PVC Well Casing and Drop Pipe

Submittal Data Sheet

Job or Customer: .....

Engineer: .....

Contractor: .....

Submitted by: ..... Date

Approved by: ..... Date

Order No: ..... Date

Specification: .....

< STANDARDS >

Drop Pipe	Well Casing	
ASTM D1785	SCH 40	ASTM F480 ASTM D1785 ASTM D2665
	SDR 17	ASTM F480
	SDR 21	ASTM F480 ASTM D2241
	SDR 26	ASTM F480 ASTM D2241
	SDR 27.6	ASTM F480

Drop Pipe	NSF 14 NSF 61
Well Casing	NSF 14

Please see our listing on agency websites for NSF compliant pipe and fittings.

www.nsf.org
www.CSAgroup.org

PVC is the most frequently specified of all thermoplastic piping materials. It has been used successfully for over 60 years. PVC is characterized by distinctive physical properties, and is resistant to corrosion and chemical attack by acids, alkalis, salt solutions and many other chemicals.

Well casing and drop pipe are manufactured from a PVC compound with a 12454 cell classification (Type 1, Grade 1). The maximum service temperature for PVC is 140°F (60°C), under pressure.

Well Casing is offered in SCH 40, SDR 17, 21, 26 and specialty sizing such as SDR 27.6. The Pipe is bell end, available in 20' sections and is the only manufacturer in the industry to have a NSF listed PVC well casing that meets or exceeds an IC-2 rating.

Drop pipe is offered in both SCH 80 and SCH 120 (Male Threaded, Both Ends). These products are traditionally used in Well and Pump applications. All threaded pipe is supplied with a plastic cap on each end to protect the thread until installation.

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Toll Free: 800 463-9572

IPEX by aliaxis

PVC Well Casing and Drop Pipe

Submittal Data Sheet

Material Properties

Properties	PVC	Standards
Specific gravity	1.42	ASTM D792
Tensile strength, psi at 73°F	7,000	ASTM D638
Modulus of elasticity tensile, psi at 73°F	400,000	ASTM D638
Flexural strength, psi	14,500	ASTM D790
Izod impact, ft.lbs./in. at 73°F, notched	0.65	ASTM D256
Compressive strength, psi	9,000	ASTM D695
Poisson's ratio	0.38	
Working stress, psi at 73°F	2,000	
Coefficient of thermal expansion in./in./°F (x 10^{-5})	3	ASTM D696
Linear expansion, in./10°F per 100' of pipe	0.36	
Maximum operating temperature under pressure	140°F (60°C)	
Deflection temperature under load, °F at 66 psi	173	ASTM D648
Deflection temperature under load, °F at 264 psi	160	ASTM D648
Thermal conductivity, BTU.in./hr.ft^2.°F	1.2	ASTM C177
Burning rate	Self extinguish	ASTM D635
Burning class	V-0	UL-94
Flash ignition, °F	730	
Limited oxygen index (%)	43	ASTM D2863-70
Water absorption, %, (24 hrs. at 73°F)	0.05	ASTM D570

PVC Well Casing and Drop Pipe

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Well Casing Availability

Specials, Bell End 20'

Nominal Size	Product Type	Outside Diameter	Min. Wall Thickness	Inside Diameter (Min. - Max.)	Wt/100'	Impact Rating	Resistance to Hydraulic Collapse PSI	Resistance to Hydraulic Collapse Depth (FT)
4-1/2"	SDR 17	4.950	0.291	4.308 - 4.378	275	IC-2	215	497
4-1/2"	SDR 26	4.950	0.190	4.510 - 4.580	187	IC-2	58	134
4-1/2"	SCH 40/SDR 21	4.950	0.248	4.414 - 4.464	240	IC-2	130	300
6-1/8" I.D.	SDR 21	6.900	0.329	6.180 - 6.253	445	IC-2	111	256
6-1/4" I.D.	SDR 27.6	6.900	0.250	6.324 - 6.411	345	IC-2	48	111

SDR 17, Bell End 20'

Nominal Size	Outside Diameter	Min. Wall Thickness	Inside Diameter (Min. - Max.)	Wt/100'	Impact Rating	Resistance to Hydraulic Collapse PSI	Resistance to Hydraulic Collapse Depth (FT)
5"	5.563	0.327	4.821 - 4.919	360	IC-2	215	497
6"	6.625	0.390	5.740 - 5.856	496	IC-2	215	497
6-1/4"	6.906	0.406	6.463 - 6.505	545	IC-2	215	497

SDR 21, Bell End 20'

Nominal Size	Outside Diameter	Min. Wall Thickness	Inside Diameter (Min. - Max.)	Wt/100'	Impact Rating	Resistance to Hydraulic Collapse PSI	Resistance to Hydraulic Collapse Depth (FT)
2"	2.375	0.113	2.103 - 2.155	53	IC-0	111	256
3"	3.500	0.167	3.118 - 3.174	114	IC-0	111	256
4"	4.500	0.214	4.011 - 4.081	189	IC-0	111	256
5"	5.563	0.265	4.975 - 5.043	295	IC-0	111	256
6"	6.625	0.316	5.906 - 6.004	412	IC-0	111	256
8"	8.625	0.410	7.692 - 7.820	688	IC-0	111	256
10"	10.750	0.511	9.591 - 9.743	1088	IC-0	111	256

Note: Length of pipe: 20ft plus bell

PVC Well Casing and Drop Pipe

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Well Casing Availability

SDR 26, Bell End 20'

Nominal Size	Outside Diameter	Min. Wall Thickness	Inside Diameter (Min. - Max.)	Wt/100'	Impact Rating	Resistance to Hydraulic Collapse PSI	Resistance to Hydraulic Collapse Depth (FT)
4"	4.500	0.173	4.105 - 4.163	156	IC-0	58	134
5"	5.563	0.214	5.071 - 5.145	240	IC-2	58	134
6"	6.625	0.255	6.042 - 6.126	336	IC-2	58	134

SCH 40, Bell End 20'

Nominal Size	Outside Diameter	Min. Wall Thickness	Inside Diameter (Min. - Max.)	Wt/100'	Impact Rating	Resistance to Hydraulic Collapse PSI	Resistance to Hydraulic Collapse Depth (FT)
2"	2.375	0.154	2.021 - 2.073	70	IC-0	291	672
3"	3.500	0.216	3.008 - 3.076	144	IC-0	250	577
4"	4.500	0.237	3.961 - 4.035	205	IC-2	152	351
5"	5.563	0.265	4.975 - 5.043	295	IC-2	111	256
6"	6.625	0.280	5.986 - 6.076	364	IC-2	77	178
8"	8.625	0.322	7.888 - 7.996	546	IC-2	52	120
10"	10.750	0.365	9.917 - 10.035	753	IC-0	39	90
12"	12.750	0.406	11.825 - 11.953	1000	IC-0	32	74

Note: Length of pipe: 20ft plus bell

Drop Pipe Availability

Schedule 80 White, Threaded 20'

Nominal Size	Outside Diameter	Min. Wall Thickness	Inside Diameter	Max Working Pressure at 73° F	Wt/100'
1"	1.315	0.179	0.957	THD 320 PSI / PE 630 PSI	40
1-1/4"	1.660	0.191	12.78	THD 260 PSI / PE 520 PSI	55
1-1/2"	1.900	0.200	15.00	THD 240 PSI / PE 470 PSI	68
2"	2.375	0.218	19.39	THD 200 PSI / PE 400 PSI	94

Schedule 120 White, Threaded 20'

Nominal Size	Outside Diameter	Min. Wall Thickness	Inside Diameter	Max Working Pressure at 73° F	Wt/100'
1"	1.315	0.200	0.915	THD 360 PSI / PE 720 PSI	44
1-1/4"	1.660	0.215	12.30	THD 300 PSI / PE 600 PSI	61

Well Casing Installation

Safe Handling & Storage of Pipe

Care must be taken when handling PVC products to ensure that pipe is not damaged prior to installation. Take the following precautions to ensure PVC products remain in top condition prior to installation.

- Store pipe indoors if possible
- Pipe stored outside must be covered with a wellventilated white tarp
- Always keep pipe clean and covered in its original packaging
- Always store pipe on a flat surface and never store other products on top of pipe
- Do not drop or drag pipe
- Inspect all products for shipping damage prior to installation
- Never install products that are damaged

WARNING

DANGER: Highly flammable liquid and vapor may form explosive peroxide. Follow guidelines carefully.

WARNING

During the curing of the solvent welded joints, vapors may accumulate inside the piping system, especially should one end of the line be capped. Nearby sparks from welders or torches may inadvertently ignite these vapors and create a hazardous incident. Attention must be given to removing all vapors using air-blowers or water flushing prior to capping one end of an empty piping system.

Solvent Welding Installation

Introduction

Creating optimal solvent welded connections requires attention to detail, proper preparation of components and an understanding of all instructions provided in this manual.

Safe Handling & Storage of Primers & Solvent Cements

Primer and solvent cement are made from flammable liquids and must be kept away from all sources of ignition. Good ventilation must be maintained to reduce fire hazard and to minimize the breathing of solvent vapors. Refer to ASTM F402, Standard Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings. Always adhere to local jobsite and workplace safety regulations.

- Always provide proper ventilation when applying primers and cements
- Avoid skin or eye contact with primers and cements
- Wash immediately if contact occurs to avoid prolonged
- exposure
- Do not solvent weld joints near open flames or soldering torches
- Use Personal Protection Equipment (PPE) when handling primers and solvent cements
- Always store primer and cement indoors
- For cold weather installation, store primer and cement in a warm location above 40°F
- For hot weather installation, store primer and cement in a cool, shaded location
- Always check bottom of primer and cement cans for date of manufacture and expiry date
- Consult the primer and cement manufacturer directly if unsure that the primer and cement has expired
- Properly discard primer and cement that exceeds its recommended shelf life or expiry date
- Properly discard solvent cement that has hardened or jelled
- Tightly close partially used primer and cement containers
- Always thoroughly shake cement before use

Solvent Welding Basics

To make consistently tight joints, the following points should be followed:

- Dry fit all joints prior to solvent welding to confirm proper interference fit
- Do not solvent weld joints that are too loose or too tight
- Always use bevelling tools to prepare pipe ends before cementing
- Do not solvent weld joints without first bevelling pipe ends
- Follow all solvent welding instructions provided in this manual
- The joining surfaces must be softened and made semifluid with the use of a primer
- Sufficient cement must be applied to fill the gap between pipe and fittings
- Assembly of pipe must be made while the cement coatings on the surfaces are still wet and fluid
- Joint strength will develop as the cement cures. If the joint is made properly, the dissolved surfaces in the tight part of the joint will fuse together

NOTICE

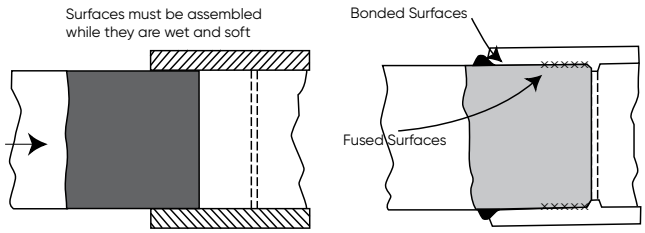
Do not use excessive amounts of primers or solvent cement as it can lead to puddling. Puddling of primer and cement in the pipe and fittings can result in product failures and property damage. Always follow the instructions provided with each can of CPVC primer and/or solvent cement.

Cement Types

Two-Step Method (Solvent Cement) for Joining PVC.

- Solvent Cement: meets ASTM D2564 are typically clear, blue, or gray
- Primer: meets ASTM F656 and plumbing codes require them to be purple

Sufficient cement must be applied to fill the gap in the loose part of the joint. Besides filling the gap, adequate solvent cement layers will penetrate the surfaces. If the solvent cement coatings on the pipe and fittings are wet and fluid when assembly takes place, they will tend to flow together and become one solvent cement layer. Also, if the solvent cement is wet, the surfaces beneath them will still be soft, and these dissolved surfaces in the tight part of the joint will fuse together.



As the solvent dissipates, the solvent cement layer and the dissolved surfaces will dry and harden with a corresponding increase in joint strength. Completed joints must not be disturbed until they have properly set. See the Joint Set Schedule table for details.

Joint strength continues to develop as the solvent cement dries. To determine when solvent cement joints can be pressure tested, see the Joint Cure Schedule table.

Handling & Installation Procedures

Solvent Welding Installation

Step 1 Preparation

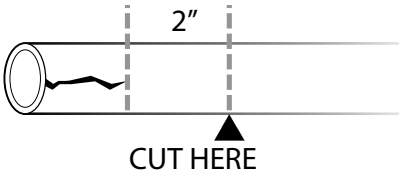
Assemble proper materials for the job. This includes the appropriate cement, primer and applicator for the size of piping system to be assembled, tape measure, contrasting color marker and beveling tool. See Tables for guidelines to estimate the amount of cement required.

CAUTION: Use proper Personal Protective Equipment (PPE) for the job: respirator, safety glasses, gloves and protective clothing.

Step 2 Cutting the Pipe

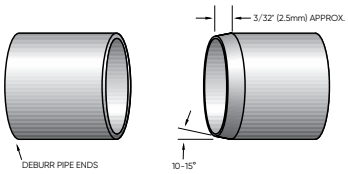
It is important to cut the pipe squarely. A square cut provides the surface of the pipe with the maximum bonding area. Pipe can be easily cut with a wheel-type plastic tubing cutter, chop saw or fine toothed saw. Do not use reciprocating saws.

Tools used to cut pipe must be designed for use with CPVC piping and must be in good condition in accordance with the tool manufacturer's recommendations. If there is any indication of pipe damage or evidence of pipe end cracking, cut off at least 2 inches beyond any visible crack. Use of ratchet cutters is not recommended as they may split the pipe if not properly used and maintained.



Step 3 Preparing Pipe Ends

After cutting, always remove all burrs and filings from both the inside and outside of the pipe and bevel the pipe end using a beveling tool. Remove burrs and filings from the inside of the pipe using a knife edge or file. Failure to remove burrs can scrape channels into pre-softened surfaces, create obstructions inside surface walls, or inadvertently plow cement out of the joint during assembly.



Step 4 Cleaning

Using a clean dry cloth, wipe any dirt and moisture from the fitting socket and the pipe end. Moisture will increase cure times and dirt and grease can prevent adhesion.

Handling & Installation Procedures

Step 5 Dry Fitting

Before applying primer or solvent cement, test all connections (pipe, fittings and accessories) to confirm a proper interference fit exists. Dry-fit contact between properly beveled pipe and fitting sockets is essential in making a good joint. The beveled pipe should easily enter the fitting socket and make contact with the inner fitting socket wall before bottoming out. A proper interference fit is present when the beveled pipe can only be inserted 1/3 to 2/3 of the way into the fitting socket.

CAUTION: We do not recommend the solvent welding of pipe, fittings or accessories that fit loosely together or where pipe bottoms out in a dry fit. Proper joint strength may not be developed. Please contact IPEX to discuss further.

Do not solvent weld pipe, fittings or accessories if a beveled pipe cannot easily be inserted at least 1/3 of the way into the fitting socket. This may cause excessive stresses during assembly leading to joint failure.

Step 6 Marking the Pipe

Measure the socket depth and mark the outside of the pipe with this dimension, followed by a second mark 1 inch further back. The first line will provide a guide for ensuring enough solvent cement is applied on the pipe. Maintaining a 1 inch distance to the second line once the pipe is inserted into the socket will indicate full and proper insertion of the pipe inside the socket.

Step 7 Select Applicator

Ensure that the right applicator is being used for the size of pipe being joined. The applicator size should be equal to half the pipe diameter. It is important that a proper size applicator be used to help ensure that sufficient layers of cement and primer are applied.

Step 8 Primer Application

Using the correct applicator, aggressively work the primer into the socket, keeping the surface and applicator wet until the surface has been softened. More applications may be needed for hard surfaces and cold weather conditions. Re-dip the applicator in primer as required. When the surface is primed, remove any puddles of primer from the socket.

Handling & Installation Procedures

Step 9 Primer Application

Aggressively work the primer on to the end of the pipe to a point 1/2" beyond the depth of the fitting socket.

Step 10 Primer Application

A second application of primer in the socket is required, keeping the surface and applicator wet until the surface has been softened. When the surface is primed, remove any puddles of primer from the socket.

Step 11 Cement Application

Throughly stir the cement or shake can before each use. Immediately and while the surfaces are still wet, using the correct size applicator, aggressively work a heavy, even layer of cement on to the pipe end equal to the depth of the fitting socket. Do not brush it out to a thin paint type layer, as this will dry too quickly.

Step 12 Cement Application

Aggressively work a medium layer of cement into the socket. Avoid puddling cement in the socket by holding the fitting on an angle. If primer has dried, repeat the two Primer Application steps above.

NOTICE: Avoid pulling the cement in the socket. Excessive cement may cause the fitting to weaken due to softening by the trapped solvents.

Step 13 Cement Application

Apply a second heavy, even layer of cement on the pipe. Apply enough solvent cement to completely fill all the gaps between the pipe and at socket entrance.

Handling & Installation Procedures

Step 14 Assembly

Without delay, while the cement is still wet, assemble the pipe. Use sufficient force to ensure that the pipe bottoms in the socket.

If cement has dried before assembly, discard.

Step 15 Assembly

Hold the pipe and socket together for approximately 30 seconds to avoid push out. If push out does occur, the joint will need to be replaced.

Step 16 Assembly

After assembly, a joint should have a ring or bead of cement completely around the juncture of the pipe and socket. If voids in this ring are present, sufficient cement was not applied and the joint may be defective.

Step 17 Removing Excess

With a clean, dry cloth, remove the excess solvent cement from the pipe and socket entrance. This will allow the solvent to evaporate from within the joint and prevent weakening of the pipe.

Step 18 Joint Setting & Curing

Handle newly assembled joints carefully until initial set has taken place.
(Note: in humid weather, allow for at least 50% more curing time.)

- Set time – time required before the joint can be carefully handled.

Well Casing Installation Procedures

Cold Weather

Although normal installation temperatures are between 40°F (4°C) and 110°F (43°C), high strength joints have been made at temperatures as low as –15°F (–26°C).

In cold weather, solvents penetrate and soften the plastic pipe and fitting surfaces more slowly than in warm weather. In this situation, the plastic is more resistant to solvent attack and it becomes even more important to pre-soften surfaces with an aggressive primer. Be aware that because of slower evaporation, a longer cure time is necessary.

Tips for solvent cementing in cold weather

- Prefabricate as much of the system as is possible in a heated work area.
- Store cements and primers in a warmer area when not in use and make sure they remain fluid.
- Take special care to remove moisture including ice and snow from the surfaces to be joined.
- Ensure that the temperature of the materials to be joined (re: pipe and fittings) is similar.
- Use a primer to soften the joining surfaces before applying cement. More than one application may be necessary.
- Allow a longer cure period before the system is used.
  Note: A heat blanket may be used to speed up the set and cure times.

Hot Weather

There are many occasions when solvent cementing plastic pipe at 95°F (35°C) temperatures and above cannot be avoided. If special precautions are taken, problems can be avoided.

Solvent cements for plastic pipe contain highstrength solvents which evaporate faster at elevated temperatures. This is especially true when there is a hot wind blowing. If the pipe is stored in direct sunlight, the pipe surface temperatures may be 20°F to 30°F (10°C to 15°C) higher than the ambient temperature. In this situation, the plastic is less resistant to attack and the solvents will attack faster and deeper, especially inside a joint. It is therefore very important to avoid puddling the cement inside the fitting socket and to ensure that any excess cement outside the joint is wiped off.

Tips for solvent cementing in hot weather:

- Store solvent cements and primers in a cool or shaded area prior to use.
- If possible, store fittings and pipe or at least the ends to be solvent welded, in a shady area before cementing.
- Try to do the solvent cementing in cooler morning hours.
- Cool surfaces to be joined by wiping with a damp rag.
- Make sure that the surface is dry prior to applying solvent cement.
- Make sure that both surfaces to be joined are still wet with cement when putting them together. With large size pipe, more people on the crew may be necessary.
- Using a primer and a heavier, high-viscosity cement will provide a little more working time.

Note: During hot weather the expansion-contraction factor may increase. Refer to the expansion-contraction design criteria in this manual.

Drop Pipe Installation Procedures

Safe Handling and Storage of Pipe

Care must be taken when handling PVC products to ensure that pipe is not damaged prior to installation. Take the following precautions to ensure PVC products remain in top condition prior to installation.

- Store pipe indoors if possible
- Pipe stored outside must be covered with a well- ventilated white tarp
- Always keep pipe clean and covered in its original packaging
- Always store pipe on a flat surface and never store other products on top of pipe
- Do not drop or drag pipe
- Inspect all products for shipping damage prior to installation
- Never install products that are damaged

Step 1 Preparing the Threaded Pipe

The threads should be cleaned by brushing away cuttings and ribbons. After cleaning, apply an IPEX recommended thread lubricant such as Teflon® tape (PTFE) to the threaded portion of the pipe. Wrap the tape around the entire length of threads beginning with number two thread from the end. The tape should slightly overlap itself going in the same direction as the threads. This will prevent the tape from unraveling when the fitting is tightened on the pipe. Overlapping in the wrong direction and the use of too much tape can affect tolerances between threads. This can generate stress in the wall of female fittings resulting in failure during operations.

Alternatively, apply a compatible Teflon® based thread sealant paste per sealant manufacturer instructions.

Step 2 Assembly of Threaded Joints

After applying thread lubricant, screw the threaded fitting onto the pipe. Screwed fittings should be started carefully and hand tightened. Threads must be properly cut and a good quality thread tape must be used. If desired, the joint may be tightened with a strap wrench. In NO INSTANCE should a pipe or chain wrench be used as the jaws of this type of wrench will scar and damage the pipe wall.

Fittings should be threaded together until hand tight with an additional 1/2 to 1 turns more. Avoid stretching or distorting the pipe, fittings or threads by over tightening.

Note 1: Never apply solvent cement to threaded pipe or threaded fittings. Do not allow cleaners, primers, or solvent cements to “run” or drip into the threaded portion of the fitting.

Handling & Installation Procedures

Well & Submersible Pump Depth Table

For submersible pump installations, ensure that your PVC or PE pipe can be installed to the necessary depth without it's performance or service life being impacted. The maximum depth setting for plastic pipe is determined by the pipe's pres-sure rating and the pump shut off pressure (a.k.a. cut-off or discharge pressure).

$$\text{Max. Depth (ft.)} = (\text{Pressure Rating of Pipe} - \text{Shut-Off Pressure}) \times 2.31$$

Note: 1 psi = 2.31 ft. H_2O

We recommend that installers of pipe in well applications should support the pump by using a cable or rope. The length of the coupling used to join PVC threaded pipe should be at least 2 inches. For the use of torque arrestors and centering devices, follow the manufacturer's recommendations.

Nominal Size	Pressure Rating @ 73°F (PSI)	Maximum Depth - Based Shut-Off Pressure				Maximu Flow Rate*	Maximu H.P.
		30psi	40psi	50psi	60psi		
1" SCH 80	320	670'	645'	625'	600'	11 GPM	1.5
1-1/4" SCH 80	260	530'	510'	485'	460	20 GPM	2
1-1/2" SCH 80	240	485'	460'	440'	415'	27 GPM	5
2" SCH 80 1"	200	395'	370'	345'	325'	45 GPM	7.5
SCH 120	360	760'	740'	715'	695'	10 GPM	1.5
1-1/4" SCH 120	300	625'	600'	575'	555'	18 GPM	2

* Maximum Flow Rate is based on a water velocity of 5 ft/s to minimize excessive surge pressures

Handling & Installation Procedures

Additional Handling and Storage Considerations

PVC is a strong, lightweight material, about one fifth the weight of steel or cast iron. Piping made of this material is easily handled and, as a result, there is a tendency for them to be thrown about on the jobsite. Care should be taken in handling and storage to prevent damage to the pipe.

PVC pipe should be given adequate support at all times. It should not be stacked in large piles, especially in warm temperature conditions, as bottom pipe may become distorted and joining will become difficult.

For long-term storage, pipe racks should be used, providing continuous support along the length. If this is not possible, timber supports of at least 3" bearing width, at spacings not greater than 3' centers, should be placed beneath the piping. If the stacks are rectangular, twice the spacing at the sides is required. Pipe should not be stored more than seven layers high in racks. If different classes of pipe are kept in the same rack, pipe with the thickest walls should always be at the bottom. Sharp corners on metal racks should be avoided.

For temporary storage in the field when racks are not provided, care should be taken that the ground is level and free of sharp objects (i.e. loose stones, etc.). Pipe should be stacked to reduce movement, but should not exceed three to four layers high.

Most pipe is now supplied in crates. Care should be taken when unloading the crates; avoid using metal slings or wire ropes. Crates may be stacked four high in the field. The above recommendations are for a temperature of approximately 80°F (27°C). Stack heights should be reduced if higher temperatures are encountered, or if pipe is nested (i.e. pipe stored inside pipe of a larger diameter). Reduction in height should be proportional to the total weight of the nested pipe, compared with the weight of pipe normally contained in such racks.

Since the soundness of any joint depends on the condition of the pipe end, care should be taken in transit, handling and storage to avoid damage to these ends. The impact resistance and flexibility of PVC pipe is reduced by lower temperature conditions. The impact strength for both types of piping materials will decrease as temperatures approach 32°F (0°C) and below. Care should be taken when unloading and handling pipe in cold weather. Dropping pipe from a truck or forklift may cause damage. Methods and techniques normally used in warm weather may not be acceptable at the lower temperature range.

When loading pipe onto vehicles, care should be taken to avoid contact with any sharp corners (i.e. angle irons, nail heads, etc.), as the pipe may be damaged.

While in transit, pipe should be well secured and supported over the entire length and should never project unsecured from the back of a trailer.

Larger pipe may be off-loaded from vehicles by rolling them gently down timbers, ensuring that they do not fall onto one another or onto a hard, uneven surface.

Prolonged Outdoor Exposure

Prolonged exposure of PVC pipe to the direct rays of the sun will not damage the pipe. However, some mild discoloration may take place in the form of a milky film on the exposed surfaces. This change in color merely indicates that there has been a harmless chemical transformation at the surface of the pipe. A small reduction in impact strength could occur at the discolored surfaces but they are of a very small order and are not enough to cause problems in field installation.

Protection – Covering

Discoloration of the pipe can be avoided by shading it from the direct rays of the sun. This can be accomplished by covering the stockpile or the crated pipe with a light colored opaque material such as canvas. If the pipe is covered, always allow for the circulation of air through the pipe to avoid heat buildup in hot summer weather. Make sure that the pipe is not stored close to sources of heat such as boilers, steam lines, engine exhaust outlets, etc.

Testing

Well Casing Site Pressure Testing

Refer to the plumbing code or local code officials (Authority Having Jurisdiction) for pressure testing requirements.

Drop Pipe Site Pressure Testing

Typically, drop pipe pressure testing is conducted on the full water delivery system which is composed of the drop pipe and relevant piping to the dwelling. Pressure testing is used to verify there is a drop in pressure when the pump cuts off after reaching the high level set point, which can often be between 40 and 60 PSI.

Refer to the plumbing code or local code officials (Authority Having Jurisdiction) for pressure testing requirements.

WARNING

- **NEVER** use compressed air or gas in PVC/CPVC/PP/PVDF pipe and fittings.
- **NEVER** test PVC/CPVC/PP/PVDF pipe and fittings with compressed air or gas, or air-over-water boosters.
- **ONLY** use PVC/CPVC/PP/PVDF pipe for water and approved chemicals.

PVC Well Casing and Drop Pipe

Submittal Data Sheet

Specifications

PVC Well Casing

Scope

This specification sheet covers the manufacturers' requirements for PVC Schedule 40, SDR 17, SDR 21, SDR 26, & SDR 27.6 well casing pipe. The pipe meets or exceeds all applicable ASTM and NSF standards and are suitable for use in water well construction.

PVC Materials

Rigid PVC (polyvinyl chloride) used in the extrusion of Schedule 40, SDR 17, SDR 21, SDR 26, & SDR 27.6 well casing pipe complies with the material requirements of ASTM D1784 (formerly Type 1, Grade 1) and has a cell classification of 12454. Raw material used in the extrusion shall be virgin material and contain the standard specified amounts of color pigment, stabilizers and other additives. The compounds used are listed to the requirements of NSF 14. Material shall meet the requirements of ASTM F480 and Impact Classification shall be tested in accordance with ASTM D2444.

Dimensions

Physical dimensions and properties of Schedule 40 PVC well casing pipe shall meet the requirements of ASTM D1785. Socket dimensions of belled end pipe shall meet the requirements of F480.

Physical dimensions and properties of SDR 17 & 27.6 PVC well casing pipe shall meet the requirements of ASTM F480.

Physical dimensions and properties of SDR 21 & 26 PVC well casing pipe shall meet the requirements of ASTM F480 and ASTM D2241.

Marking

PVC Well Casing pipe is marked as prescribed in ASTM F480 & NSF 14. The marking includes the following: Nominal size, PVC-1120, Schedule or SDR size and pressure rating, ASTM & NSF standards,"WELL CASING", IC impact rating.

PVC Well Casing and Drop Pipe

Submittal Data Sheet

Specifications

PVC Drop Pipe

Scope

This specification sheet covers the manufacturers' requirements for PVC Schedule 80 and Schedule 120 Drop Pipe. The pipe meets or exceeds all applicable ASTM and NSF standards and is suitable for well and pump applications and for potable water.

PVC Materials

Rigid PVC (polyvinyl chloride) used in the extrusion of Schedule 80 & 120 pipe complies with the material requirements of ASTM D1784 (formerly Type 1, Grade 1) and has a cell classification of 12454. Raw material used in the extrusion shall virgin material and contain the standard specified amounts of color pigment, stabilizers and other additives. The compounds used are listed to the requirements of NSF 61 and 14 for use in potable water service.

Dimensions

Physical dimensions and properties of Schedule 80 & 120 PVC Drop Pipe shall meet the requirements of ASTM D1785. Drop Pipe is threaded with accordance to ASTM F1498.

Marking

Schedule 80 & 120 PVC Drop Pipe is marked as prescribed in ASTM D1785, NSF 14 and 61. The marking includes the following: Nominal size, PVC-1120, Schedule size, unthreaded and threaded pressure ratings, ASTM & NSF standards

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.

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- Electrical systems
- Telecommunications and utility piping systems
- PVC, CPVC, PP, PVDF, PE, ABS, and PEX pipe and fittings
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems

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