



# PVC-U Stormwater Pipe & Fittings System

Product Catalogue



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## 1.0 Introduction

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### 1.1 Complete pipeline systems for stormwater disposal

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Advanced plastic pipe systems offer major advantages over traditional materials for stormwater applications including corrosion resistance, installation economics, operating efficiencies, and significant reductions in maintenance costs.

Iplex manufacture and supply a comprehensive range of pipeline solutions for stormwater applications with a full range of fittings and pipes up to 600mm in diameter.

Iplex have qualified and experienced engineers who are available to help in product selection, installation methods and cost benefit analysis.

## 2.0 Product Data

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### 2.1 Standards

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Iplex Pipelines PVC-U Stormwater pipe and fittings systems are for use above or below ground and are manufactured to AS/NZS 1254 Unplasticised PVC (PVC-U) Pipes and Fittings for Stormwater or Surface Water Applications.

Iplex Pipelines Stormwater pipe and fittings manufactured after the 1st January 2008 contain no lead stabiliser and can be used on rainwater tanks for drinking water, (date of manufacture printed on pipe).

Pipes are supplied in effective 6 metre lengths. Total pipe length = Effective length + socket depth. Pipes are supplied with an integral solvent weld socket.

### 2.2 Chemical resistance

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The excellent chemical resistance of PVC-U to acids, alkalis, oxidising and reducing agents make it particularly suitable for a wide range of industrial applications. Generally PVC-U is resistant to most oils, fats, alcohols and aromatic-free petrol, but is unsuitable for use with aromatic and chlorinated hydrocarbons, ketones and esters which can lead to swelling and softening of the material. A full chemical resistance library can be viewed on the Iplex website [www.iplex.com.au](http://www.iplex.com.au).

### 2.3 Colour and markings

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Some Iplex Pipelines Stormwater pipe and fittings contain a percentage of recycled material when manufactured, consequently colour can vary, however, most pipe manufactured is white in colour. Stormwater pipe and fittings contain a UV absorber (TiO<sub>2</sub>) and can be installed in direct sunlight.

Iplex stormwater pipe is branded in accordance with AS/NZS 1254, which includes the date and place of manufacture.

### 2.4 Material properties

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The properties listed in the following table are typical characteristics of PVC-U.

The mechanical properties are for PVC-U at 20°C.

<b>Density (Solid wall)</b>	1530kg/m <sup>3</sup>
<b>Minimum ultimate tensile strength</b>	52MPa
<b>Compressive strength</b>	66MPa
<b>Shear strength</b>	39MPa
<b>Tensile (Youngs) modulus</b>	2750MPa at high loads
<b>Hardness (Shore D)</b>	85ASTM D2240
<b>Hardness (Brinell) at 23degC</b>	12 - 15
<b>(Ductility) minimum elongation at Yield</b>	5.5%
<b>Poissons ratio</b>	0.35 - 0.38
<b>Flexural strength</b>	69 - 110MPa
<b>Coefficient of linear thermal expansion</b>	7 x 10 <sup>-5</sup> / °C



## 2.4 Best Environmental Practice (BEP) PVC and the GBCA Green Star rating

In 2010 the Green Building Council of Australia (GBCA) reviewed its Green Star rating tool and under a new approach, the use of Iplex PVC pressure and non-pressure pipe, conduit and fittings can assist buildings to qualify for up to two positive credit points where pipe and fittings can be shown to comply with the GBCA "Best practice Guidelines for PVC in the Built Environment".

As a means of demonstrating Best Environmental Practice PVC (BEP PVC), Iplex was subjected to an extensive audit process by independent third-party certifier, ApprovalMark. on Monday 20th February 2012, Iplex was issued with BEP PVC Certificate of Compliance No.037. A PDF copy may be downloaded from the Iplex website ([www.iplex.com.au](http://www.iplex.com.au)).

The GBCA has recognised environmental advances made by Iplex and others and has based its revision on a series of PVC Expert Reference Panel (ERP) meetings, site visits, discussions with key stakeholders and examination of international studies. This process has shown the lifecycle of PVC - from raw materials and production through use to end-of-life, recycling and disposal - has changed considerably in recent years and there is a clear rationale for favouring PVC products that are manufactured and reclaimed through Best Environmental Practice production and end of life product management processes.

More information can be found on the following websites:

Green Building Council Australia website - [www.gbca.org.au](http://www.gbca.org.au)

Plastics Industry Pipe Association website - [www.pipa.com.au](http://www.pipa.com.au)



## 2.5 Product advantages

Features	Benefits
<b>Light weight</b>	• The light weight of Iplex PVC-U stormwater pipes can lead to significant freight and handling advantages.
<b>High flow rate</b>	• Extremely smooth bores, precision joints, and lack of internal projections ensure unrivaled hydraulic capacity over the total life of the system. Flatter grades are possible using PVC-U systems.
<b>Flammability</b>	• PVC-U does not support combustion
<b>Non-conductivity</b>	• PVC-U is a non-conductor of electricity, and is therefore not subject to galvanic or electrolytic corrosion.
<b>Tree root intrusion resistance</b>	• Properly made solvent weld joints have been shown to have excellent resistance to the tree root intrusions that cause blockages and infiltration in other systems.
<b>Fittings range</b>	• The Iplex PVC-U stormwater system contains a complete range of adaptors to enable connection to a wide range downpipes and other pipe systems.
<b>Low installation cost</b>	• The light weight of Iplex Stormwater pipes together with longer pipe lengths, flexibility and the use of narrow trench widths significantly reduces installation costs, the major portion of the total in-situ costs.

## 2.6 Product limitations

Testing of pipes is in accordance with the requirements of AS/NZS 1254.

Pipes are subjected to the following tests, performed as detailed in the standard;

- Dimensional Test
- Impact Resistance at 20°C
- Reversion Test
- Flattening
- Softening Point Test

Design and Installation of Stormwater pipe and fittings is covered by AS/NZS 3500 - National Plumbing Standard, and AS/NZS 2032 - Installation of PVC-U Pipe Systems, installers should also ensure that local authority requirements are met.

Check Design Tools on the Iplex website ([www.iplex.com.au](http://www.iplex.com.au)) for more information.



### 3.0 Jointing Methods

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PVC-U pipelines are easy to assemble. While Iplex rubber ring jointed pipes can be fully assembled above the trench. Stormwater solvent welded pipe may be fully jointed above the trench, but not lowered into the trench until the solvent has taken its initial set. Care must be taken to ensure joints do not pull apart during lowering into the trench and all joints should be subsequently inspected

#### 3.1 Solvent weld joint

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Iplex Pipelines premium solvent cements and benzene free priming fluids are manufactured to AS/NZS 3879. Solvent cements and priming fluids for use with PVC-U pipes and fittings.

To achieve strong leak free joints tradespeople should:

- 1) Select the correct solvent cement for the application  
Type N - for non-pressure joints that may have a small clearance.
- 2) Select the correct pipe and fitting using the Iplex Pipelines part list.
- 3) Follow jointing steps 1 - 8 carefully (page following). Short cuts will result in poor joints that are likely to cause system failure.

#### How solvent cement works:

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Iplex solvent is a solution of resin in a mixture of solvents, which soften the surfaces when applied to PVC-U pipe and fittings. It is not a glue.

A thin uniform coat is applied to both the spigot and socket and the joint is assembled while the surfaces are still wet and fluid. The cement layers intermingle and become one. The strength of the joint develops as the solvent permeates the PVC-U and the volatile constituents evaporate.

#### Iplex Pipelines - Solvent cement - Type N:

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Type N is used for non-pressure applications and is formulated with the gap filling properties needed with clearance fits.

#### The importance of Iplex Pipelines priming fluid:

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Before applying the solvent cement, it is essential to use Iplex Priming Fluid for successful jointing as the fluid not only cleans and degreases, but removes the glazed surface from PVC-U which allows the solvent cement to permeate into the wall of the pipe or fitting.

It must be applied with a clean, lint free cotton cloth. Brushing the priming fluid on or simply pouring the fluid over the pipes and fittings does not remove grease and dirt.

#### Average number of joints per litre of Iplex primer and solvent:

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For larger size pipes, a large brush should be used to apply the priming fluid and solvent cement.

Nominal pipe size (mm)	Approx. joints per litre
75	60
90	55
100	48
150	40
225	16
300	8
375	6

## Jointing instructions

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Do not work with hot pipes or on hot windy days without protecting pipes from the wind. Keep lid on solvent cement to minimise evaporation. Do not use solvent over 12 months old.

### Step 1 - Cut spigot square and deburr:

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Cut the spigot as square as possible using a mitre box and hacksaw or power saw. Remove all swarf and burrs from both inside and outside edges with a knife, file, reamer or sandpaper. Swarf and burrs if left, will wipe off the solvent cement and prevent proper jointing. Also swarf inside pipes can become dislodged and jam taps and valves.



### Step 2 - Check alignment:

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Check the pipe and spigot or fittings for proper alignment. The time for any adjustments is now, not later.



### Step 3 - Mark clearly:

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Mark the spigot with a pencil or marker at a distance equal to the internal depth of the socket. Only use pencil or a marker. Do not score or damage the surface of the pipe or fitting.



### Step 4 - Clean and soften the surface:

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Thoroughly clean the inside of the socket and the area between the pencil mark and the spigot end with a clean, lint free cotton cloth dipped in priming fluid (do not use synthetic material). This removes dirt and grease and softens the PVC-U surface. Do not brush or pour the priming fluid on.

*\*Iplex recommends the use of gloves. If contact with skin occurs, wash affected area with soap and copious quantities of water immediately.*



**Jointing instructions - Continued...**

**Step 5 - Coat socket first - then spigot:**

Apply a thin, uniform coat of Iplex solvent cement to the socket. Take care to ensure that solvent build up does not occur in the root of the socket - a pool of cement there will severely weaken the pipe or fitting. Now apply a uniform coat of solvent cement to the external surface of the spigot up to the pencil mark.



**Step 6 - Assemble-hold for 30 seconds:**

Assemble the joint quickly before the cement dries by pushing the spigot firmly into the socket as far as the pencil mark, ending with a quarter turn to spread the cement evenly. Hold the joint in this position for at least thirty seconds without movement.



**Step 7 - A vital 5 minutes:**

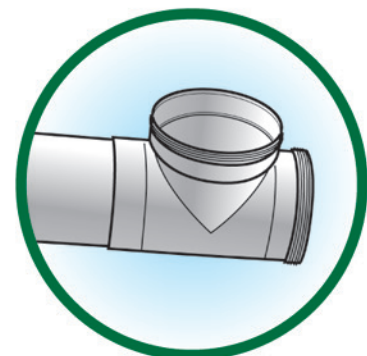
Wipe off the excess solvent cement from the outside of the joint and where possible from the inside of the joint. Do not disturb the joint for at least a further five minutes-movement may break the initial bond.



**Step 8 - Curing and testing:**

The cure time is the time taken for the joint to achieve sufficient strength to allow it to be tested by internal pressure or vacuum.

The minimum cure time for solvent weld joints in Iplex Stormwater pipes and fittings is 24 hours.







## Storage

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- Solvent cement and priming fluids are highly flammable. In the event of fire, smother with sand or earth or use suitable fire extinguisher.
- Store solvent cements and priming fluid in a cool place away from heat, flames and sparks.
- Ensure can lids are tightly closed when not in use.
- Use solvent cements within twelve months of the date stamped on the bottom of the bottle/can. If the solvent cement has become so thick that it does not flow easily, discard.
- Do not add any other ingredients or solvents to these products.

## Safety precautions

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- Do not use solvent cements or priming fluid in confined spaces without adequate ventilation, or near open flames or sparks.
- Do not smoke while using these products.
- If spilt on skin, wash off with soap and water.
- If poisoning occurs, consult a doctor or Poisons Information Centre.
- Keep container sealed when not in use.

### If swallowed:

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If swallowed:	
<b>Solvent cement</b>	<ul style="list-style-type: none"> <li>• Do not induce vomiting.</li> <li>• Call Poisons Information Centre or a doctor immediately.</li> </ul>
<b>Priming fluid</b>	<ul style="list-style-type: none"> <li>• Do not induce vomiting.</li> <li>• Call Poisons Information Centre or a doctor immediately.</li> </ul>

### Avoid contact with eyes:

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- If contact occurs flush with copious amounts of water.

By following these steps exactly you should be able to make strong leak-free joints with Iplex Solvent Cement. Refer to AS/NZS 2032- Installation of PVC-U Pipe systems for further guidance. Correct pipe and fitting selection is also vital. See the Iplex Pipelines part list for correct selection.

Iplex Pipelines Suppliers and Technical Representatives will be happy to answer any questions you have.

## 4.0 Installation

One of the most significant advantages of Iplex PVC-U Stormwater pipe system is its light weight. This means that the pipe can be easily handled and longer lengths can be installed without sophisticated lifting machinery and with minimum in-trench labour.

6 metre lengths increase the speed with which a system can be installed.

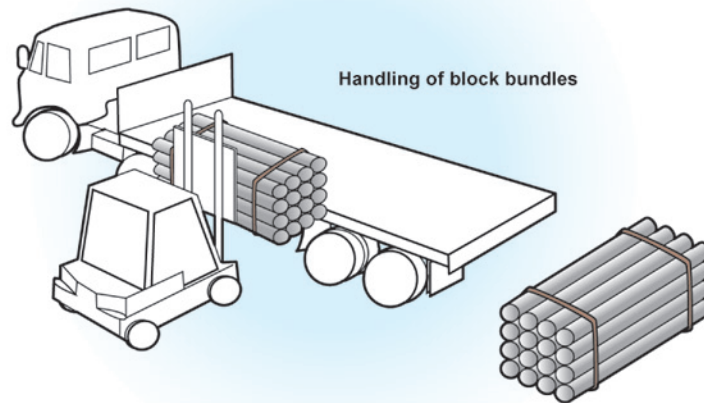
Stormwater pipelines rely on gravity to ensure adequate flow of fluid. Strict adherence to the designed grade along the entire pipeline is essential and the line must be maintained to specification between inspection position.

Installation of PVC-U Stormwater pipelines will be fast and efficient provided the following guidelines are followed. The installer must ensure that pipeline system installation is performed in accordance with AS/NZS 2032 "Installation of PVC-U Pipe Systems", and "AS/NZS 3500 National Plumbing Standard" together with the requirements of local authorities, where applicable.

## 4.1 Handling and storage

While PVC-U pipes are light and easy to handle, careless handling can cause unnecessary damage. Pipes and fittings should not be dropped or thrown onto hard surfaces or allowed to come into contact with sharp objects that could result in deep scratches. PVC-U pipes should not be allowed to slide across sharp edges.

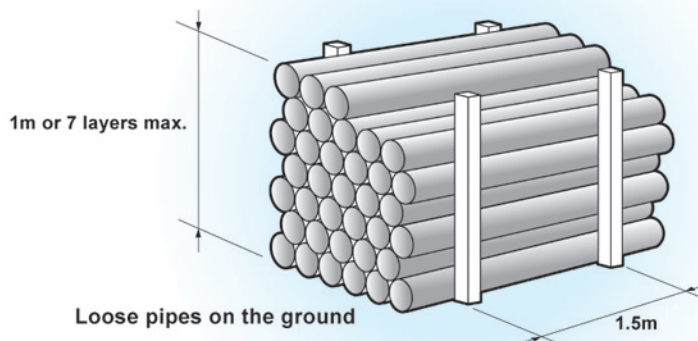
PVC-U is subject to distortion under high loads, particularly at elevated temperatures, and also to bowing due to uneven heating; stacks should therefore be protected from direct sunlight, or other heat source, if stored for extended periods.



Temporary storage in the field, where racks are not provided, can be in stacks on the ground, providing this surface is level and free from loose stones or other sharp projections.

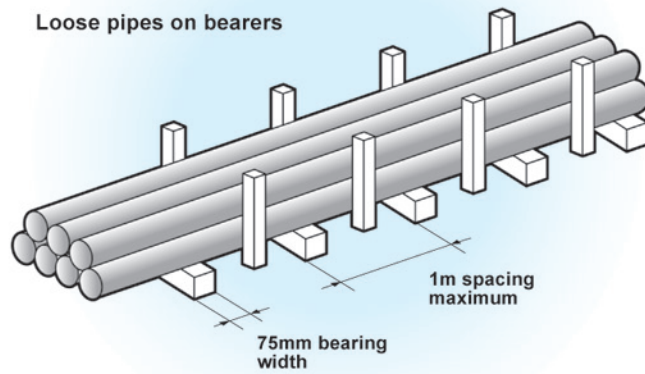
Socketed pipes should be stacked in layers with sockets placed at alternative ends of the rack, and protruding, to avoid uneven stacks and distortion. The sockets should not be load bearing. Another acceptable approach is to have alternate layers of pipe facing in the same direction.

If mechanical handling equipment such as fork lifts or cranes are to be used on bundles, adequate spreader and lifting bars should be provided. Wire slings must be kept clear of the pipes.

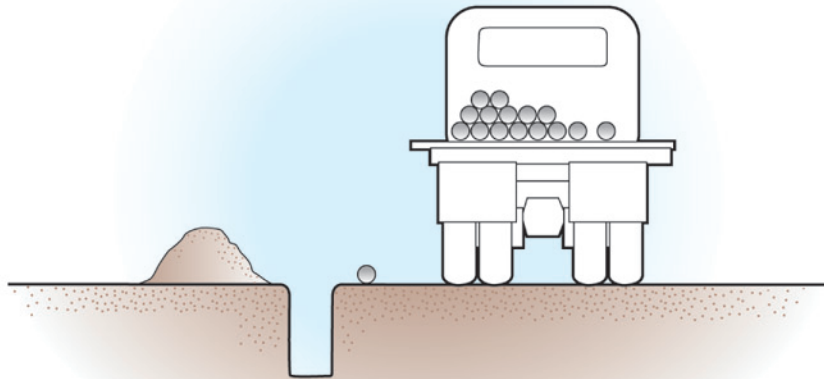


#### 4.1 Handling and storage - Continued...

Racks for long term storage are recommended and should preferably provide continuous support, but if this is not possible then supports of at least 75mm bearing widths at 1m centres (max) should be placed beneath the pipes. Side restraints should be placed at centres not exceeding 1.5m and stacks should not exceed 1m in height.



When unloading alongside dug trenches, it is recommended that pipes be placed on the opposite side of the trench from excavated material.



## 4.2 Trenching

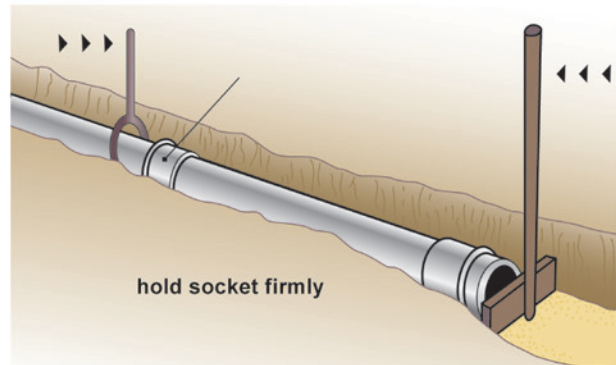
Trenches should be excavated in accordance with plans and specifications, and with reference to AS/NZS 2032. They should be as narrow as practicable at the level of the top of the pipe and, in a straight trench, have a bed width not less than 200mm wider than the pipe diameter, to provide working space for the laying crew.

Trenches when excavated are either 'stable' or 'unstable'. The category into which a trench fits is affected by the soil conditions, width, depth and method of excavation. To ensure that maximum support is given to the buried pipe by the undisturbed ground the resultant stable or unstable trench should be treated in the following way:

### Placing pipes into trenches

Iplex solvent weld jointed PVC-U lines can be jointed outside the trench if required. Solvent weld jointed pipes can safely be handled without risk, provided that the joints have been allowed to develop sufficient strength.

When pipes are jointed in the trench, the jointing procedures are described under solvent weld joints. Particular care should be taken to ensure that no dirt or moisture has collected on the joint surface during handling.



### Stable conditions:

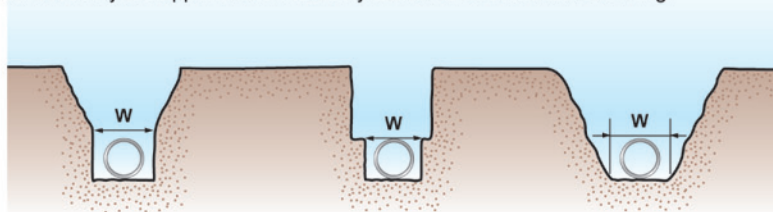
Stable conditions are those where, after excavation, the trench walls remain solid and do not show any signs of collapse or cave-in.

Under such conditions the recommended trench widths are shown in the following table:

Pipe diameter (mm)	Nominal trench width (mm)
75-100	400
150-200	600
225-300	750
375	900

### Unstable conditions:

Unstable conditions are those where, during or after excavation, the trench walls tend to collapse and cave-in. Under these conditions, in open or unrestricted areas, the top of the trench can be widened until stability is reached. A smaller trench should then be dug in the bottom of the excavation to contain the pipe as shown. In areas where space is limited, e.g. in streets, it may be necessary to support trench walls by timber or other suitable shoring.



### Trench depths:

The minimum trench depth should be such that pressures created by the weight of fill material plus anticipated traffic or other superimposed loads will not damage the pipes. As a guide the recommended minimum clear cover above is listed below, but refer to AS/NZS 2032 for the latest information.

Condition	Minimum cover depth
• Where no subject to vehicular loading:	300mm
• Where subject to vehicular loading:	
Under driveways:	450mm
In sealed roadways:	600mm
In unsealed roadways:	750mm

## Laying and compaction

### Preparing the trench:

The trench bottom should be as level as possible, so that the barrel of the pipe is fully supported. The trench bottom should have sandy or loamy soil, free from rocks and stones to ensure continuous support for the pipe.

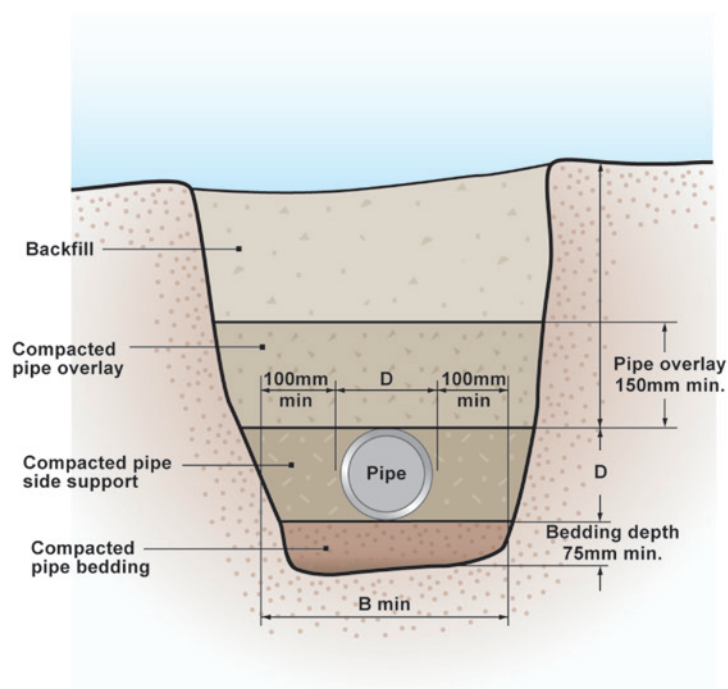
### Wet conditions:

In wet ground, sloppy working conditions can be alleviated by first placing a layer of hard granular material, or by de-watering the area in and around the trench. If patches of ground are so wet that there is a risk of subsidence and possible damage to sections of the pipeline, these areas should be consolidated by the addition of suitable fill material.

### Trench installation:

The trench should be excavated deeply enough to allow for the specified grade, the required depth of bedding, and the minimum cover over the pipe.

AS/NZS 2032 - "Installation of PVC-U Pipe Systems", suggests the following typical installation in a trench, which Iplex recommends.



AS/NZS 2032 suggests the following materials as suitable for bedding and overlay in the trench:

- Suitable sand, free from rock or other hard or sharp objects.
- Crushed rock or gravel of approved grading up to a maximum size of 14mm
- The excavated material, if it is free from rock or hard matter and broken up so that it contains no soil lumps having any dimension greater than 75mm which would prevent adequate compaction of the bedding.
- Cement mortar, containing one part of cement and four parts of sand by volume, mixed with clean water to a workable consistency (bedding only).



### 4.3 Backfilling

#### Use of short lengths of pipe

PVC-U pipe may be cut on site when shorter lengths are required for the installation of fittings.

The cutting of PVC-U pipe is easily achieved using a fine-toothed handsaw or a PVC-U pipe cutter. The position of the cut should be measured and carefully re-checked before cutting: reasonable accuracy should be exercised to ensure that the cut is square to the axis of the pipe and all burrs must be removed from the cut end before making a joint.

#### Completing sitework

Once the pipe is laid in the trench backfilling can commence. Two distinct phases are involved with pipelines:

- a. backfilling prior to testing the pipeline
- b. backfilling after testing the pipeline

Backfilling usually follows pipe installation as closely as possible in order to protect the pipe from external damage. This eliminates the possibility of the pipe floating due to flooding of open trenches, and avoids shifting the pipe out of line due to cave-ins.

It should be remembered that the purpose of backfilling is not only to protect the pipe by covering it, but to provide firm continuous support under the pipe. Where concrete or mortar bedding has been used, the bedding has to take its initial set before overlay materials is added.

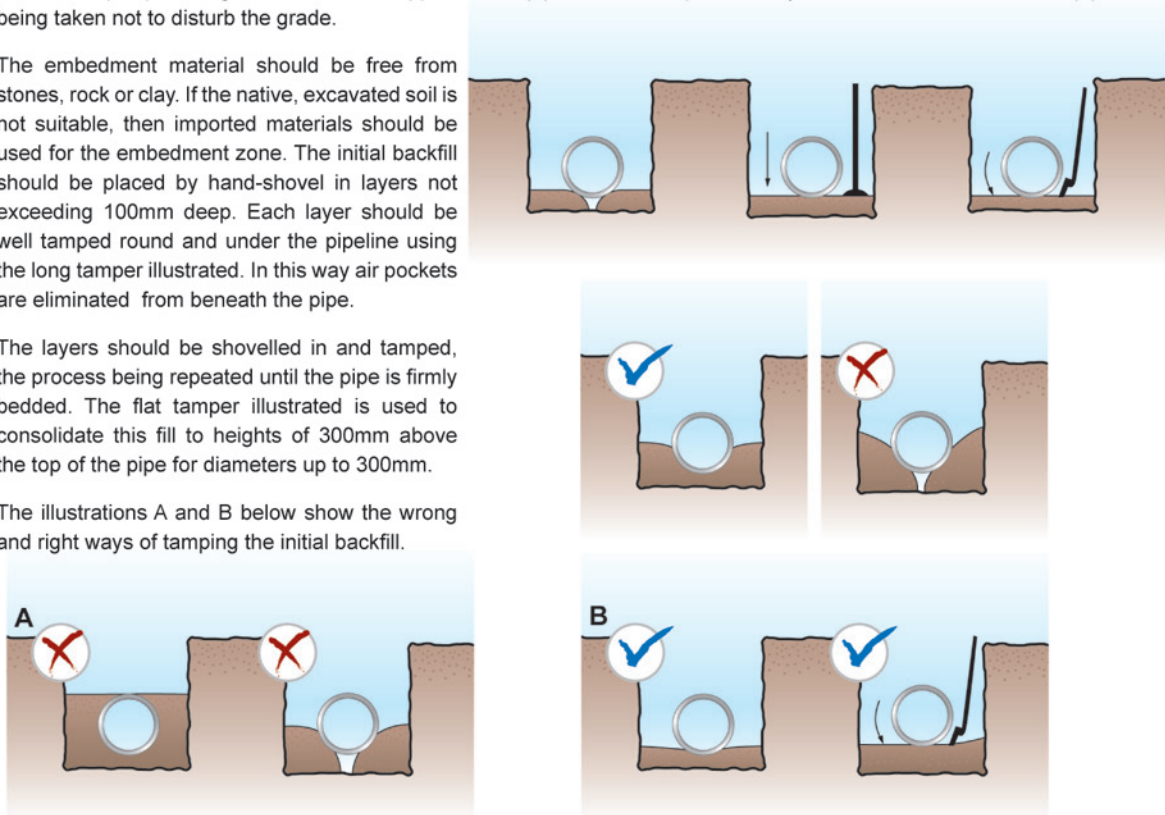
#### Initial backfilling

The first step in providing firm continuous support for the pipeline is to tamp soil solidly under the entire barrel of the pipe, care being taken not to disturb the grade.

The embedment material should be free from stones, rock or clay. If the native, excavated soil is not suitable, then imported materials should be used for the embedment zone. The initial backfill should be placed by hand-shovel in layers not exceeding 100mm deep. Each layer should be well tamped round and under the pipeline using the long tamper illustrated. In this way air pockets are eliminated from beneath the pipe.

The layers should be shovelled in and tamped, the process being repeated until the pipe is firmly bedded. The flat tamper illustrated is used to consolidate this fill to heights of 300mm above the top of the pipe for diameters up to 300mm.

The illustrations A and B below show the wrong and right ways of tamping the initial backfill.



Case A, too much soil is present and the tamping bar cannot compact it properly leaving a void underneath the pipe.

Case B, shows the correct fill of a 100mm layer of soil which can be compacted to form a firm bed for the pipe.

Pipe joints should be temporarily left exposed when placing the initial backfill, to enable pressure tests to be carried out. After testing the line, backfilling and final filling may be completed.

### 4.3 Backfilling - Continued...

#### Supports for PVC-U pipelines:

<b>Fixed supports</b>	<ul style="list-style-type: none"> <li>The purpose of a fixed support is to restraint all movement and to provide a fixed point in the installation</li> </ul>
<b>Sliding supports</b>	<ul style="list-style-type: none"> <li>The purpose of a sliding support or clip is to provide a guide without restraint on axial movement of the pipe</li> </ul>
<b>Location of supports</b>	<ul style="list-style-type: none"> <li>Refer to maximum spacing of pipe support table</li> <li>PVC-U shall be supported at intervals dependent on the maximum temperature likely to be reached by the material</li> </ul>
<b>PVC-U pipes through walls &amp; floors</b>	<ul style="list-style-type: none"> <li>Any pipe or fitting built into a wall or floor shall either be lagged with a suitable flexible material not less than 6mm thick, or pass through a sleeve providing an annular clear space of not less than 6mm, so as to permit the pipe to be sealed in position without restricting axial movement of the pipe</li> </ul>

#### Maximum spacing of pipe supports for non-pressure pipes AS/NZS 2032:2006:

Nominal size of pipe (mm)	Graded pipelines (m)	Vertical pipelines (m)
32	0.90	1.80
40-50	1.00	2.00
65-150	1.20	2.50
>150	1.50	3.00

### 4.4 Testing

#### Testing stormwater pipelines

Modern construction practice is to adopt some rigorous form of acceptance test on newly constructed stormwater lines. It is usual for two separate tests to be made: one prior to backfilling and another towards the end of the job when backfilling has been completed and settled, and manholes and sidelines constructed.

The purpose of testing a non-pressure pipeline is to ensure that the line has been correctly laid to line and grade, will flow satisfactorily and is sealed at each joint and fitting.

Recommended practices follow.

#### *Preparing for the test:*

During the installation careful checking and adequate supervision will ensure that stormwater lines are laid to line and grade. If an installation specification exists it should be followed. Otherwise the pipeline section to be tested should be backfilled leaving all couplings and fittings exposed for inspection during testing. In solvent weld PVC-U jointed non-pressure pipelines, at least 24 hours should have elapsed since the last joint was made before testing commences.

#### *Test procedures:*

Two types of testing are in current use - hydrostatic testing and low pressure or vacuum air testing. The choice of the type of test, its duration and test pressures required depend on the requirements of the authority concerned and may also be governed by the availability of water on the site, but in general hydrostatic testing is recommended.



**Testing stormwater pipelines - Continued...**

***Hydrostatic testing:***

The single opening at the top of the test section should be fitted with a special test plug. The test plug should have two entries; an upper one connected to a calibrated container capable of supplying make-up water when filled, and a lower entry connected to a water supply.

The pipeline should be filled with water allowing air to escape through the upper entry in the test plug via the calibrated container.

Unless otherwise specified by the client or relevant Government Authority, the following figures are recommended.

When pipeline is full, using the calibrated container raise the pipeline pressure to between 2m and 3m above the natural surface at the top of the test section. Allow the pipeline time to settle during which period make-up water should be added. This period should be a minimum of 24 hours.

During a subsequent one hour test the water loss measured by the drop in water level should not exceed 0.55 litres per 10mm internal diameter per 100 metres of pipe length. During the test all joints should be inspected.

Should the pipeline fail to pass the test it must be further examined to locate the leak, then drained, repaired and retested.

***Volume of water required to fill line:***

For a guide as to the amount of water required to fill the test section of stormwater line, the following table has been calculated. The amount of water required in practice will vary slightly from the tabulated figures due to variations in pressure and temperature.

Nominal dia. (mm)	Vol. in m <sup>3</sup> /km or l/m
75	4.5
90	5.8
100	8.5
150	18
225	43.9
300	69.6
375	112.2

***Make-up water:***

Make-up water will generally be necessary to obtain a satisfactory test, even if the pipeline is laid with the best of care under favourable conditions because of entrapped or entrained air.

***Low pressure air testing:***

All inlets, outlets and access points shall be capped and sealed. Air shall be introduced slowly, since rapid pressurization can cause significant air temperature changes that may affect testing accuracy.

Apply an initial test pressure of approximately 15kPa. Close the valve on the pressure line and shut off the pump. Allow the air pressure to stabilize for at least 3min to identify any initial leakage.

When the pressure has stabilized and is at or above the starting test pressure of 10kPa commence the test by allowing the gauge pressure to drop to 10kPa, at which point initiate time recording. Record the drop in pressure over the test period.

The length of drain under test is considered to pass if the pressure drop is ≤3kPa for the relevant time interval specified in table below.

***Completing final backfill:***

After testing of the pipeline, selected material should be hand shovelled over each exposed joint and tamped to give 300mm minimum cover. Final backfilling to ground level can be completed by hand or machine, using the soil originally excavated from the trench. Care should be taken to exclude large rocks and stones from the final backfill.





## 5.0 Frequently Asked Questions

---

### **Can Stormwater pipe be installed in sunlight?**

---

Yes, Stormwater pipe and fittings contain UV absorber (TiO<sub>2</sub>) and can be installed in direct sunlight.

### **Can I use Stormwater pipe to transfer drinking water?**

---

Australian Standards do not require Stormwater pipes to be tested in use in contact with drinking water. In these applications, pipes complying with the test requirements of AS/NZS 4020 should be used. Typically, these will be pressure pipes.

### **What is the flow capacity of the Stormwater pipe?**

---

Refer Design tools - Hydraulic flow calculator on website ([www.iplex.com.au](http://www.iplex.com.au))

### **Can I concrete encase Stormwater pipe?**

---

Yes, refer to AS/NZS 2032.

### **Can I run petrol through the pipe?**

---

Generally not, but refer Design Tools - Chemical resistance chart on website ([www.iplex.com.au](http://www.iplex.com.au))

### **What dimensions does Stormwater pipe and fittings come in?**

---

Refer Product Range (page 15 onwards)

### **What pressure do I test to?**

---

Stormwater pipes systems are not pressure rated and should not be pressure tested.

### **What is a safe span if installed above the ground?**

---

Australian Standard AS/NZS 2032 provides guidance for maximum support spacing. See also the table in Section 4.3.

### **Can Iplex PVC-U Stormwater pipes can be painted?**

---

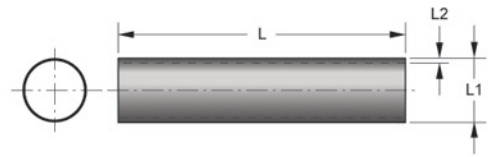
Yes, they can be painted with a water based paint.

## 6.0 Product Range

### PVC-U Stormwater System - Pipe

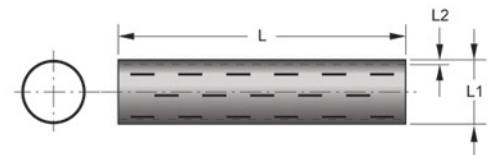
#### Stormwater Pipe:

Product code	DN Nominal size (mm)	Rating	Typical dimensions		
			Dim. (m) L	Min. mean outside dia. (mm) L1	Typical wall thickness min. (mm) L2
WPSO75	75	SN2	6	75.0	1.6
WPSO90	90	SN2	6	90.0	1.9
WPSO90EH	90	SN4	6	90.0	2.5
WPSN90	90	Non standard	6	90.0	-
WPSO150	150	SN2	6	160.0	3.2
WPSO225	250	SN2	6	250.0	5.5
WPSO300	300	SN2	6	315.0	6.0
WPSO375	375	SN2	6	400.0	7.9



#### Slotted Stormwater Pipe:

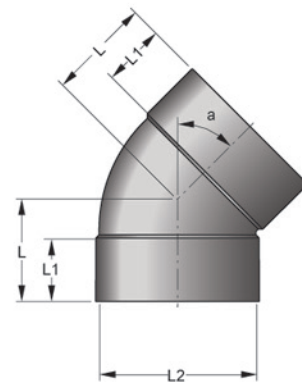
Product code	Nominal size (mm)	Dim. (m) L	Mean outside dia. min.(mm) max.(mm)		Wall thickness min.(mm) L2
			L1	L1	
WPSO90SL	90	6	90.0	90.3	1.9
WPSO150SL	150	6	160.0	160.5	3.2



Note: Not available in WA

#### Plain Bend F&F:

Product code	Nominal size (mm)	Angle (deg) a	Typical dimensions		
			Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2
W0027522	75	22½°	47	35	75
W0027545	75	45°	51	30	75
W0027590	75	90°	57	20	75
W0029015	90	15°	37	28	90
W0029022	90	22½°	40	28	90
W0029045	90	45°	49	28	90
W0029090	90	90°	75	28	90
W00215015	150	15°	82	64	160
W00215045	150	45°	105	64	160
W00215090	150	90°	153	64	160
W00222590	225	90°	183	100	225
W00230045	300	45°	227	125	300
W00230090	300	90°	231	125	300
W00237545	375	45°	297	160	375
W00237590	375	90°	294	160	375



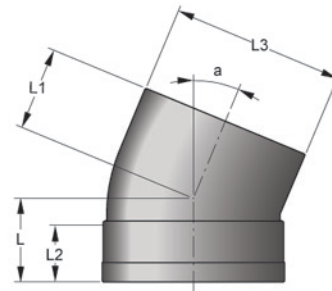
Note:

- All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.

**PVC-U Stormwater System - Fittings**

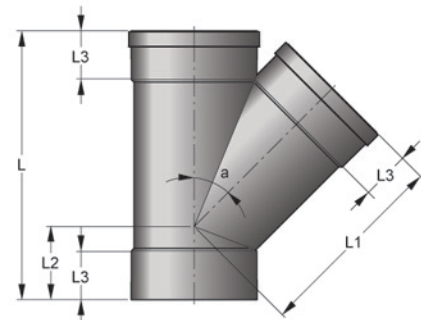
**Plain Bend M&F:**

Product code	Typical dimensions					
	Nominal size (mm)	Angle (deg) a	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
W0037522	75	22½°	47	47	35	75
W0037545	75	45°	51	47	30	75
W0039015	90	15°	40	40	30	90
W0039022	90	22½°	44	44	30	90
W0039045	90	45°	50	52	30	90
W00315045	150	45°	105	98	64	160



**Plain Junction F&F:**

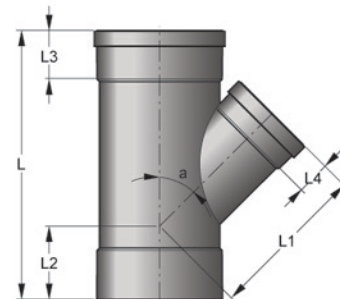
Product code	Typical dimensions					
	Nominal size (mm)	Angle (deg) a	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
W0247545	75	45°	187	129	60	35
W0247590	75	90°	149	79	73	35
W0249045	90	45°	193	143	50	30
W0249090	90	90°	146	73	73	28
W02415045	150	45°	358	261	98	64
W02415090	150	90°	292	146	146	64



Note:  
• For larger sizes refer to DWV Plain junction

**Reducing Junction F&F:**

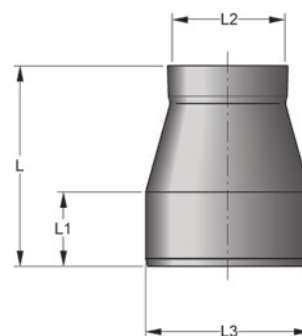
Product code	Typical dimensions						
	Nominal size (mm)	Angle (deg) a	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
W025151045	150x100	45°	358	212	98	64	44



Note:  
• For larger sizes refer to DWV Reducing junction

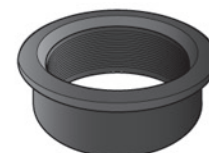
**Adaptor Stormwater Sewer:**

Product code	Typical dimensions				
	Nominal size (mm)	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
W04175100	75x100	135	50	75	110
W04190100	90x100	109	52	90	110



**Stormwater Rubber Insert:**

Product code	Description
W05100	100mm Rubber insert for stormwater

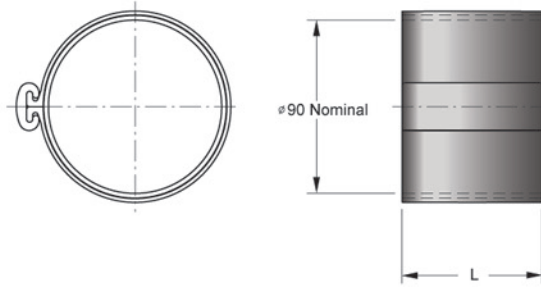


Note:  
• All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.

**PVC-U Stormwater System - Fittings**

**Pipe Repair Kit:**

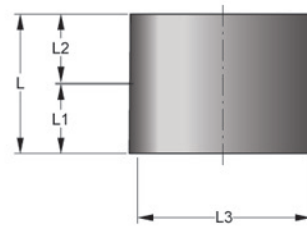
Product code	Typical dimensions	
	Nominal size (mm)	Dim. (mm) L
W05690	90	73



**Straight Coupling Plain:**

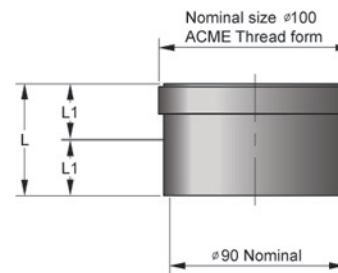
Product code	Nominal size (mm)	Typical dimensions			
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
W05775*	75	67	30	30	75

Note: \*W05775 is a plain/repair coupling



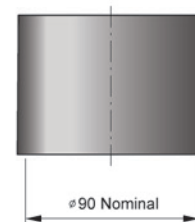
**Threaded/Repair Coupling:**

Product code	Nominal size (mm)	Typical dimensions	
		Dim. (mm) L	Dim. (mm) L1
W05890	90	56	29



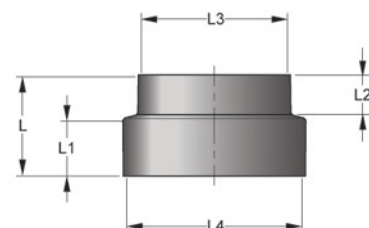
**90mm Slip Repair Coupling:**

Product code	Nominal size (mm)
W711S90	90



**Reducing Coupling:**

Product code	Nominal size (mm)	Typical dimensions				
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
W0619075	90x75	53	29	21	75	90

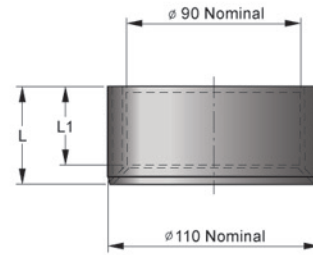


Note: All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.

**PVC-U Stormwater System - Fittings**

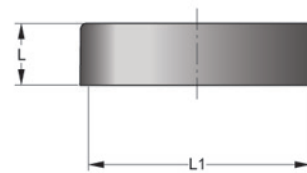
**Reducing Bush Stormwater to Sewer:**

Product code	Typical dimensions		
	Nominal size (mm)	Dim. (mm) L	Dim. (mm) L1
W07390100	100x90	51	41



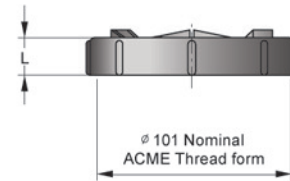
**Push on Cap:**

Product code	Typical dimensions		
	Nominal size (mm)	Dim. (mm) L	Dim. (mm) L1
W10575	75	21	75
W10590	90	32	90



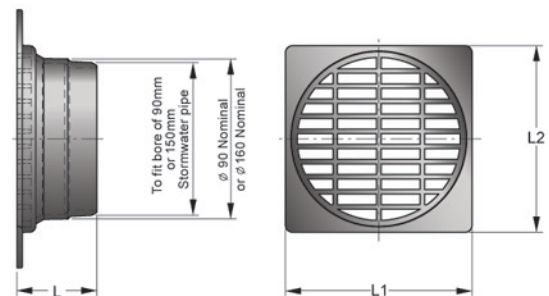
**Threaded Cap:**

Product code	Typical dimensions	
	Nominal size (mm)	Dim. (mm) L
W10990	90	20



**Stormwater Grate:**

Product code	Typical dimensions			
	Nominal size (mm)	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2
W15590	90	45	105	105
W155150	150	78	210	210



Note:

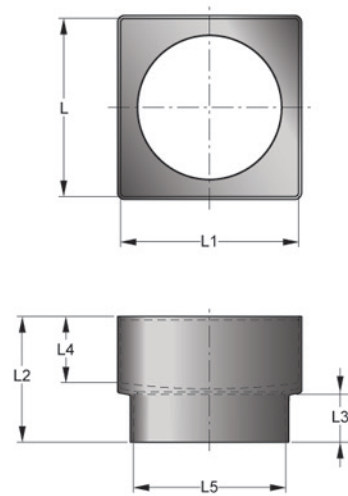
- All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.



**PVC-U Stormwater System - Fittings**

**Downpipe Adaptor - Rectangular:**

Product code	Nominal size (mm)	Typical dimensions					
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4	Dim. (mm) L5
W160755050	75x50x50	56	56	125	45	37	75
W160758050	75x80x50	83	53	73	30	39	75
W160758080	75x80x80	80	80	135	38	40	75
W160751050	75x100x50	55	106	92	30	50	75
W160751080	75x100x80	80	100	145	38	40	75
W160751010	75x100x100	106	106	125	20	40	75
W160908050	90x80x50	84	55	97	30	51	90
W160908080	90x80x80	80	80	120	60	40	90
W160901050	90x100x50	106	55	75	29	40	90
W160901065	90x100x65	65	106	97	30	50	90
W160901080	90x100x80	106	80	75	29	40	90
W160901010	90x100x100	106	106	75	29	40	90
W160101050	100x100x50	105	54	170	60	62	110
W160101080	100x100x80	105	80	125	35	60	110
W160101010	100x100x100	106	106	86	41	40	110
W160101510	100x150x100	105	150	205	55	45	110
W160161510	160x150x100	105	150	220	100	50	160
W160161515	160x150x150	150	150	220	100	85	160



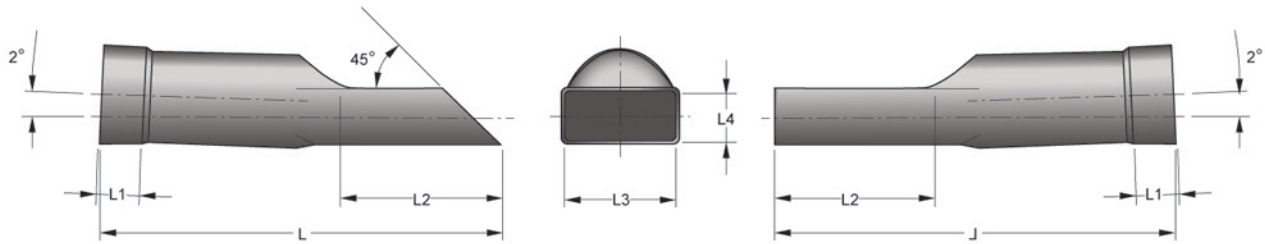
Note:

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**PVC-U Stormwater System - Fittings**

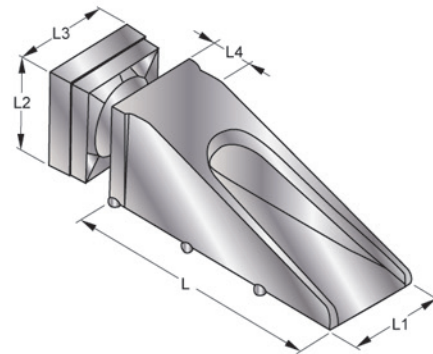
**Kerb Adaptor:**

Product code	Nominal size (mm)	Typical dimensions				
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
W16090KA	90 Kerb Adaptor	380	40	150	104	48
W16090SKA	90 Kerb Adaptor(Sloped)	380	40	150	104	48
W160100KA	100 Kerb Adaptor	380	50	180	128	48



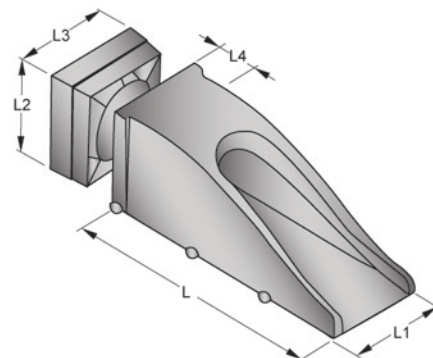
**Aluminium Kerb Adaptor:**

Product code	Typical dimensions				
	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
ZLAYBACK	225	105	105	105	50



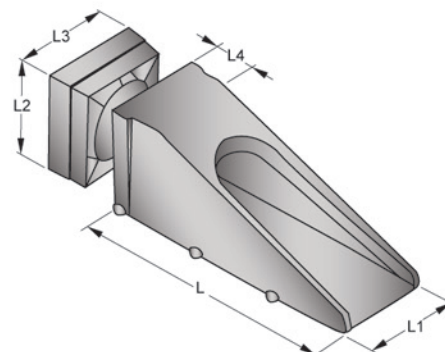
**PVC Rollover Kerb Adaptor:**

Product code	Typical dimensions				
	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
ZLAYBACKAE3	300	100	105	100	50



**PVC Kerb Adaptor:**

Product code	Typical dimensions				
	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
ZLAYBACKAE1	310	135	135	135	35

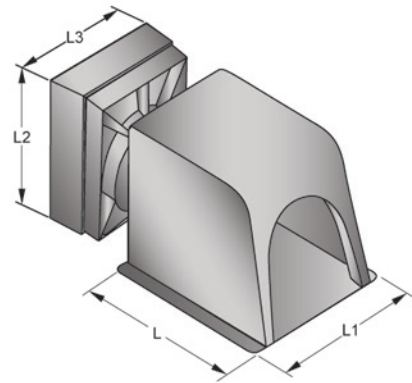


Note:  
 • All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.

**PVC-U Stormwater System - Fittings**

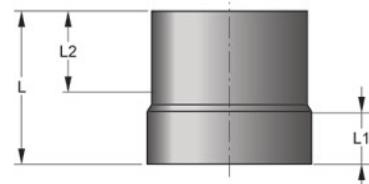
**PVC Upright Kerb Adaptor:**

Product code	Typical dimensions			
	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
ZBARRIER	150	135	135	135



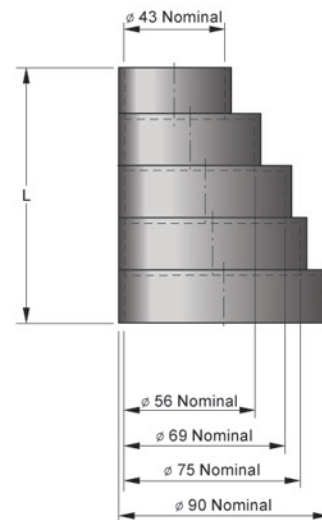
**Downpipe Adaptor - Round:**

Product code	Nominal size (mm)	Typical dimensions		
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2
W1619050V	90x50	74	30	32
W1619065V	90x65	82	30	40
W1619080V	90x80	88	30	47
W16190100V	90x100	93	53	30
W16190150V	90x150	209	98	41



**Multi-pipe Adaptor:**

Product code	Typical dimensions	
	Nominal size (mm)	Dim. (mm) L
W161907654	90x75x65x50x40	111



Note:

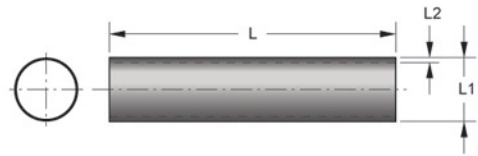
- All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.



**PVC-U Stormwater System - Rainwater**

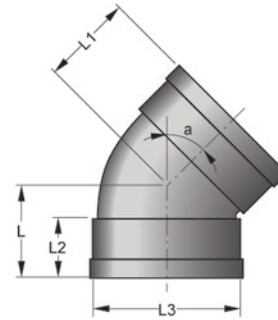
**Rainwater Downpipe:**

Product code	Typical dimensions				
	DN Nominal size (mm)	Rating	Dim. (m) L	Min. mean outside dia. (mm) L1	Typical wall thickness min. (mm) L2
RDP075	75	N/A	3	75	1.6



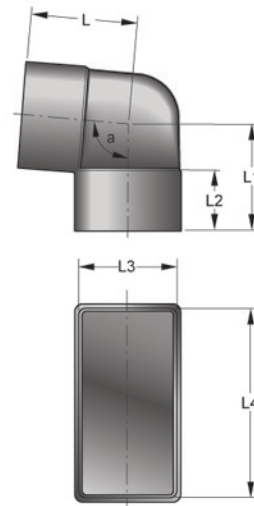
**Rainwater Plain Bend (Round):**

Product code	Typical dimensions					
	Nominal size (mm)	Angle (deg) a	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
R0027522	75	22	47	47	35	75
R0027545	75	45	51	51	30	75
R0027590	75	90	57	20	30	75
R0029090	90	90	75	75	28	90



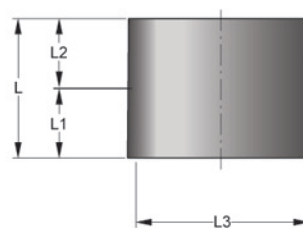
**Rainwater Plain Bend (Rectangle):**

Product code	Typical dimensions						
	Nominal size (mm)	Angle (deg) a	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
R002105045	100x50	45	46	46	32	55	105
R002105095	100x50	95	59	59	32	55	105



**Rainwater Coupling (Round):**

Product code	Typical dimensions				
	Nominal size (mm)	Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
R05775	75	67	30	30	75



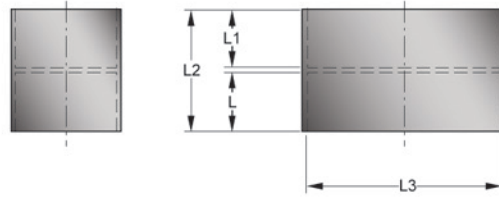
Note:

- All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.

**PVC-U Stormwater System - Rainwater**

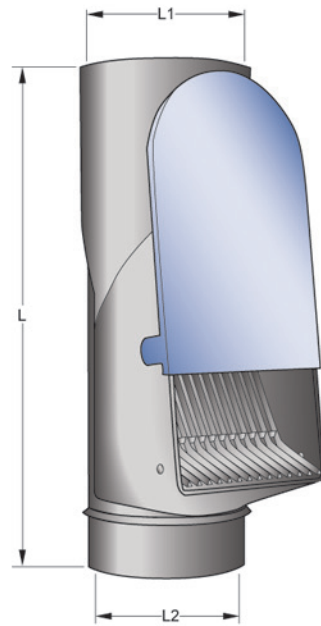
**Rainwater Coupling (Rectangle):**

Product code	Nominal size (mm)	Typical dimensions			
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3
R05710050	100x50	32	31	66	106



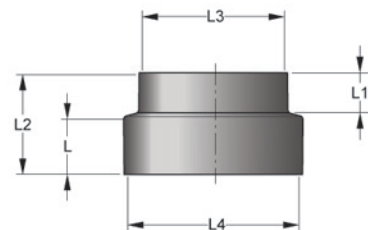
**Leaf Separator:**

Product code	Nominal size (mm)	Typical dimensions		
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2
R157090	90	325	110	102



**Rainwater Adaptor (Round):**

Product code	Nominal size (mm)	Typical dimensions				
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4
R1617590	75x90	29	21	53	75	90



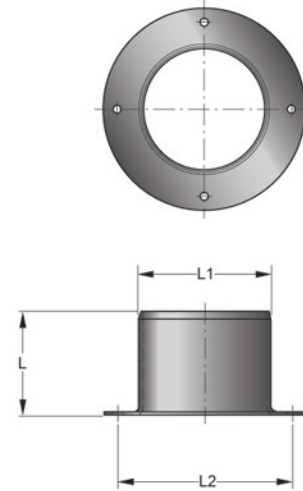
Note:

- All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.

PVC-U Stormwater System - Rainwater

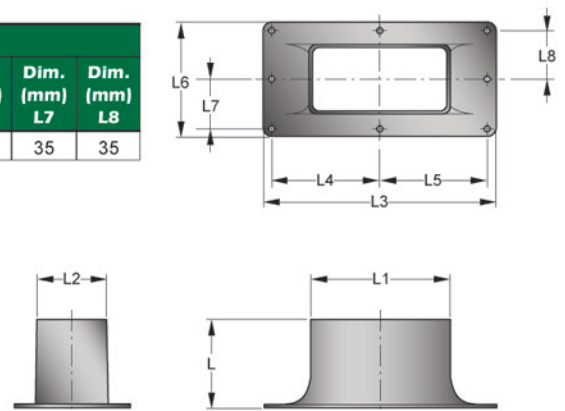
Rainwater Gutter Pop (Round):

Product code	Nominal size (mm)	Typical dimensions		
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2
R18075	75	60	75	100



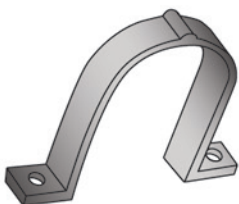
Rainwater Gutter Pop (Rectangle):

Product code	Nominal size (mm)	Typical dimensions								
		Dim. (mm) L	Dim. (mm) L1	Dim. (mm) L2	Dim. (mm) L3	Dim. (mm) L4	Dim. (mm) L5	Dim. (mm) L6	Dim. (mm) L7	Dim. (mm) L8
R18010050	100x50	64	99	49	165	77	77	82	35	35

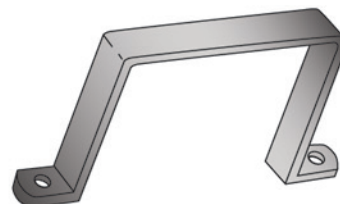


Rainwater Clip:

Product code	Nominal size (mm)
R18575	75



Product code	Nominal size (mm)
R18510050	100x50



Note:

- All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.

**PVC-U Stormwater System - Jointing Materials**

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**Solvent Cement Non Pressure (Blue):**

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Product code	Size
JNB0125	125ml
JNB0250	250ml
JNB0500	500ml
JNB1000	1 litre
JNB4000	4 litre



**Solvent Cement Non Pressure (Clear):**

---

Product code	Size
JNC0250	250ml
JNC0500	500ml



**Priming Fluid (Red):**

---

Product code	Size
JR0250	250ml
JR0500	500ml
JR1000	1 litre
JR4000	4 litre



**Note:**

- It is recommended when assembling and installing Iplex PVC pipes and fittings that Iplex solvent cement and priming fluids be used.

**Note:**

- All dimensions, mass & volume are approximate only. If critical contact Iplex Pipelines.



***iplex***  
*Pipelines*

ABN 56 079 613 308

FOR ALL ENQUIRIES AND ORDERS CONTACT IPLEX PIPELINES:

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