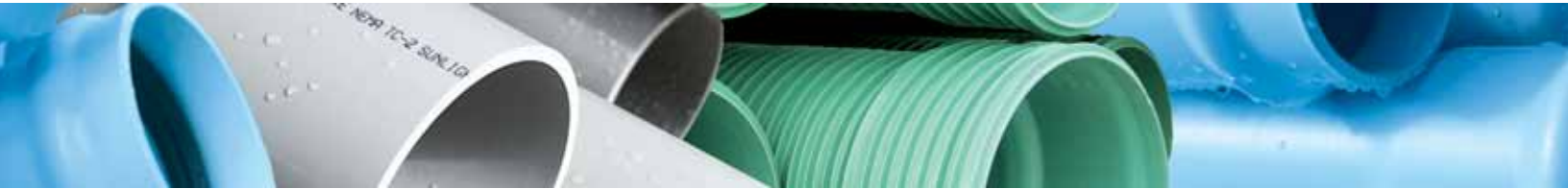
PVC Schedule 30, 40, 80 and Cellular Core Schedule 40

Pressure Rated 100, 125, 160, 200, 250 and 315 psi

Sewer and Drain Pipe, Perforated Pipe

ABS Schedule 40 DWV, Cellular Core

Meets ASTM D2661 and ASTM F628



SOLVENT WELD

PLUMBING AND IRRIGATION

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01

PRODUCT DESCRIPTION

SOLVENT WELD

FOR USE IN PLUMBING, DRAINAGE WASTE AND IRRIGATION

DESCRIPTION

JM Eagle™ covers the following Solvent Weld pressure and non-pressure products in this catalog: PVC Schedule 40 and 80 (ASTM D1785 and/or ASTM D2665), Cellular Core PVC Sch 40 (ASTM F891), PVC Schedule 30 (ASTM D2949), PVC Pressure Rated (ASTM D2241), PVC Sewer Pipe (ASTM D3034), PVC Perforated Drain Pipe (ASTM D2729), ABS Sch 40 (ASTM D2661), and Cellular Core ABS Sch 40 (ASTM F628).

LONG LAYING LENGTHS

All JM Eagle™ Solvent Weld pipe products are offered in 20 and/or 10 feet standard lengths. This means that more ground can be covered during installation while eliminating the cost of unnecessary joints.



APPLICATIONS

Solvent Weld joints are designed to provide a rigid (or restrained) joint connection. These products are engineered for use in a variety of applications from potable water distribution to sewer and drainage systems. Additionally, the schedule rated products are specifically engineered for use in partial support systems above ground.



PURPLE RECLAIM

JM Eagle™ also manufactures this pipe in purple, specifically for reclaimed water systems. This pipe is made and tested to the same requirements as our standard products. The only difference is that the pigment used is purple. These products will not be marked with the UL or NSF listing marks. Additionally, the purple pipe will be marked: "Reclaimed Water... Do Not Drink."

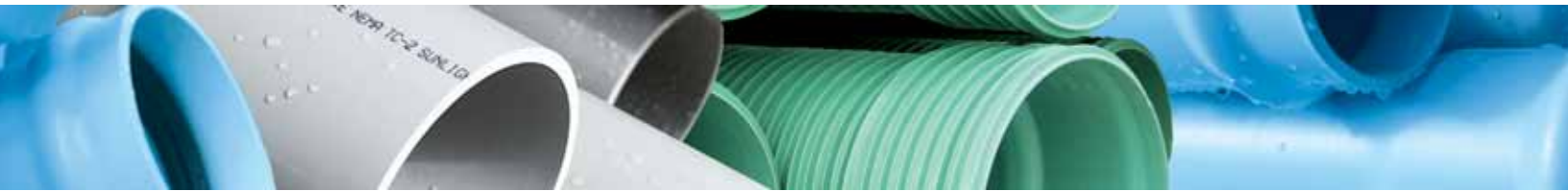
QUALITY CONTROL

This pipe is tested in accordance with the provisions of the appropriate listed standard(s) and subject to inspection by our quality control inspectors throughout every step of the manufacturing process. JM Eagle's Quality Management System is ISO 9001: 2000 registered. Copies of the registration certificates are available on our website at <http://www.jmeagle.com>.

* JM Eagle™ is in the process of obtaining the ISO 9001-2000 registration of Quality Management System for all locations.

CORROSION RESISTANCE

Solvent Weld PVC is unaffected by electrolytic or galvanic corrosion, or any known corrosive soil or water condition. You don't have to worry about tuberculation, or the need for costly lining, wrapping, coating, or cathodic protection.



FLOW CAPACITY

This PVC water pipe has a smooth interior that stays smooth over its long service life with no loss in carrying capacity. It's coefficient of flow is C=150 (Hazen & Williams) the best available in common use water systems. This capacity often allows savings in pumping costs as well as savings on the size of pipe required.

SAVE IN HANDLING COSTS

JM Eagle™ Solvent Weld pipe products are designed for installed-cost savings. Most sizes can be handled manually, so there is no need for costly installation equipment. Use the backhoe for excavating and back-filling only. Dig more trench, lay pipe faster, and save more in costs per foot installed.

LIGHT WEIGHT

A 20 foot length of 6" Schedule 40 PVC water pipe weighs approximately 72 pounds. That makes it easy to load, easy to transport, and easy to handle. Installers prefer it because it goes into the ground quickly, thus saving on installation costs.



SERVICE LIFE

Since PVC does not corrode and is resistant to most chemicals, the pipe does not lose strength due to either potable water corrosion or external galvanic soil conditions. The design of the pressure rated pipe products allows for a 2 to 1 long-term safety factor at the marked capacity of the pipe.

FIELD CUTTING

You can cut Solvent Weld PVC pipe with a power saw or an ordinary handsaw. This eliminates the need to invest in costly cutting equipment. The pipe can also be beveled without the use of any expensive or complicated machinery.



INSTALLATION

This product should be installed in accordance with JM Eagle™ Publication JME-07B, "Solvent Weld Pipe Installation Guide" and Uni-Bell® Publication UNI-PUB-08-07, "Tapping Guide for PVC Pressure Pipe."

I.P.S. AND GRAVITY SEWER O.D.'S

Available in .5" through 16" diameter sizes, this pipe can be connected directly to most plumbing and I.P.S. fixtures without complicated procedures or adapters. In addition, it can be connected into C.I.O.D. fittings with adapters and/or transition gaskets.



PRODUCT DESCRIPTION

(CONTINUED)



SOLVENT WELD JOINTS

Solvent Weld joints provide a rigid joint connection for use in applications where restraint of the joint may be needed. This allows the whole run of pipe to act as one piece of pipe, regardless of the number of joints. This is accomplished by fusing material from both the spigot end and the bell end (or coupling) together.

Once this is properly done and the joint has cured, the result is a “zero-leak” joint that is structurally sound.

Solvent Weld joints are most often used in applications above ground and/or indoors. They may be used, however, in underground applications. During installation, it is important to remember that the finished product will function as a single span of pipe. Therefore, allowances in the form of “snaking,” or offsets, should be made to accommodate thermal expansion of the material and/or surges.

ACCESSORIES

JM Eagle's Solvent Weld PVC pipe is compatible with all the items required for smooth installation of plumbing, vent, and drainage pipe systems.



SURGE DESIGN

SURGE PRESSURES IN VARIOUS PRESSURE PIPE

It is important to note that for the same conditions of interrupted flow, the surge pressures generated in pipe with high tensile moduli will be greater than the surges in low moduli (PVC) pipe of similar dimensions.

As the modulus of tensile elasticity for a piping material increases, the resultant pressure surges, or “water hammer”, caused by a change in flow velocity increases. For example, an instantaneous 2 fps (0.6 mps) flow velocity change in an 6" water pipe will create surge pressures, as shown in **Table 1**, for different pipe materials. For all system designs, surge pressures should be examined with the pipe material in use.

TABLE 1
PRESSURE SURGES IN 6 IN. WATER MAIN

In Response to 2 fps (0.6 mps) Instantaneous Flow Velocity Change.

PIPE PRODUCT	PRESSURE SURGE	
	psi	kPa
Class 350 DI Pipe	109.0	751
Sch. 40 PVC Pipe	29.2	202

Pressure surges in PVC pipe of different dimension schedules in response to a 1 fps (0.3 mps) instantaneous flow velocity change are shown in **Table 2**.

TABLE 2
DESIGN TABLE FOR PVC PIPE-PRESSURE SURGE VS. SIZE

In Response to 1 fps (0.3 mps) Instantaneous Flow Velocity Change.

SIZE (IN)	PRESSURE SURGE (psi)	
	Sch. 40	Sch. 80
0.5	27.9	32.9
0.75	25.3	29.9
1	24.4	28.7
1.5	21.1	25.0
2	19.3	23.2
3	18.9	22.4
4	17.4	20.9
6	15.5	19.4
8	14.6	18.3
10	13.9	17.3
12	13.4	17.6

* For surge generated in Pressure Rated (SDR Series) products, please refer to JM Eagle™ Publication JME-06A, “I.P.S. Pressure Rated Pipe.”

03

SHORT FORM SPECIFICATION

SOLVENT WELD

SCOPE

This specification designates general requirements for 0.5" through 16" unplasticized polyvinyl chloride (PVC) and 1.5" through 6" ABS Solvent Weld pipe for the conveyance of water and other fluids in pressure and non-pressure applications. Please contact JM Eagle™ Sales for availability.

MATERIALS

All solid wall PVC pipe shall be made from quality PVC resin, compounded to provide physical and mechanical properties that equal or exceed cell class 12454 or 12364 or 12164 as defined in ASTM D1784. PVC cellular core pipe material shall meet cell classification 11432 per ASTM D4396. All pipe constructed of ABS materials shall be made from quality ABS resin, compounded to provide physical and mechanical properties that equal or exceed cell class 42222 as defined in ASTM D3965.

STANDARD LAYING LENGTHS

Standard lengths are 10 or 20 feet for all sizes depending on the product and shipping location.

PIPE

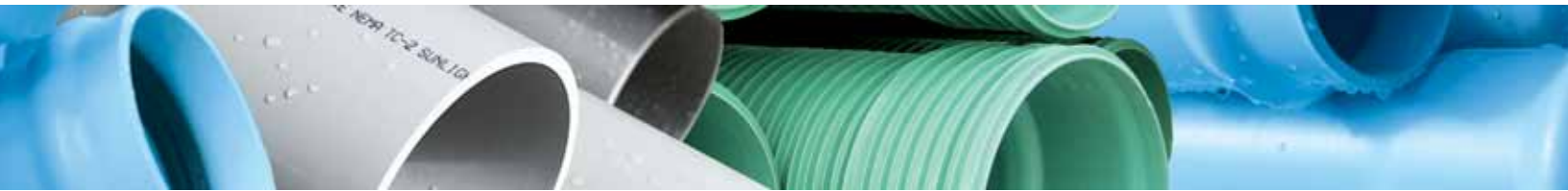
All pipe shall be suitable for use as pressure conduit and/or DWV conduit. Provisions must be made for expansion and contraction of the pipe structure. The bell section shall be designed to be at least as hydrostatically strong as the pipe wall and meet the requirements of the appropriate specification for the pipe. Sizes and dimensions shall be as shown in this specification.

For product installation notes and procedures, please contact JM Eagle™ at (800) 621-4404. Pipe installation and usage shall be in compliance with JM Eagle™ Publication JME-07B "Solvent Weld Pipe Installation Guide" and Uni-Bell® Publication UNI-PUB-08-07, "Tapping Guide for PVC Pressure Pipe."

OTHER PROPERTIES

Pipe stiffness and impact resistance of these products are measured in accordance with the applicable standards. For specific values, please contact JM Eagle™ or consult the latest edition of the ASTM product standard.





QUICK BURST TEST

Randomly selected samples of pressure rated pipe is tested in accordance with ASTM D1599 and shall withstand the prescribed pressures without failure, when applied in 60-70 seconds.

TESTING REQUIREMENTS FOR ASTM D1785

PIPE SIZE (IN)	Schedule 40		Schedule 80	
	Long Term Pressure Test 1000 hours (psi)	Short Term Burst Test psi	Long Term Pressure Test 1000 hours (psi)	Short Term Burst Test psi
1/2	1250	1910	1780	2720
3/4	1010	1540	1440	2200
1	950	1440	1320	2020
1 1/4	770	1180	1090	1660
1 1/2	690	1060	990	1510
2	580	890	850	1290
2 1/2	640	970	890	1360
3	590	840	790	1200
4	470	710	680	1040
5	410	620	610	930
6	370	560	590	890
8	330	500	520	790
10	300	450	490	750
12	280	420	480	730

TESTING REQUIREMENTS FOR ASTM D2241

	SDR 41 100 psi	SDR 32.5 125 psi	SDR 26 160 psi	SDR 21 200 psi	SDR17 250 psi
LONG TERM PRESSURE TEST 1000 hours (psi)	210	270	340	420	530
SHORT TERM PRESSURE TEST (psi)	315	400	500	630	800



SHORT FORM SPECIFICATION

SOLVENT WELD

(CONTINUED)

ADDITIONAL TEST REQUIREMENTS FOR SOLVENT WELD PRESSURE RATED PIPE

ASTM D2241 ASTM D1785

ACETONE IMMERSION TEST PER ASTM D2152						
Sch 40	Sch 80	SDR 41	SDR 32.5	SDR 26	SDR 21	SDR 17
20 min.	20 min.	20 min.	20 min.	20 min.	20 min.	20 min.
FLATTENING TEST - TESTS EXTRUSION QUALITY AND DUCTILITY UNDER SLOW LOADING CONDITIONS						
Sch 40	Sch 80	SDR 41	SDR 32.5	SDR 26	SDR 21	SDR 17
40% between the plates within 2 - 5 min	40% between the plates within 2 - 5 min	40% between the plates within 2 - 5 min	40% between the plates within 2 - 5 min	40% between the plates within 2 - 5 min	40% between the plates within 2 - 5 min	40% between the plates within 2 - 5 min

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	SOLVENT WELD PVC PIPE	ASTM TEST METHOD
Fiber Hoop Stress at 73° F Short Term Bursting Strength (psi) 1,000 Hour Strength (psi)	6400 * 4200 *	D1599 D1598
Working Pressure Rating 73° F (% of rating at 73° F) 80° F (% of rating at 73° F) 100° F (% of rating at 73° F)	100% * 88% * 60% *	—
Chemical Resistance at 73° F Acids Salts - Bases Aliphatic Hydrocarbons (including crude oil)	Excellent Excellent Good	—
Thermal Expansion (in / 100 ft / 50° F Change)	2"	—
Fire Resistance	Self Extinguishing	—
Flame Spread	10	E162
Smoke Development	330	E84
Coefficient of Flow Hazen & Williams	C = 150	—
Mannings N Value	N = 0.009	—

* Pressure Rated products only

* Please contact sales for availability and product range.

DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

PVC SOLVENT WELD - (SCHEDULE SERIES)

Dual marking for both Pressure and Drain, Waste, Vent (DWV) Applications

JM EAGLE™ PVC SCHEDULE 40/DWV PIPE

Specifications: ASTM D1785 & ASTM D2665 ::

Listed : ANSI/NSF-PW NSF-DWV
Standard 61, Standard 14

NOM. PIPE SIZE (IN)	O.D. (IN)	NOM. I.D. (IN)	MIN. T. (IN)	WATER PRESSURE RATING AT 23°C (73°F)	APPROX. WEIGHT (LBS/FT)
1/2	0.840	0.609	0.109	600	0.164
3/4	1.050	0.810	0.113	480	0.218
1	1.315	1.033	0.133	450	0.324
1 1/4	1.660	1.363	0.140	370	0.439
1 1/2	1.900	1.593	0.145	330	0.525
2	2.375	2.049	0.154	280	0.705
2 1/2	2.875	2.445	0.203	300	1.118
3	3.500	3.042	0.216	260	1.463
4	4.500	3.998	0.237	220	2.083
6	6.625	6.031	0.280	180	3.663
8	8.625	7.942	0.322	160	5.512
10	10.750	9.976	0.365	140	7.815
12	12.750	11.889	0.406	130	10.333
14	14.000	13.073	0.437	130	12.220
16	16.000	14.940	0.500	130	15.980

:: Standard Color: White, Standard Length 10' & 20', Plain End and Belled End.

JM EAGLE™ PVC SCHEDULE 30/DWV FOR DRAIN, WASTE, VENT PIPE

Specifications: ASTM D2949 ::

Listed : ANSI/NSF-DWV, Standard 14

NOM. PIPE SIZE (IN)	O.D. (IN)	NOM. I.D. (IN)	MIN. T. (IN)	WATER PRESSURE RATING AT 23°C (73°F)	APPROX. WEIGHT (LBS/FT)
3	3.250	2.980	0.125	None	0.800

:: Cell Class 12454

* Prior to ordering or specifying, please consult JM Eagle™ for product and/or listing availability.

I.D. : Inside Diameter

O.D. : Outside Diameter

T. : Wall Thickness



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

JM EAGLE™ PVC SCHEDULE 80 PIPE

Specifications: ASTM D1785 ::

Listed : ANSI/NSF-PW Standard 61, Standard 14

NOM. PIPE SIZE (IN)	O.D. (IN)	NOM. I.D. (IN)	MIN. T. (IN)	WATER PRESSURE RATING AT 23°C (73°F)	APPROX. WEIGHT (LBS/FT)
1/2	0.840	0.528	0.147	850	0.210
3/4	1.050	0.724	0.154	690	0.285
1	1.315	0.936	0.179	630	0.419
1 1/4	1.660	1.255	0.191	520	0.579
1 1/2	1.900	1.476	0.200	470	0.701
2	2.375	1.913	0.218	400	0.969
2 1/2	2.875	2.290	0.276	420	1.479
3	3.500	2.864	0.300	370	1.979
4	4.500	3.786	0.337	320	2.892
6	6.625	5.709	0.432	280	5.516
8	8.625	7.565	0.500	250	8.336
10 †	10.750	9.493	0.593	230	12.375
12 †	12.750	11.294	0.687	230	17.027

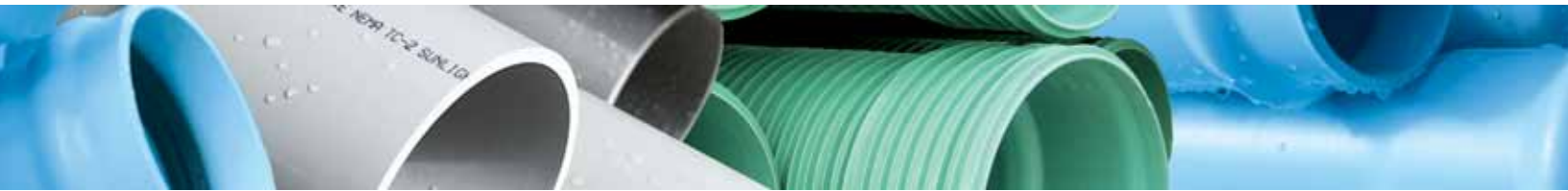
:: Standard Color: Dark Gray, Standard Length: 20' overall, Plain End Only

† Available in Western Region Only.

I.D. : Inside Diameter

O.D. : Outside Diameter

T. : Wall Thickness



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

CELLULAR CORE PIPE

JM EAGLE™ PVC SCHEDULE 40/DWV CELLULAR CORE PIPE

Specifications: ASTM F891 ::

Listed : ANSI/NSF-DWV Standard 14

NOM. PIPE SIZE (IN)	O.D. (IN)	NOM. I.D. (IN)	MIN. T. (IN)	APPROX. WEIGHT (LBS/FT)
1½	1.900	1.593	0.145	0.383
2	2.375	2.049	0.154	0.500
3	3.500	3.042	0.216	1.050
4	4.500	3.998	0.237	1.450
6	6.625	6.031	0.280	2.450
8	8.625	7.942	0.322	—
10	10.750	9.976	0.365	—
12	12.750	11.889	0.406	—

:: Standard Color: White, Standard Length: 10' & 20', Plain End and Belled End

* Prior to ordering or specifying, please consult JM Eagle™ for product and/or listing availability.

I.D. : Inside Diameter

O.D. : Outside Diameter

T. : Wall Thickness

JM EAGLE™ ABS SCHEDULE 40/DWV AND/OR WITH CELLULAR CORE PIPE

Specifications: ASTM D2661 and ASTM F628 ::

Listed : ANSI/NSF - DWV, Standard 14

NOM. PIPE SIZE (IN)	O.D. (IN)	NOM. I.D. (IN)	MIN T. (IN)	APPROX. WEIGHT SCH 40/DWV	APPROX. WEIGHT SCH 40/DWV CELLULAR CORE
1½	1.900	1.593	0.145	0.383	0.277
2	2.375	2.049	0.154	0.515	0.363
3	3.500	3.042	0.216	1.069	0.728
4	4.500	3.998	0.237	1.523	1.022
6	6.625	6.031	0.280	1.768	1.768

:: Available in 5', 10' and 20' lengths.

* Prior to ordering or specifying, please consult JM Eagle™ for product and/or listings availability.

I.D. : Inside Diameter

O.D. : Outside Diameter

T. : Wall Thickness



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

PVC SOLVENT WELD - (SDR SERIES) : :

JM EAGLE™ PVC SOLVENT WELD PRESSURE RATED PIPE

Specifications: ASTM D2241

Listed : ANSI/NSF - Standard 61, Standard 14

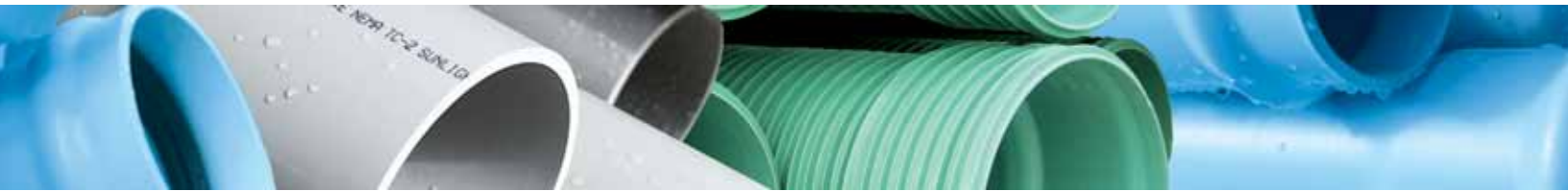
NOM. PIPE SIZE (IN)	O.D. (IN)	100 PSI/ SDR 41† MIN. T. (IN)	NOM. I.D. (IN)	125 PSI/ SDR 32.5† MIN. T. (IN)	NOM. I.D. (IN)	160 PSI/ SDR 26 MIN. T. (IN)	NOM. I.D. (IN)
1/2	0.840	—	—	—	—	—	—
3/4	1.050	—	—	—	—	—	—
1	1.315	—	—	—	—	0.060	1.188
1-1/4	1.660	—	—	0.060	1.533	0.064	1.524
1-1/2	1.900	—	—	0.060	1.773	0.073	1.745
2	2.375	—	—	0.073	2.220	0.091	2.182
2-1/2	2.875	—	—	0.088	2.688	0.110	2.642
3	3.500	0.085	3.320	0.108	3.271	0.135	3.214
4	4.500	0.110	4.267	0.138	4.207	0.173	4.133
5	5.563	0.136	5.275	0.171	5.200	0.214	5.109
6	6.625	0.162	6.282	0.204	6.193	0.255	6.084
8	8.625	0.210	8.180	0.265	8.063	0.332	7.921
10	10.750	0.262	10.195	0.331	10.048	0.413	9.874
12	12.750	0.311	12.091	0.392	11.919	0.490	11.711

NOM. PIPE SIZE (IN)	O.D. (IN)	200 PSI/ SDR 21 MIN. T. (IN)	NOM. I.D. (IN)	250 PSI/ SDR 17 MIN. T. (IN)	NOM. I.D. (IN)	315 PSI/ SDR 13.5 MIN. T. (IN)	NOM. I.D. (IN)
1/2	0.840	—	—	—	—	0.062	0.709
3/4	1.050	0.060	0.923	0.062	0.919	0.078	0.885
1	1.315	0.063	1.181	0.077	1.152	0.097	1.109
1-1/4	1.660	0.079	1.493	0.098	1.452	0.123	1.399
1-1/2	1.900	0.090	1.709	0.112	1.663	0.141	1.601
2	2.375	0.113	2.135	0.140	2.078	0.176	2.002
2-1/2	2.875	0.137	2.585	0.169	2.517	0.213	2.423
3	3.500	0.167	3.146	0.206	3.063	0.259	2.951
4	4.500	0.214	4.046	0.265	3.938	0.333	3.794
5	5.563	0.265	5.001	0.327	4.870	0.412	4.690
6	6.625	0.316	5.955	0.390	5.798	0.491	5.584
8	8.625	0.410	7.756	0.508	7.548	—	—
10	10.750	0.511	9.667	0.632	9.410	—	—
12	12.750	0.606	11.465	0.750	11.160	—	—

:: Standard Color: White, Standard Length: 20' Overall, Belled End Only.

† Available in Western Region Only.

* Prior to ordering or specifying, please consult JM Eagle™ for product and/or listing availability.



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

PERFORATED UNDERDRAIN PIPE ::

JM EAGLE™ PVC ASTM D3034 SOLVENT WELD SDR35 SEWER PIPE

JM EAGLE™ SOLVENT WELD SEWER PIPE CONFORMS TO SPECIFICATIONS PRIOR TO PERFORATION AND CELL CLASS 12454 OR 12364 AS DEFINED IN ASTM D1784

NOM. PIPE SIZE (IN)	O.D. (IN)	NOM. I.D. (IN)	MIN T. (IN)	APPROX. WEIGHT (LBS/FT)
4"	4.215	3.961	0.120	1.022
4" x 10' Perf	4.215	3.961	0.120	1.022
6"	6.275	5.893	0.180	2.285
6" x 10' Perf	6.275	5.893	0.180	2.285

:: Standard Color: Green, Standard length: 10' or 20' Overall, Belled End Only.

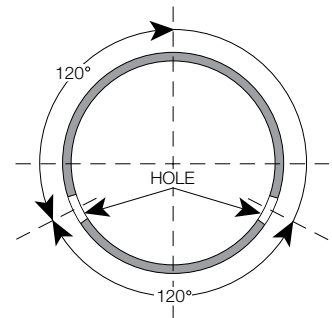
:: Standard perforations for pipe are two rows of holes ½" in diameter on 5" centers and 120° angle apart. Perforated pipe does not have ASTM designation on print line.

When using JM Eagle™ PVC ASTM D3034 Solvent Weld Sewer Pipe for septic tank fields, please install in accordance with ASTM D2321, and JM Eagle™ Publication JME-05B, "Gravity Sewer Installation Guide."

JM EAGLE™ PVC ASTM D2729 SOLVENT WELD DRAIN PIPE

JM EAGLE™ SOLVENT WELD DRAIN PIPE CONFORMS TO SPECIFICATIONS AND CELL CLASS 12454 OR 12164 AS DEFINED IN ASTM D1784

NOM. PIPE SIZE (IN)	O.D. (IN)	NOM. I.D. (IN)	MIN T. (IN)	APPROX. WEIGHT (LBS/FT)
3" Solid	3.250	3.102	0.070	0.465
3" Perf	3.250	3.102	0.070	0.465
4" Solid	4.215	4.056	0.075	0.648
4" Perf	4.215	4.056	0.075	0.648
6" Solid	6.275	6.063	0.100	1.300
6" Perf	6.275	6.063	0.100	1.300



:: Standard Color: White, Standard length: 10' Overall, Belled End Only.

:: Standard perforations for pipe are two rows of holes ½" in diameter on 5" centers and 120° angle apart. Three perforation rows may be available.

When using JM Eagle™ PVC ASTM D2729 Solvent Weld Drain Pipe for septic tank fields, please install in accordance with ASTM F481, and JM Eagle™ Publication JME-05B, "Gravity Sewer Installation Guide."

* Prior to ordering or specifying, please consult JM Eagle™ for product and /or listing availability.

I.D. : Inside Diameter

O.D. : Outside Diameter

T. : Wall Thickness



DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

JM EAGLE™ SOLARBLOK - UVR SCHEDULE 40 IPS SIZE

Specifications: ASTM D1785

Listed : ANSI/NSF 61

NOM. PIPE SIZE (IN)	O.D. (IN)	APPROX. I. D. (IN)	MIN. T. (IN)	PRESSURE RATING (psi)	APPROX. WEIGHT (LBS/FT)
1/2	0.840	0.609	0.109	600	0.164
3/4	1.050	0.810	0.113	480	0.218
1	1.315	1.033	0.133	450	0.324
1 1/4	1.660	1.363	0.140	370	0.439
1 1/2	1.900	1.593	0.145	330	0.525
2	2.375	2.049	0.154	280	0.705
2 1/2	2.875	2.445	0.203	300	1.118
3	3.500	3.042	0.216	260	1.463
4	4.500	3.998	0.237	220	2.083

Pipe color is brown.

Pipe is produced with integral Solvent Weld bells.

Available in 20 foot lengths only.

PVC material is specially formulated to increase resistance to ultraviolet rays.

The material includes the maximum amount of titanium dioxide allowed by the PPI PVC Range Composition for pressure pipe applications.

FLOW/FRICTION CHARTS

FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SCHEDULE 40

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	
½	1	0.90	2.08	1.13	2	30	0.70	1.62	2.93	
	2	1.80	4.16	2.26		35	0.93	2.15	3.41	
	5	10.15	23.44	5.64		40	1.19	2.75	3.90	
	7	13.64	43.06	7.90		45	1.49	3.43	4.39	
	10	35.51	82.02	11.28		50	1.80	4.16	4.88	
¾	1	0.22	0.51	0.63		60	2.53	5.84	5.85	
	2	0.44	1.02	1.26		70	3.36	7.76	6.83	
	5	2.48	5.73	3.16		75	3.82	8.82	7.32	
	7	4.56	10.52	4.43		80	4.30	9.94	7.80	
	10	8.68	20.04	6.32		90	5.36	12.37	8.78	
	15	18.39	42.46	9.48		100	6.51	15.03	9.75	
	20	31.32	72.34	12.65		2-½	1	—	—	—
1	1	—	—	—			2	—	—	—
	2	0.24	0.55	0.77			5	0.016	0.038	0.30
	5	0.75	1.72	1.93			7	0.023	0.051	0.49
	7	1.37	3.17	2.72	10		0.039	0.09	0.68	
	10	2.61	6.02	3.86	15		0.082	0.19	1.03	
	15	5.53	12.77	5.79	20		0.14	0.32	1.37	
	20	9.42	21.75	7.72	25		0.21	0.49	1.71	
	25	14.22	32.88	9.65	30		0.29	0.68	2.05	
30	19.95	46.08	11.58	35	0.39		0.91	2.39		
1¼	1	—	—	—	40		0.50	1.16	3.73	
	2	0.06	0.14	0.44	45		0.62	1.44	3.08	
	5	0.19	0.44	1.11	50		0.76	1.75	3.42	
	7	0.35	0.81	1.55	60		1.07	2.46	4.10	
	10	0.67	1.55	2.21	70		1.42	3.27	4.79	
	15	1.42	3.28	3.31	75	1.61	3.71	5.13		
	20	2.42	5.59	4.42	80	1.81	4.19	5.47		
	25	3.66	8.45	5.52	90	2.26	5.21	6.15		
	30	5.13	11.85	6.63	100	2.74	6.33	6.84		
	35	6.82	15.76	7.73	125	4.15	9.58	8.55		
	40	8.74	20.18	8.84	150	5.81	13.41	10.26		
45	10.87	25.10	9.94	3	1	—	—	—		
50	13.21	30.51	11.05		2	—	—	—		
1½	1	—	—		—	5	0.007	0.015	0.22	
	2	0.03	0.07		0.33	7	0.009	0.021	0.31	
	5	0.09	0.22		0.81	10	0.013	0.03	0.44	
	7	0.17	0.38		1.13	15	0.030	0.07	0.66	
	10	0.31	0.72		1.62	20	0.048	0.11	0.88	
	15	0.66	1.53		2.42	25	0.074	0.17	1.10	
	20	1.13	2.61		3.23	30	0.10	0.23	1.33	
	25	1.71	3.95		4.04	35	0.13	0.31	1.55	
	30	2.39	5.53		4.85	40	0.17	0.40	1.77	
	35	3.19	7.36		5.66	45	0.22	0.50	1.99	
40	4.08	9.43	6.47		50	0.26	0.60	2.21		
45	5.08	11.73	7.27		60	0.37	0.85	2.65		
50	6.17	14.25	8.08		70	0.49	1.13	3.09		
60	8.65	19.98	9.70	75	0.55	1.28	3.31			
2	1	—	—	—	80	0.62	1.44	3.53		
	2	—	—	—	90	0.78	1.80	3.98		
	5	0.029	0.066	0.49	100	0.94	2.18	4.42		
	7	0.048	0.11	0.69	125	1.43	3.31	5.52		
	10	0.091	0.21	0.98	150	2.00	4.63	6.63		
	15	0.19	0.45	1.46	175	2.67	6.16	7.73		
	20	0.33	0.76	1.95	200	3.41	7.88	8.83		
	25	0.50	1.15	2.44	250	5.17	11.93	11.04		

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION CHARTS

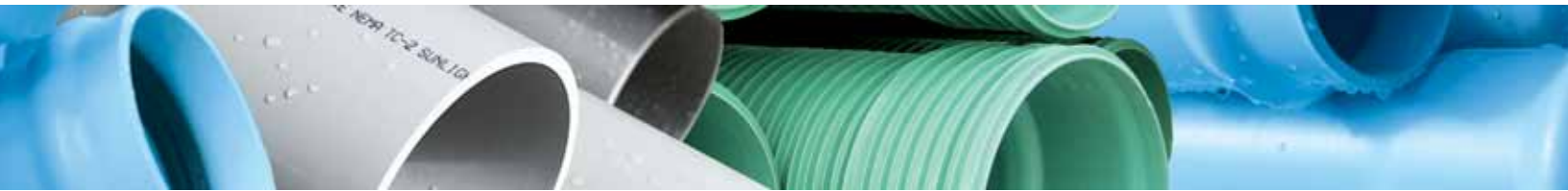
(CONTINUED)

FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SCHEDULE 40 (CONTINUED)

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
4	20	0.013	0.03	0.51	6	175	0.096	0.22	1.97
	25	0.017	0.04	0.64		200	0.12	0.28	2.25
	30	0.026	0.06	0.77		250	0.19	0.43	2.81
	35	0.035	0.08	0.89		300	0.26	0.60	3.37
	40	0.048	0.11	1.02		350	0.34	0.79	3.94
	45	0.056	0.13	1.15		400	0.44	1.01	4.49
	50	0.069	0.16	1.28		450	0.55	1.26	5.06
	60	0.095	0.22	1.53		500	0.66	1.53	5.62
	70	0.13	0.30	1.79		750	1.41	3.25	8.43
	75	0.15	0.34	1.92		1000	2.40	5.54	11.24
	80	0.16	0.38	2.05	8	100	0.012	0.03	0.65
	90	0.20	0.47	2.30		125	0.015	0.035	0.81
	100	0.25	0.58	2.56		150	0.017	0.04	0.97
	125	0.38	0.88	3.20		175	0.024	0.055	1.14
	150	0.53	1.22	3.84		200	0.030	0.07	1.30
	175	0.71	1.63	4.48		250	0.048	0.11	1.63
	200	0.90	2.08	5.11		300	0.069	0.16	1.94
	250	1.36	3.15	6.40		350	0.091	0.21	2.27
	300	1.91	4.41	7.67		400	0.12	0.27	2.59
	350	2.55	5.87	8.95		450	0.14	0.33	2.92
400	3.26	7.52	10.23	500	0.17	0.40	3.24		
5	30	0.009	0.02	0.49	750	0.37	0.85	4.86	
	35	0.013	0.03	0.57	1000	0.63	1.45	6.48	
	40	0.013	0.03	0.65	1250	0.95	2.20	8.11	
	45	0.017	0.04	0.73	1500	1.33	3.07	9.72	
	50	0.022	0.05	0.81	10	200	0.012	0.027	0.82
	60	0.030	0.07	0.97		250	0.015	0.035	1.03
	70	0.043	0.10	1.14		300	0.022	0.05	1.23
	75	0.048	0.11	1.22		350	0.028	0.065	1.44
	80	0.056	0.13	1.30		400	0.039	0.09	1.64
	90	0.069	0.16	1.46		450	0.048	0.11	1.85
	100	0.082	0.19	1.62		500	0.056	0.13	2.05
	125	0.125	0.29	2.03		750	0.12	0.28	3.08
	150	0.17	0.40	2.44		1000	0.21	0.48	4.11
	175	0.235	0.54	2.84		1250	0.32	0.73	5.14
	200	0.30	0.69	3.25	1500	0.44	1.01	6.16	
	250	0.45	1.05	4.06	2000	0.74	1.72	8.21	
	300	0.63	1.46	4.87	2500	1.13	2.61	10.27	
	350	0.85	1.95	5.69	350	0.012	0.027	1.01	
	400	1.08	2.49	6.50	400	0.017	0.04	1.16	
	450	1.34	3.09	7.31	450	0.022	0.05	1.30	
500	1.63	3.76	8.12	500	0.026	0.06	1.45		
6	50	0.009	0.02	0.56	750	0.052	0.12	2.17	
	60	0.013	0.03	0.67	1000	0.087	0.20	2.89	
	70	0.017	0.04	0.79	1250	0.13	0.31	3.62	
	75	0.022	0.05	0.84	1500	0.19	0.43	4.34	
	80	0.022	0.05	0.90	2000	0.32	0.73	5.78	
	90	0.026	0.06	1.01	2500	0.49	1.11	7.23	
	100	0.035	0.08	1.12	3000	0.67	1.55	8.68	
	125	0.052	0.12	1.41	3500	0.90	2.07	10.12	
	150	0.069	0.16	1.69	4000	1.15	2.66	11.07	

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SCHEDULE 80

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
1/2	1	1.74	4.02	1.48	2	35	1.29	2.99	3.91
	2	3.48	8.03	2.95		40	1.66	3.83	4.47
	5	19.59	45.23	7.39		45	2.07	4.76	5.03
	7	35.97	83.07	10.34		50	2.51	5.79	5.58
	10	—	—	—		60	3.52	8.12	6.70
3/4	1	0.37	0.86	0.74		70	4.68	10.80	7.82
	2	0.74	1.72	1.57		75	5.31	12.27	8.38
	5	4.19	9.67	3.92		80	5.99	13.83	8.93
	7	7.69	17.76	5.49		90	7.45	17.20	10.05
	10	14.65	33.84	7.84		100	9.05	20.90	11.17
	15	31.05	71.70	11.76	1	—	—	—	
1	1	—	—	—	2	—	—	—	
	2	0.38	0.88	0.94	5	0.022	0.05	0.39	
	5	1.19	2.75	2.34	7	0.032	0.07	0.54	
	7	2.19	5.04	3.28	10	0.052	0.12	0.78	
	10	4.16	9.61	4.68	15	0.11	0.26	1.17	
	15	8.82	20.36	7.01	20	0.19	0.44	1.56	
	20	15.02	34.68	9.35	25	0.29	0.67	1.95	
	25	22.70	52.43	11.69	30	0.41	0.94	2.34	
30	31.82	73.48	14.03	35	0.54	1.25	2.73		
1 1/4	1	—	—	—	40	0.69	1.60	3.12	
	2	0.09	0.21	0.52	45	0.86	1.99	3.51	
	5	0.29	0.66	1.30	50	1.05	2.42	3.90	
	7	0.53	1.21	1.82	60	1.47	3.39	4.68	
	10	1.00	2.30	2.60	70	1.95	4.51	5.46	
	15	2.11	4.87	3.90	75	2.22	5.12	5.85	
	20	3.59	8.30	5.20	80	2.50	5.77	6.24	
	25	5.43	12.55	6.50	90	3.11	7.18	7.02	
	30	7.62	17.59	7.80	100	3.78	8.72	7.80	
	35	10.13	23.40	9.10	125	5.72	13.21	9.75	
	40	12.98	29.97	10.40	150	8.00	18.48	11.70	
	45	16.14	37.27	11.70	1	—	—	—	
	50	19.61	45.30	13.00	2	—	—	—	
1 1/2	1	—	—	—	5	0.009	0.02	0.25	
	2	0.041	0.10	0.38	7	0.012	0.028	0.35	
	5	0.126	0.30	0.94	10	0.017	0.04	0.50	
	7	0.24	0.55	1.32	15	0.039	0.09	0.75	
	10	0.45	1.04	1.88	20	0.065	0.15	1.00	
	15	0.95	2.20	2.81	25	0.095	0.22	1.25	
	20	1.62	3.75	3.75	30	0.13	0.31	1.49	
	25	2.46	5.67	4.69	35	0.18	0.42	1.74	
	30	3.44	7.95	5.63	40	0.23	0.54	1.99	
	35	4.58	10.58	6.57	45	0.29	0.67	2.24	
	40	5.87	13.55	7.50	50	0.35	0.81	2.49	
	45	7.30	16.85	8.44	60	0.49	1.14	2.99	
	50	8.87	20.48	9.38	70	0.65	1.51	3.49	
	60	12.43	28.70	11.26	75	0.74	1.72	3.74	
2	1	—	—	—	80	0.84	1.94	3.99	
	2	—	—	—	90	1.04	2.41	4.48	
	5	0.040	0.10	0.56	100	1.27	2.93	4.98	
	7	0.065	0.15	0.78	125	1.92	4.43	6.23	
	10	0.13	0.29	1.12	150	2.68	6.20	7.47	
	15	0.27	0.62	1.68	175	3.58	8.26	8.72	
	20	0.46	1.06	2.23	200	4.58	10.57	9.97	
	25	0.69	1.60	2.79	250	6.93	16.00	12.46	
	30	0.97	2.25	3.35	—	—	—	—	

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION CHARTS

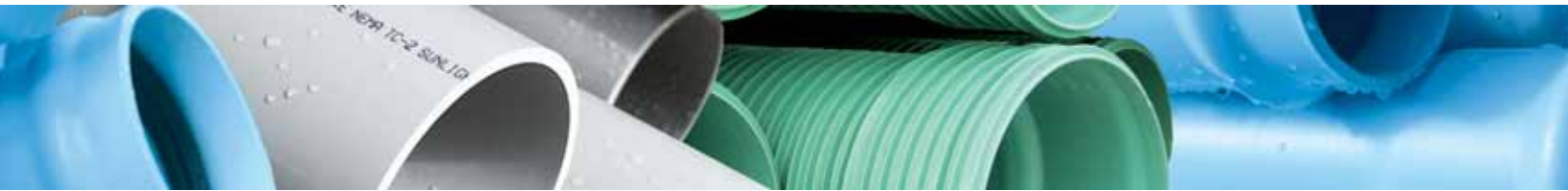
(CONTINUED)

FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SCHEDULE 80 (CONTINUED)

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
4	20	0.017	0.04	0.57	6	175	0.12	0.29	2.20
	25	0.026	0.06	0.72		200	0.16	0.37	2.51
	30	0.035	0.08	0.86		250	0.24	0.56	3.14
	35	0.048	0.11	1.00		300	0.34	0.78	3.76
	40	0.061	0.14	1.15		350	0.45	1.04	4.39
	45	0.074	0.17	1.29		400	0.58	1.33	5.02
	50	0.091	0.21	1.43		450	0.71	1.65	5.64
	60	0.13	0.30	1.72		500	0.87	2.00	6.27
	70	0.17	0.39	2.01		750	1.84	4.25	9.40
	75	0.19	0.45	2.15		1000	3.13	7.23	12.54
	80	0.22	0.50	2.29	8	125	0.019	0.045	0.90
	90	0.27	0.63	2.58		150	0.022	0.05	1.07
	100	0.33	0.76	2.87		175	0.033	0.075	1.25
	125	0.50	1.16	3.59		200	0.039	0.09	1.43
	150	0.70	1.61	4.30		250	0.61	0.14	1.79
	175	0.93	2.15	5.02		300	0.087	0.20	2.14
	200	1.19	2.75	5.73		350	0.12	0.27	2.50
	250	1.81	4.16	7.16		400	0.15	0.34	2.86
	300	2.52	5.83	8.60		450	0.18	0.42	3.21
350	3.36	7.76	10.03	500		0.22	0.51	3.57	
400	4.30	9.93	11.47	750	0.47	1.08	5.36		
5	30	0.013	0.03	0.54	1000	0.80	1.84	7.14	
	35	0.017	0.04	0.63	1250	1.20	2.78	8.93	
	40	0.017	0.04	0.72	1500	1.68	3.89	10.71	
	45	0.026	0.06	0.81	200	0.015	0.036	0.90	
	50	0.030	0.07	0.90	250	0.02	0.045	1.14	
	60	0.043	0.10	1.08	300	0.03	0.07	1.36	
	70	0.056	0.13	1.26	350	0.037	0.085	1.59	
	75	0.061	0.14	1.35	400	0.048	0.11	1.81	
	80	0.069	0.16	1.44	450	0.061	0.14	2.04	
	90	0.087	0.20	1.62	500	0.074	0.17	2.27	
	100	0.10	0.24	1.80	750	0.16	0.36	3.40	
	125	0.16	0.37	2.25	1000	0.26	0.61	4.54	
	150	0.23	0.52	2.70	1250	0.40	0.92	5.67	
	175	0.30	0.69	3.15	1500	0.56	1.29	6.80	
	200	0.38	0.88	3.60	2000	0.95	2.19	9.07	
	250	0.58	1.34	4.50	2500	1.44	3.33	11.34	
	300	0.81	1.87	5.40	350	0.016	0.037	1.12	
	350	1.08	2.49	6.30	400	0.022	0.05	1.28	
	400	1.38	3.19	7.19	450	0.026	0.06	1.44	
450	1.72	3.97	8.09	500	0.030	0.07	1.60		
500	2.09	4.82	8.99	750	0.065	0.15	2.40		
6	50	0.013	0.03	0.63	1000	0.11	0.26	3.20	
	60	0.017	0.04	0.75	1250	0.17	0.40	4.01	
	70	0.022	0.05	0.88	1500	0.24	0.55	4.81	
	75	0.026	0.06	0.94	2000	0.41	0.94	6.41	
	80	0.030	0.07	1.00	2500	0.62	1.42	8.01	
	90	0.035	0.08	1.13	3000	0.86	1.99	9.61	
	100	0.043	0.10	1.25	3500	1.15	2.65	11.21	
	125	0.068	0.16	1.57	4000	1.48	3.41	12.82	
	150	0.095	0.22	1.88	—	—	—	—	

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SDR 13.5

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
½	1	0.45	1.03	0.85	2	30	0.78	1.80	3.06
	2	0.89	2.05	1.69		35	1.04	2.40	3.57
	5	5.01	11.58	4.22		40	1.33	3.07	4.08
	7	9.20	21.24	5.91		45	1.65	3.82	4.59
	10	17.52	40.46	8.44		50	2.01	4.64	5.10
¾	1	0.15	0.34	0.54		60	2.81	6.50	6.12
	2	0.29	0.68	1.07		70	3.75	8.65	7.14
	5	1.65	3.82	2.68		75	4.26	9.83	7.65
	7	3.03	7.01	3.75		80	4.80	11.08	8.16
	10	5.78	13.34	5.35		90	5.97	13.78	9.18
	15	12.24	28.27	8.03	100	7.25	16.75	10.20	
	20	20.86	48.17	10.70	2½	1	—	—	—
1	1	—	—	—		2	—	—	—
	2	0.17	0.40	0.68		5	0.016	0.038	0.35
	5	0.54	1.24	1.69		7	0.023	0.053	0.49
	7	0.99	2.28	2.36		10	0.039	0.09	0.70
	10	1.87	4.33	3.37		15	0.087	0.20	1.04
	15	3.97	9.18	5.06		20	0.15	0.34	1.39
	20	6.77	15.64	6.74		25	0.22	0.51	1.74
	25	10.24	23.65	8.43		30	0.31	0.71	2.09
30	14.35	33.15	10.11	35		0.41	0.95	2.44	
1¼	1	—	—	—		40	0.52	1.21	2.78
	2	0.06	0.13	0.42		45	0.65	1.51	3.13
	5	0.17	0.39	1.05		50	0.79	1.83	3.48
	7	0.31	0.72	1.47		60	1.11	2.57	4.18
	10	0.59	1.37	2.10		70	1.48	3.42	4.87
	15	1.26	2.91	3.15	75	1.68	3.88	5.22	
	20	2.15	4.96	4.21	80	1.89	4.37	5.57	
	25	3.24	7.49	5.26	90	2.36	5.44	6.27	
	30	4.55	10.50	6.31	100	2.86	6.61	6.96	
	35	6.05	13.97	7.36	125	4.33	10.01	8.70	
	40	7.75	17.90	8.41	150	6.07	14.01	10.44	
	45	9.64	22.26	9.4	3	1	—	—	—
50	11.71	27.05	10.52	2		—	—	—	
1½	1	—	—	—		5	0.009	0.02	0.24
	2	0.028	0.065	0.32		7	0.012	0.03	0.33
	5	0.088	0.20	0.80		10	0.017	0.04	0.47
	7	0.16	0.37	1.12		15	0.035	0.08	0.70
	10	0.31	0.71	1.60		20	0.056	0.13	0.94
	15	0.65	1.50	2.40		25	0.082	0.19	1.17
	20	1.10	2.55	3.20		30	0.12	0.27	1.41
	25	1.67	3.85	4.00		35	0.16	0.36	1.64
	30	2.34	5.40	4.80		40	0.20	0.46	1.88
	35	3.11	7.19	5.60		45	0.25	0.58	2.11
40	3.98	9.20	6.40	50		0.30	0.70	2.35	
45	4.95	11.44	7.20	60		0.42	0.98	2.82	
50	6.02	13.91	8.00	70		0.57	1.31	3.29	
60	8.44	19.50	9.60	75	0.65	1.49	3.52		
2	1	—	—	—	80	0.73	1.68	3.76	
	2	0.013	0.03	0.20	90	0.90	2.09	4.23	
	5	0.033	0.075	0.51	100	1.10	2.54	4.70	
	7	0.054	0.125	0.72	125	1.66	3.84	5.88	
	10	0.10	0.24	1.02	150	2.33	5.37	7.04	
	15	0.22	0.50	1.53	175	3.10	7.15	8.22	
	20	0.37	0.85	2.04	200	3.96	9.15	9.39	
25	0.56	1.29	2.55	250	6.00	13.86	11.74		

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION CHARTS

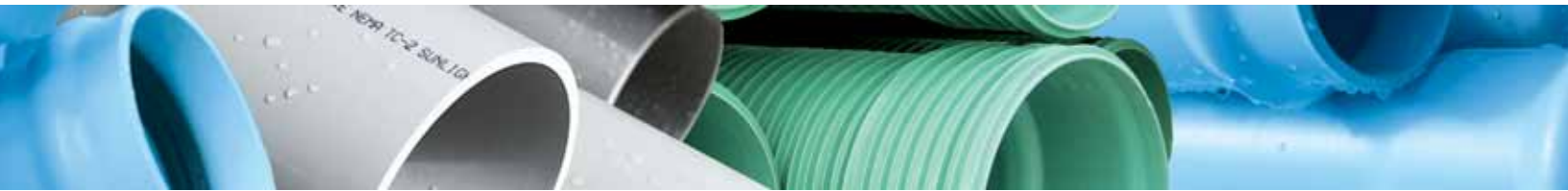
(CONTINUED)

FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SDR 13.5 (CONTINUED)

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
4	20	0.017	0.04	0.57	5	100	0.12	0.27	1.86
	25	0.026	0.06	0.71		125	0.18	0.40	2.33
	30	0.035	0.08	0.85		150	0.24	0.56	2.79
	35	0.048	0.11	0.99		175	0.33	0.75	3.26
	40	0.060	0.14	1.14		200	0.42	0.96	3.72
	45	0.074	0.17	1.28		250	0.63	1.46	4.66
	50	0.091	0.21	1.42		300	0.88	2.03	5.58
	60	0.13	0.29	1.70		350	1.17	2.70	6.52
	70	0.16	0.38	1.99		400	1.50	3.46	7.44
	75	0.19	0.44	2.13		450	1.87	4.31	8.37
	80	0.21	0.49	2.27	500	2.27	5.24	9.30	
	90	0.26	0.61	2.56	6	50	0.013	0.03	0.66
	100	0.32	0.74	2.84		60	0.017	0.04	0.79
	125	0.49	1.13	3.55		70	0.026	0.06	0.92
	150	0.68	1.58	4.26		75	0.030	0.07	0.98
	175	0.91	2.10	4.97		80	0.035	0.08	1.05
	200	1.16	2.69	5.68		90	0.039	0.09	1.18
	250	1.76	4.07	7.10		100	0.048	0.11	1.31
	300	2.46	5.69	8.52		125	0.074	0.17	1.64
	350	3.29	7.58	9.94		150	0.10	0.24	1.97
400	4.20	9.70	11.36	175		0.14	0.32	2.30	
5	30	0.013	0.03	0.56	200	0.18	0.41	2.62	
	35	0.017	0.04	0.65	250	0.27	0.62	3.28	
	40	0.022	0.05	0.74	300	0.38	0.87	3.93	
	45	0.026	0.06	0.84	350	0.50	1.16	4.59	
	50	0.030	0.07	0.93	400	0.64	1.48	5.24	
	60	0.043	0.10	1.12	450	0.80	1.84	5.90	
	70	0.061	0.14	1.30	500	0.97	2.23	6.56	
	75	0.069	0.16	1.40	750	2.05	4.73	9.83	
	80	0.078	0.18	1.49	1000	3.49	8.06	13.11	
	90	0.095	0.22	1.67	—	—	—	—	

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SDR 21

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
1/2	1	0.44	1.00	0.84	2	25	0.41	0.95	2.25
	2	0.87	2.00	1.67		30	0.58	1.34	2.71
	5	4.87	11.25	4.17		35	0.77	1.78	3.16
	7	8.95	20.66	5.84		40	0.98	2.27	3.61
	10	17.03	39.34	8.34		45	1.23	2.83	4.06
3/4	1	0.12	0.28	0.50		50	1.49	3.44	4.51
	2	0.24	0.56	0.99		60	2.09	4.82	5.41
	5	1.36	3.14	2.47		70	2.78	6.41	6.31
	7	2.49	5.76	3.46		75	3.16	7.29	6.76
	10	4.75	10.96	4.94		80	3.55	8.21	7.21
	15	10.06	23.23	7.40	90	4.42	10.21	8.12	
1	20	17.13	39.57	9.87	100	5.37	12.41	9.02	
	2	0.13	0.30	0.60	2 1/2	1	—	—	—
	5	0.41	0.93	1.50		2	—	—	—
	7	0.74	1.70	2.09		5	0.014	0.031	0.031
	10	1.40	3.24	2.99		7	0.020	0.044	0.43
	15	2.97	6.86	4.49		10	0.03	0.07	0.61
	20	5.06	11.68	5.98		15	0.061	0.14	0.92
	25	7.65	17.66	7.48		20	0.11	0.25	1.23
30	10.72	24.76	8.97	25		0.16	0.37	1.53	
35	14.26	32.94	10.47	30		0.23	0.52	1.84	
1 1/4	2	0.04	0.095	0.37		35	0.30	0.70	2.15
	5	0.13	0.30	0.93		40	0.39	0.89	2.45
	7	0.23	0.54	1.31		45	0.48	1.11	2.76
	10	0.44	1.02	1.86		50	0.58	1.35	3.07
	15	0.94	2.16	2.79		60	0.82	1.89	3.68
	20	1.59	3.68	3.72		70	1.09	2.51	4.29
	25	2.41	5.56	4.65		75	1.23	2.85	4.60
	30	3.38	7.80	5.58		80	1.39	3.22	4.91
	35	4.49	10.37	6.51	90	1.73	4.00	5.52	
	40	5.75	13.28	7.44	100	2.10	4.86	6.14	
	45	7.15	16.52	8.37	125	3.19	7.36	7.67	
1 1/2	50	8.69	20.08	9.30	150	4.46	10.30	9.20	
	60	12.18	28.14	11.17	175	5.94	13.72	10.74	
	2	0.022	0.05	0.29	3	5	0.006	0.015	0.20
	5	0.065	0.15	0.71		7	0.009	0.021	0.29
	7	0.12	0.28	0.99		10	0.013	0.03	0.41
	10	0.23	0.52	1.41		15	0.026	0.06	0.62
	15	0.48	1.11	2.12		20	0.039	0.09	0.83
	20	0.82	1.89	2.83		25	0.061	0.14	1.03
	25	1.23	2.85	3.54		30	0.087	0.20	1.24
	30	1.73	4.00	4.24		35	0.12	0.27	1.45
	35	2.30	5.32	4.95		40	0.15	0.34	1.65
	40	2.95	6.81	5.66		45	0.18	0.42	1.86
	45	3.67	8.47	6.36		50	0.22	0.51	2.06
50	4.46	10.29	7.07	60		0.31	0.72	2.48	
60	6.24	14.42	8.49	70		0.42	0.96	2.89	
70	8.31	19.19	9.90	75		0.47	1.09	3.10	
75	9.44	21.80	10.61	80	0.53	1.23	3.30		
2	1	—	—	—	90	0.66	1.52	3.72	
	2	0.010	0.023	0.18	100	0.80	1.85	4.13	
	5	0.025	0.06	0.45	125	1.22	2.81	5.17	
	7	0.035	0.081	0.63	150	1.70	3.93	6.19	
	10	0.074	0.17	0.90	175	2.26	5.23	7.23	
	15	0.16	0.37	1.35	200	2.90	6.69	8.26	
	20	0.27	0.63	1.80	250	4.39	10.13	10.33	

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION CHARTS

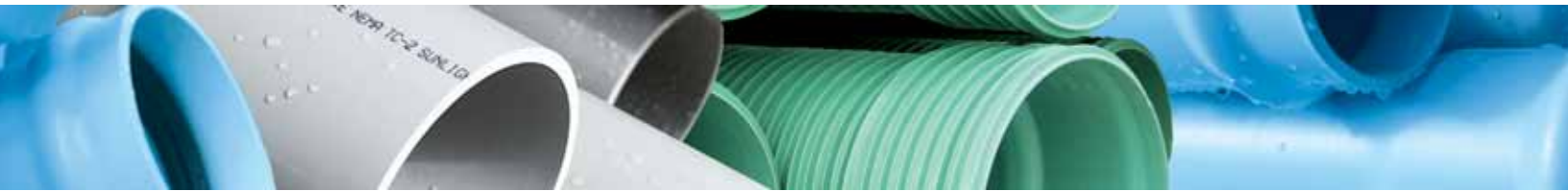
(CONTINUED)

FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SDR 21 (CONTINUED)

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	
4	20	0.013	0.03	0.50	6	175	0.103	0.24	2.02	
	25	0.017	0.04	0.62		200	0.13	0.30	2.31	
	30	0.026	0.06	0.75		250	0.20	0.46	2.89	
	35	0.035	0.08	0.87		300	0.27	0.63	3.46	
	40	0.043	0.10	1.00		350	0.37	0.85	4.04	
	45	0.052	0.12	1.12		400	0.47	1.08	4.61	
	50	0.065	0.15	1.25		450	0.58	1.34	5.19	
	60	0.091	0.21	1.50		500	0.71	1.63	5.76	
	70	0.12	0.28	1.75		750	1.50	3.46	8.64	
	75	0.14	0.32	1.87		1000	2.55	5.89	11.53	
	80	0.16	0.36	2.00		100	0.012	0.03	0.67	
	90	0.19	0.45	2.25		125	0.015	0.037	0.85	
	100	0.23	0.54	2.50		150	0.022	0.05	1.02	
	125	0.36	0.82	3.13		175	0.028	0.065	1.19	
	150	0.50	1.15	3.75		200	0.035	0.08	1.36	
	175	0.67	1.54	4.37		250	0.054	0.125	1.70	
	200	0.85	1.96	4.99		300	0.078	0.18	2.04	
	250	1.29	2.97	6.24		350	0.103	0.24	2.38	
	300	1.80	4.16	7.49		400	0.13	0.30	2.72	
	350	2.40	5.54	8.74		450	0.16	0.37	3.06	
400	3.07	7.09	9.99	500	0.19	0.45	3.40			
450	3.82	8.82	11.24	750	0.42	0.96	5.10			
500	4.64	10.72	12.48	1000	0.64	1.63	6.80			
5	30	0.009	0.02	0.49	8	1250	1.07	2.47	8.50	
	35	0.013	0.03	0.57		1500	1.49	3.45	10.19	
	40	0.017	0.04	0.65		2000	2.54	5.87	13.59	
	45	0.017	0.04	0.74		200	0.012	0.027	0.86	
	50	0.022	0.05	0.82		250	0.020	0.045	1.10	
	60	0.035	0.08	0.98		300	0.026	0.06	1.31	
	70	0.043	0.10	1.14		350	0.035	0.08	1.54	
	75	0.048	0.11	1.23		400	0.043	0.10	1.75	
	80	0.056	0.13	1.31		450	0.056	0.13	1.97	
	90	0.069	0.16	1.47		500	0.065	0.15	2.19	
	100	0.082	0.19	1.63		750	0.14	0.33	3.29	
	125	0.13	0.30	2.04		1000	0.24	0.56	4.38	
	150	0.18	0.41	2.45		1250	0.37	0.85	5.48	
	175	0.24	0.55	2.86		1500	0.51	1.18	6.57	
	200	0.30	0.70	3.27		2000	0.87	2.02	8.76	
	250	0.46	1.06	4.09		2500	1.33	3.06	10.96	
	300	0.64	1.48	4.90		3000	1.85	4.27	13.15	
	350	0.86	1.98	5.72		350	0.016	0.036	1.08	
	400	1.10	2.53	6.54		400	0.017	0.04	1.24	
	450	1.36	3.14	7.35		450	0.026	0.06	1.40	
500	1.65	3.82	8.17	500	0.030	0.07	1.55			
750	3.50	8.09	12.26	750	0.061	0.14	2.33			
6	50	0.009	0.02	0.58	10	1000	0.10	0.24	3.11	
	60	0.013	0.03	0.69		1250	0.16	0.37	3.89	
	70	0.017	0.04	0.81		1500	0.22	0.51	4.66	
	75	0.022	0.05	0.86		2000	0.38	0.87	6.22	
	80	0.022	0.05	0.92		2500	0.57	1.33	7.77	
	90	0.030	0.07	1.04		3000	0.80	1.85	9.33	
	100	0.035	0.08	1.15		3500	1.07	2.47	10.88	
	125	0.054	0.125	1.44		4000	1.37	3.17	12.44	
	150	0.078	0.18	1.73		4500	1.70	3.93	13.99	
	6	50	0.009	0.02		0.58	12	1250	0.16	0.37
60		0.013	0.03	0.69	1500	0.22		0.51	4.66	
70		0.017	0.04	0.81	2000	0.38		0.87	6.22	
75		0.022	0.05	0.86	2500	0.57		1.33	7.77	
80		0.022	0.05	0.92	3000	0.80		1.85	9.33	
90		0.030	0.07	1.04	3500	1.07		2.47	10.88	
100		0.035	0.08	1.15	4000	1.37		3.17	12.44	
125		0.054	0.125	1.44	4500	1.70		3.93	13.99	
150		0.078	0.18	1.73						

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE
SDR 26

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
1/2	1	0.43	1.00	0.84	2	20	0.25	0.57	1.73
	2	0.86	2.00	1.67		25	0.37	0.86	2.16
	5	4.87	11.25	4.17		30	0.52	1.21	2.60
	7	8.95	20.66	5.84		35	0.70	1.61	3.03
	10	17.03	39.34	8.34		40	0.89	2.06	3.46
3/4	1	0.12	0.28	0.50		45	1.11	2.56	3.90
	2	0.24	0.56	0.99		50	1.35	3.11	4.33
	5	1.36	3.14	2.47		60	1.89	4.36	5.19
	7	2.49	5.76	3.46		70	2.51	5.80	6.06
	10	4.74	10.96	4.94		75	2.86	6.60	6.49
	15	10.06	23.23	7.40	80	3.22	7.43	6.92	
	20	17.13	39.57	9.87	90	4.01	9.25	7.79	
1	2	0.13	0.29	0.59	100	4.87	11.24	8.66	
	5	0.39	0.91	1.48	1	—	—	—	
	7	0.72	1.66	2.08	2	—	—	—	
	10	1.37	3.16	2.96	5	0.011	0.025	0.30	
	15	2.90	6.69	4.44	7	0.015	0.035	0.42	
	20	4.94	11.40	5.92	10	0.026	0.06	0.59	
	25	7.46	17.23	7.40	15	0.056	0.13	0.88	
	30	10.46	24.15	8.88	20	0.095	0.22	1.18	
1 1/4	35	13.91	32.13	10.36	25	0.15	0.34	1.47	
	2	0.037	0.085	0.36	30	0.20	0.47	1.77	
	5	0.117	0.27	0.90	35	0.27	0.63	2.06	
	7	0.21	0.49	1.25	40	0.35	0.81	2.35	
	10	0.40	0.92	1.79	45	0.43	1.00	2.65	
	15	0.85	1.96	2.68	50	0.53	1.22	2.94	
	20	1.45	3.34	3.58	60	0.74	1.71	3.53	
	25	2.18	5.04	4.47	70	0.98	2.27	4.12	
	30	3.06	7.07	5.36	75	1.12	2.58	4.41	
	35	4.07	9.41	6.26	80	1.26	2.91	4.71	
	40	5.22	12.05	7.15	90	1.57	3.62	5.30	
	45	6.49	14.98	8.04	100	1.90	4.39	5.89	
	50	7.88	18.21	8.94	125	2.88	6.65	7.36	
	1 1/2	2	0.0087	0.02	0.27	150	4.03	9.31	8.83
5		0.059	0.14	0.68	175	5.37	12.40	10.31	
7		0.104	0.25	0.96	5	0.0045	0.01	0.20	
10		0.20	0.47	1.36	7	0.0063	0.014	0.28	
15		0.43	1.00	2.04	10	0.009	0.02	0.40	
20		0.74	1.71	2.72	15	0.022	0.05	0.59	
25		1.12	2.59	3.40	20	0.039	0.09	0.79	
30		1.57	3.63	4.08	25	0.056	0.13	0.99	
35		2.09	4.83	4.76	30	0.078	0.18	1.19	
40		2.68	6.18	5.44	35	0.10	0.24	1.39	
45		3.33	7.69	6.12	40	0.13	0.31	1.59	
50		4.04	9.34	6.80	45	0.16	0.38	1.78	
60		5.67	13.10	8.16	50	0.20	0.47	1.98	
70		7.54	17.42	9.52	60	0.28	0.65	2.38	
75		8.57	19.80	10.19	70	0.38	0.87	2.78	
80	9.66	22.31	10.87	75	0.43	0.99	2.97		
90	12.02	27.75	12.23	80	0.48	1.11	3.17		
100	14.61	33.73	13.59	90	0.60	1.38	3.57		
2	1	—	—	—	100	0.73	1.68	3.97	
	2	0.004	0.01	0.17	125	1.10	2.54	4.96	
	5	0.020	0.045	0.44	150	1.54	3.56	5.95	
	7	0.035	0.08	0.61	175	2.05	4.74	6.94	
	10	0.069	0.16	0.87	200	2.63	6.07	7.93	
	15	0.14	0.33	1.30	250	3.98	9.18	9.92	

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.



FLOW/FRICTION CHARTS

(CONTINUED)

FLOW/FRICTION LOSS, SOLVENT WELD PVC PIPE

SDR 26 (CONTINUED)

SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)	SIZE (IN)	FLOW (GAL/MIN)	FRICTION LOSS (psi)	FRICTION HEAD (FT)	VELOCITY (FT/S)
4	20	0.009	0.02	0.48	6	175	0.091	0.21	1.94
	25	0.017	0.04	0.60		200	0.12	0.27	2.21
	30	0.022	0.05	0.72		250	0.18	0.41	2.76
	35	0.030	0.07	0.84		300	0.25	0.57	3.31
	40	0.039	0.09	0.96		350	0.33	0.76	3.87
	45	0.048	0.11	1.08		400	0.42	0.97	4.42
	50	0.061	0.14	1.20		450	0.52	1.21	4.97
	60	0.082	0.19	1.44		500	0.64	1.47	5.52
	70	0.11	0.25	1.67		750	1.35	3.12	8.28
	75	0.13	0.29	1.79		1000	2.30	5.31	11.05
	80	0.14	0.32	1.91	8	100	0.012	0.03	0.66
	90	0.17	0.40	2.15		125	0.015	0.037	0.83
	100	0.21	0.49	2.39		150	0.017	0.04	0.98
	125	0.33	0.74	2.99		175	0.026	0.06	1.14
	150	0.45	1.04	3.50		200	0.030	0.07	1.30
	175	0.60	1.39	4.19		250	0.048	0.11	1.63
	200	0.77	1.77	4.79		300	0.069	0.16	1.95
	250	1.16	2.68	5.98		350	0.091	0.21	2.28
	300	1.62	3.75	7.18		400	0.12	0.27	2.61
	350	2.17	5.00	8.38		450	0.14	0.33	2.93
400	2.77	6.39	9.57	500	0.18	0.41	3.26		
450	3.44	7.95	10.77	750	0.37	0.86	4.89		
500	4.18	9.66	11.96	1000	0.64	1.47	6.51		
5	30	0.009	0.02	0.47	10	1250	0.96	2.23	8.15
	35	0.013	0.03	0.55		1500	1.35	3.11	9.77
	40	0.013	0.03	0.63		2000	2.29	5.30	13.03
	45	0.017	0.04	0.71		200	0.012	0.027	0.83
	50	0.022	0.05	0.78		250	0.017	0.04	1.05
	60	0.030	0.07	0.94		300	0.022	0.05	1.26
	70	0.039	0.09	1.10		350	0.033	0.075	1.47
	75	0.043	0.10	1.18		400	0.039	0.09	1.68
	80	0.052	0.12	1.25		450	0.048	0.11	1.89
	90	0.061	0.14	1.41		500	0.061	0.14	2.10
	100	0.078	0.18	1.57		750	0.13	0.29	3.14
	125	0.12	0.27	1.96		1000	0.22	0.50	4.19
	150	0.16	0.37	2.35		1250	0.33	0.76	5.27
	175	0.22	0.50	2.74		1500	0.46	1.06	6.29
	200	0.27	0.63	3.13		2000	0.78	1.81	8.38
	250	0.42	0.96	3.92		2500	1.19	2.74	10.48
	300	0.58	1.34	4.70		3000	1.66	3.84	12.58
	350	0.77	1.79	5.49		350	0.017	0.04	1.04
	400	0.99	2.28	6.27		400	0.017	0.04	1.19
	450	1.23	2.84	7.05		450	0.022	0.05	1.34
500	1.49	3.45	7.84	500	0.026	0.06	1.49		
750	3.17	7.31	11.75	750	0.056	0.13	2.23		
6	50	0.009	0.02	0.55	12	1000	0.095	0.22	2.98
	60	0.013	0.03	0.66		1250	0.15	0.34	3.73
	70	0.017	0.04	0.77		1500	0.20	0.46	4.47
	75	0.017	0.04	0.83		2000	0.34	0.79	5.96
	80	0.022	0.05	0.88		2500	0.52	1.20	7.45
	90	0.026	0.06	0.99		3000	0.72	1.67	8.94
	100	0.030	0.07	1.10		3500	0.96	2.22	10.43
	125	0.047	0.11	1.39		4000	1.24	2.86	11.92
	150	0.066	0.16	1.66		4500	1.53	3.54	13.41

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.

SHORT FORM INSTALLATION GUIDE/ WARNING

This information is furnished in order to provide a brief review of the installation requirements for JM Eagle™ Solvent Weld PVC pipe. It is not intended to serve as or replace the function of the FULL VERSION product installation guide available upon request.

1. Use a good quality ABS cement and primer which meets ASTM D2235 for ABS pipe only. For PVC pipe, use a good quality PVC cement and primer which meets ASTM D2564.
2. Cut pipe to desired length with pipe cutters, hacksaw, or cross cut saw.
3. Ream pipe both internally and externally or remove burrs and ragged edges.
4. Before making Solvent Weld joint be sure all joining surfaces are free of dirt, dust, water, and oil.
5. Immediately apply a smooth coat of primer and cement to the joining surfaces.
6. Immediately insert the pipe into the full depth of the fitting socket.
7. Turn pipe $\frac{1}{8}$ to $\frac{1}{4}$ turn in the socket to ensure an even spread of cement.
8. Hold firmly in position for 15 seconds.
9. Allow joint to set according to cement manufacturer's instructions.
10. Curvature of the pipe shall be accomplished through longitudinal bending of the pipe barrel in accordance with the following table. Deflection of the joint is not allowed and may cause leaks.

PIPE SIZE (IN)	RADIUS (FT)	PIPE SIZE (IN)	RADIUS (FT)	PIPE SIZE (IN)	RADIUS (FT)
1.5	38	3	75	8	200
2	50	4	100	10	250
2.5	63	6	150	12	300

11. All taps performed on JM Eagle's pressure products, shall be in accordance with Uni-Bell® Publication UNI-PUB-08-07, "Tapping Guide for PVC Pressure Pipe."

WARNING: RUPTURE HAZARD

IMPROPER INSTALLATION OR MISUSE OF TAPPING TOOLS MAY CAUSE PIPES UNDER HIGH PRESSURE TO RUPTURE AND RESULT IN HIGH VELOCITY AIRBORNE FRAGMENTATION LEADING TO SERIOUS INJURIES AND/OR DEATH.

BEFORE AND DURING INSTALLATION, ALWAYS:

- Consult and follow the FULL VERSION of the product installation guide
- Closely follow job specifications
- Use protective gear and equipment

BEFORE AND DURING TAPPING, ALWAYS:

- Consult and follow Uni-Bell® Publication UNI-PUB-08-07, "Tapping Guide for PVC Pressure Pipe."
- Use the correct tapping tools
- Bleed air from pipes at high spot before tapping
- Use protective gear and equipment

Please contact JM Eagle™ Product Assurance at (800) 621-4404 to obtain FULL VERSION of the appropriate installation guide or for further assistance.

07

WARRANTY

JM EAGLE™ PRODUCTS LIMITED WARRANTY

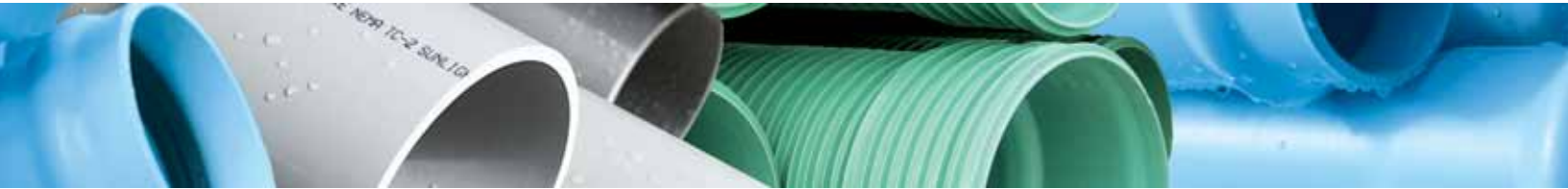
J-M Manufacturing Co., Inc. (JM Eagle™) warrants that its standard polyvinyl chloride (PVC), polyethylene (PE), conduit/plumbing/solvent weld and Acrylonitrile-Butadiene-Styrene (ABS) pipe Products (“Products”) are manufactured in accordance with applicable industry specifications referenced on the Product and are free from defects in workmanship and materials. Every claim under this warranty shall be void unless in writing and received by JM Eagle™ within thirty (30) days of the date the defect was discovered, and within one (1) year of the date of shipment from the JM Eagle™ plant. Claims for Product appearance defects, such as sun-bleached pipe etc., however, must be made within thirty (30) days of the date of the shipment from the JM Eagle™ plant. This warranty specifically excludes any Products allowed to become sun-bleached after shipment from the JM Eagle™ plant. Proof of purchase with the date thereof must be presented to the satisfaction of JM Eagle™, with any claim made pursuant to this warranty. JM Eagle™ must first be given an opportunity to inspect the alleged defective Products in order to determine if it meets applicable industry standards, if the handling and installation have been satisfactorily performed in accordance with JM Eagle™ recommended practices and if operating conditions are within standards. Written permission and/or a Return Goods Authorization (RGA) must be obtained along with instructions for return shipment to JM Eagle™ of any Products claimed to be defective.

The limited and exclusive remedy for breach of this Limited Warranty shall be, at JM Eagle’s sole discretion, the replacement of the same type, size and like quantity of non-defective Product, or credits, offsets, or combination of thereof, for the wholesale purchase price of the defective unit.

This Limited Warranty does not apply for any Product failures caused by user’s flawed designs or specifications, unsatisfactory applications, improper installations, use in conjunction with incompatible materials, contact with aggressive chemical agents, freezing or overheating of liquids in the product and any other misuse causes not listed here. This Limited Warranty also excludes failure or damage caused by fire stopping materials, thread sealants, plasticized vinyl Products or damage caused by the fault or negligence of anyone other than JM Eagle™, or any other act or event beyond the control of JM Eagle™.

JM Eagle’s liability shall not, at any time, exceed the actual wholesale purchase price of the Product. The warranties in this document are the only warranties applicable to the Product and there are no other warranties, expressed or implied. This Limited Warranty specifically excludes any liability for general damages, consequential or incidental damages, including without limitation, costs incurred from removal, reinstallation, or other expenses resulting from any defect. IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED AND JM EAGLE™ SHALL NOT BE LIABLE IN THIS RESPECT NOTWITHSTANDING JM EAGLE’S ACTUAL KNOWLEDGE THE PRODUCT’S INTENDED USE.

JM Eagle’s Products should be used in accordance with standards set forth by local plumbing and building laws, codes, or regulations and the applicable standards. Failure to adhere to these standards shall void this Limited Warranty. Products sold by JM Eagle™ that are manufactured by others are warranted only to the extent and limits of the warranty of the manufacturer. No statement, conduct or description by JM Eagle™ or its representative, in addition to or beyond this Limited Warranty, shall constitute a warranty. This Limited Warranty may only be modified in writing signed by an officer of JM Eagle™.



PLANT LOCATIONS

ADEL

2101 J-M Drive
Adel, Georgia 31620

BATCHELOR

2894 Marion Monk Road
Batchelor, Louisiana 70715

BUTNER

2602 West Lyon Station Road
Creedmoor, North Carolina 27522

CAMERON PARK

3500 Robin Lane
Cameron Park, California 95682

COLUMBIA

6500 North Brown Station Road
Columbia, Missouri 65202

CONROE

101 East Avenue M
Conroe, Texas 77301

FONTANA

10990 Hemlock Avenue
Fontana, California 92337

HASTINGS

146 North Maple Avenue
Hastings, Nebraska 68901

KINGMAN

4620 Olympic Way
Kingman, Arizona 86401

MAGNOLIA

2220 Duracrete Drive
Magnolia, Arkansas 71753

MCNARY

31240 Roxbury Road
Umatilla, Oregon 97882

MEADVILLE

15661 Delano Road
Cochranton, Pennsylvania 16314

PERRIS

23711 Rider Street
Perris, California 92570

PUEBLO

1742 E. Platteville Boulevard
Pueblo West, Colorado 81007

STOCKTON

1051 Sperry Road
Stockton, California 95206

SUNNYSIDE

1820 South First Street
Sunnyside, Washington 98944

TACOMA

2330 Port of Tacoma Road
Tacoma, Washington 98421

TULSA

4501 West 49th Street
Tulsa, Oklahoma 74107

VISALIA

8875 Avenue 304
Visalia, California 93291

WHARTON

10807 US 59 RD
Wharton, Texas 77488

WILTON

1314 W. Third Street
Wilton, Iowa 52778

MEXICO

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** Our Mexico location is a joint
venture between JM Eagle™ and
Plastics Technology*

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