Marley Optim® DWV Training

Plumbing Solutions

MARLEY®

Contents

Plumbing Solutions

MARLEY®

Marley NZ Ltd

- Marley New Zealand produces Extruded and Injection Moulded uPVC and Polyethylene products for the New Zealand rainwater, building, plumbing, civil, electrical and rural markets.
- Marley also imports a range of products from *Aliaxis* companies overseas to sell to the New Zealand market.
- Marley exports products to the Pacific Islands, South East Asia, Australia and the UK.
- Marley is part of the *Aliaxis* Group which is a leading global manufacturer and distributor of primarily plastic fluid handling systems used in residential and commercial construction.

Objective

This training module will provide the trainee with a basic understanding of the Marley DWV (drain waste and vent) system.

Introduction – DWV

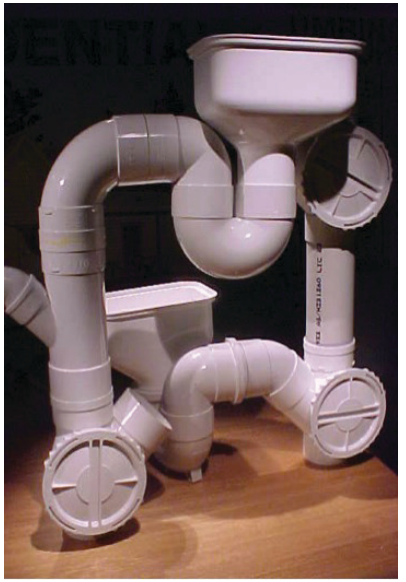
- Marley's Drain, Waste and Vent (DWV) systems are also referred to as sewer pipes and fittings (DN 100 +), that carry effluent and waste water to waste treatment plants.
- DWV is suitable for a large range of applications: Generally DWV refers to pipes and fittings used within the boundary (32DN to 150DN) but the larger products are used for Civil and infrastructure(150DN to 375DN).

Introduction – DWV cont.

- Domestic drainage
- Domestic plumbing
- Commercial drainage
- Commercial plumbing
- Local Authority Drainage – Sewer
- Industrial Plumbing and Drainage

DWV – PVC Properties

- Maximum continuous service temperature 60°C.
- Durability – min. of 50 years (Building Code B2).
- Weatherability – Pipes and Fittings are UV stabilized (1.5PHR of titanium oxide UV protection).
- Impact strength – Stiffness classes according to relevant applications (SN 4 – SN 16).
- Excellent Abrasion resistance.
- High Corrosion & Chemical resistance.
- At low temperatures impact strength of PVC is reduced, care required when cutting, handling and backfilling in cold conditions.



uPVC (Unplasticised Polyvinyl Chloride

- Marley DWV uPVC pipes and fittings are lead free, cadium free, mercury free and plasticiser free.
- This makes our product a healthier option from products used in the past.
- Unplasticised PVC pipe is approved for use in water supply by the World Health Organisation and other independent bodies.
- All uPVC drinking-water products in New Zealand have to meet stringent international standards and testing at independent laboratories.

SN Applications

Marley uPVC pipes are manufactured to different pipe stiffness (SN) classes to suit the performance requirements of the installation according to AS/NZS1462.22

SN4 and SN6

- Suitable for all domestic plumbing and drainage 100 and 150mm sizing (DN100, DN150).

SN8 and SN10

- general drainage and commercial installations requiring higher pipe stiffness due to imposed loads from backfill.

SN16

- Local authority requirements for long term stiffness to accommodate varying bedding requirements and to give an asset life of 100 years.

DWV Pipe Range

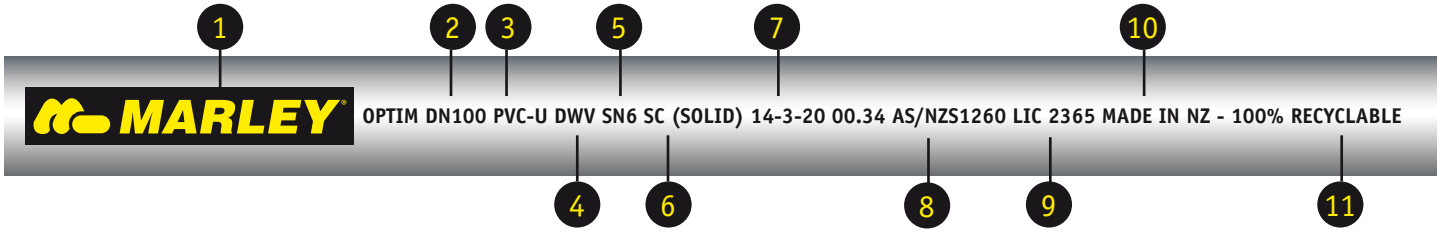
Types of Marley pipes:

OPTIM – DWV pipes :

- Solid wall **uPVC** pipes (SN4, SN6, SN8, SN10, SN16).
- Range from DN32 – DN 375 mm.
- Rubber Ring and Solvent Joints.

IMPACT – DWV pipes

- Modified **mPVC** pipe (SN4, SN6, SN8, SN10, SN16).
- Range from DN100 – DN 375 mm.
- Rubber Ring and Solvent Joints.



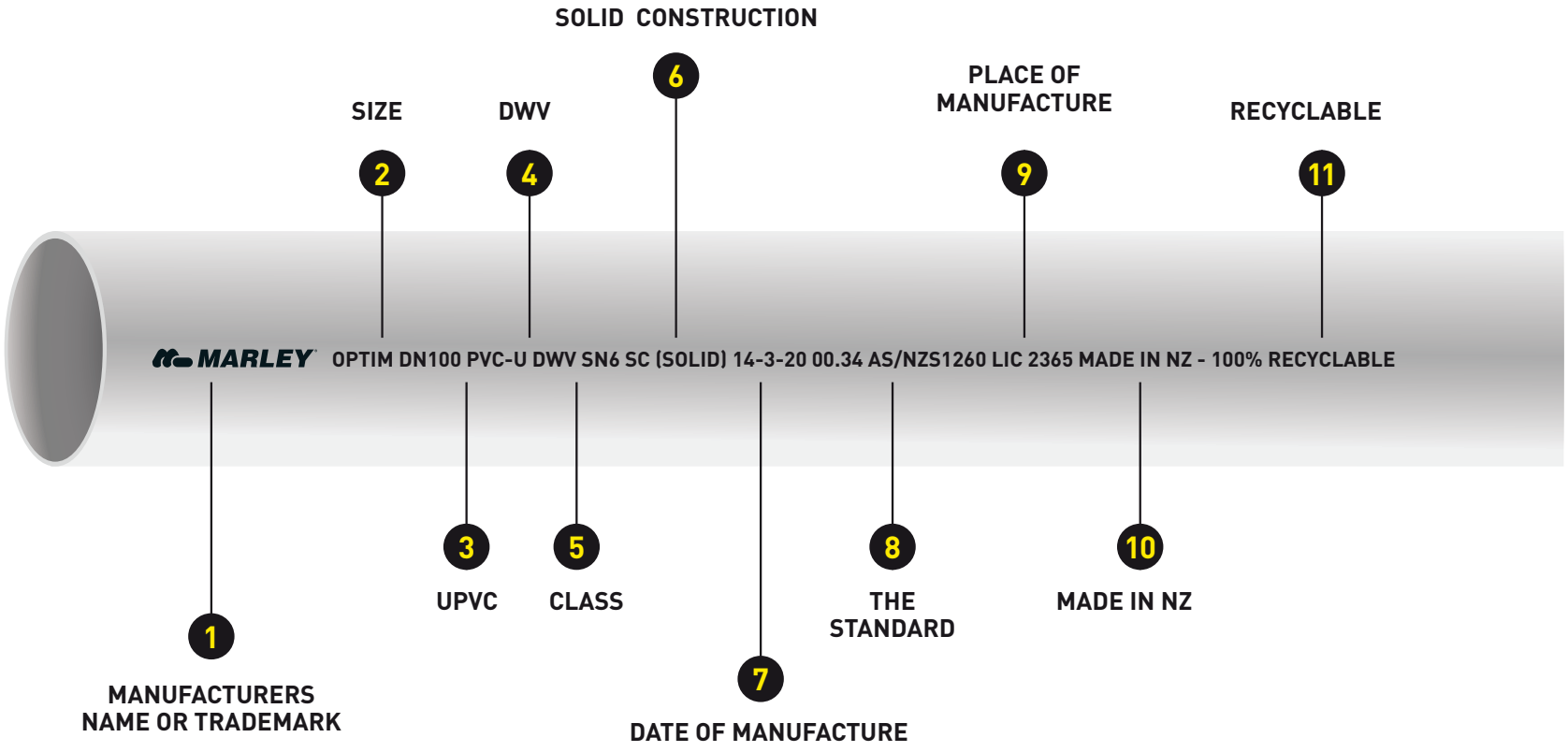
DWV Pipe Marking/Identification

1. **Manufacturers Name or Trademark:** You need to know who made it. Choose a brand you can trust.
2. **Size:** DN100 makes the size easily identifiable to the customer.
3. **PVC-U:** Shows the material it is made from.
4. **DWV:** This shows it is designated for use in Drain, Waste and Vent applications.
5. **Class:** This details the Stiffness Rating. You need to know this rating for use in the correct buried application.
6. **SC (Solid):** Sandwich construction. This is still a solid wall pipe (not foam core) but is co-extruded.
7. **Date of Manufacture:** We all need to know when it was made if there are any issues. We also identify the time.
8. **Standard:** This indicates the standard the pipe is made to.
9. **Identification of Place of Manufacture:** Marley is certified to manufacture in our Auckland and Christchurch factories. This code lets you know our product is externally certified and which factory it was made in.

The above are requirements to meet the AS/NZS1260 standard. Marley also adds the following as added value.

10. **Made in NZ:** You know its made in New Zealand. Marley has been making quality uPVC pipe in New Zealand for over 30 years.
11. **Recyclable:** Marley uPVC is 100% recyclable and we recycle all manufactured waste uPVC on site. Marley is also certified to meet BEP criteria. This means our uPVC products meet the Green Building Council's Best Practice guidelines for PVC in the built environment.

DWV Pipe Marking/Identification



DWV Fittings Range

- Full Range of uPVC fittings from 32mm to 375mm.
- DWV fittings rated to SN6 for ≥ 100DN.
- Solvent socket joint and Rubber ring joint (RJ).
- All fittings designed to meet the AS/NZS 1260 standard and are tested in the Marley Ianz accredited laboratory at Mahia Road.

DWV Product Codes

Pipe Example

- Optim: 100SN6.100.6

  100 = Product code

  SN6 = Stiffness rating

  100 = 100mm diameter

  6 = 6 metres long

Fitting Example

- Plain Bend F&F: 101.32.88

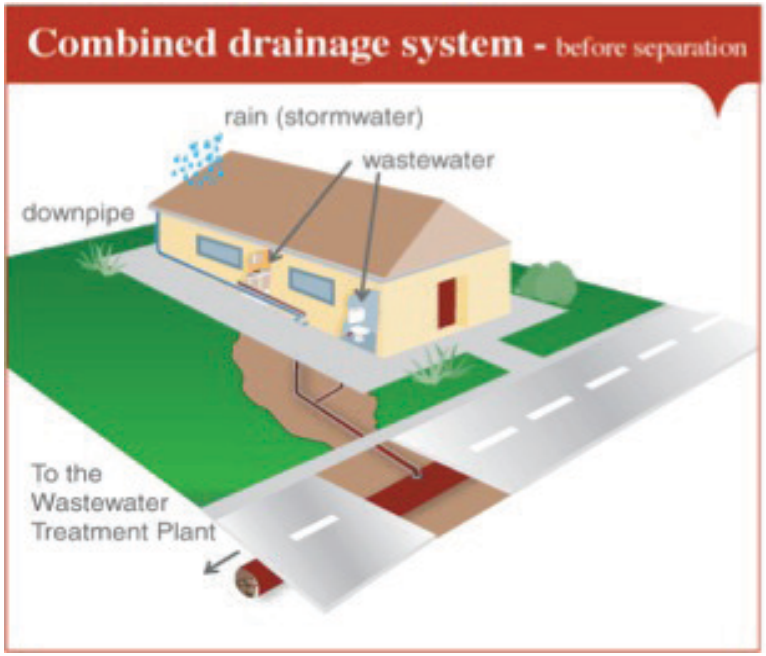
  F&F = Sockets at Both ends

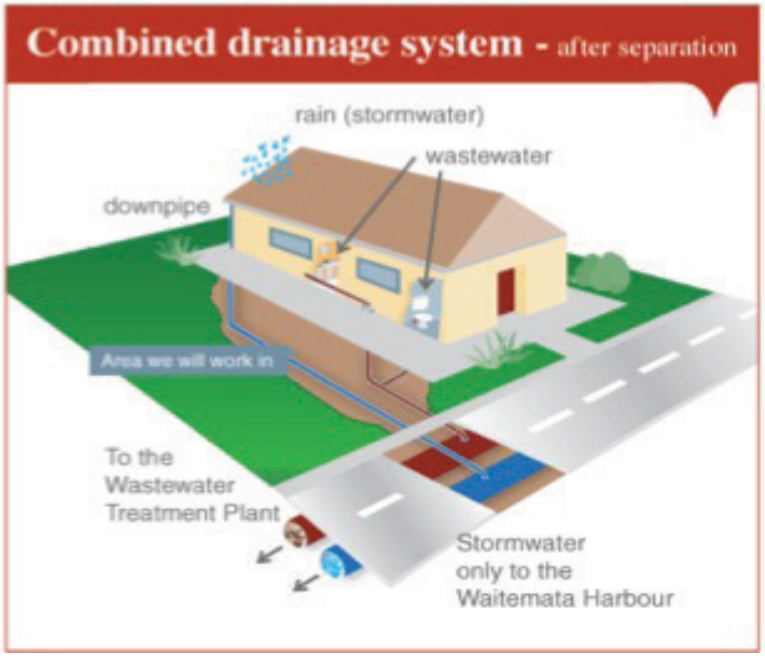
  101 = Product code

  32 = Diameter

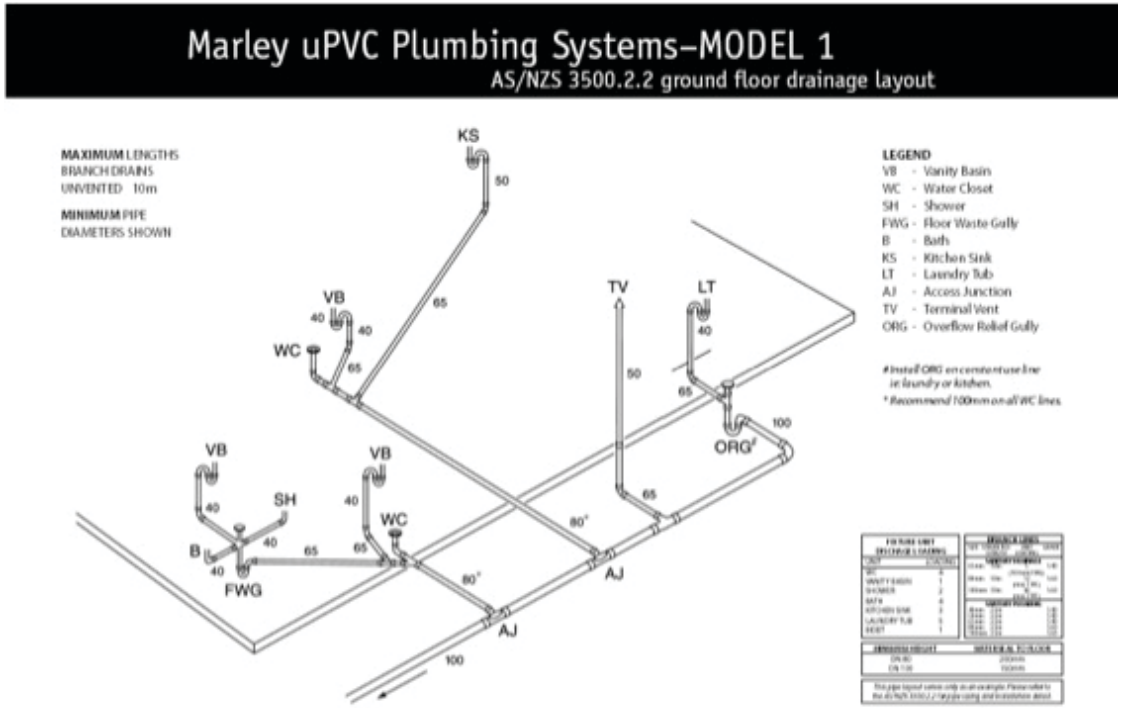
  88 = Angle in degrees

DWV and storm water Systems





Example of Ground Floor Installation



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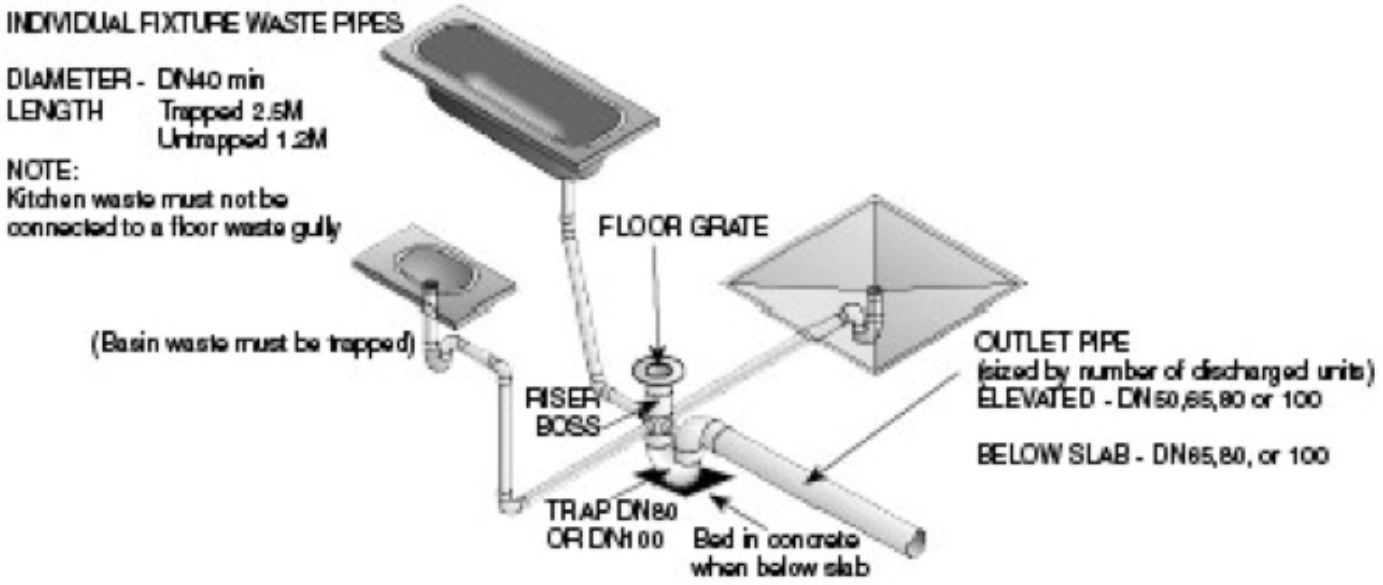
Example of Bathroom Installation

Typical Wet Area Layout for AS/NZ 3500.2.2 **Figure 4.1**



Handling and Storage

Storage

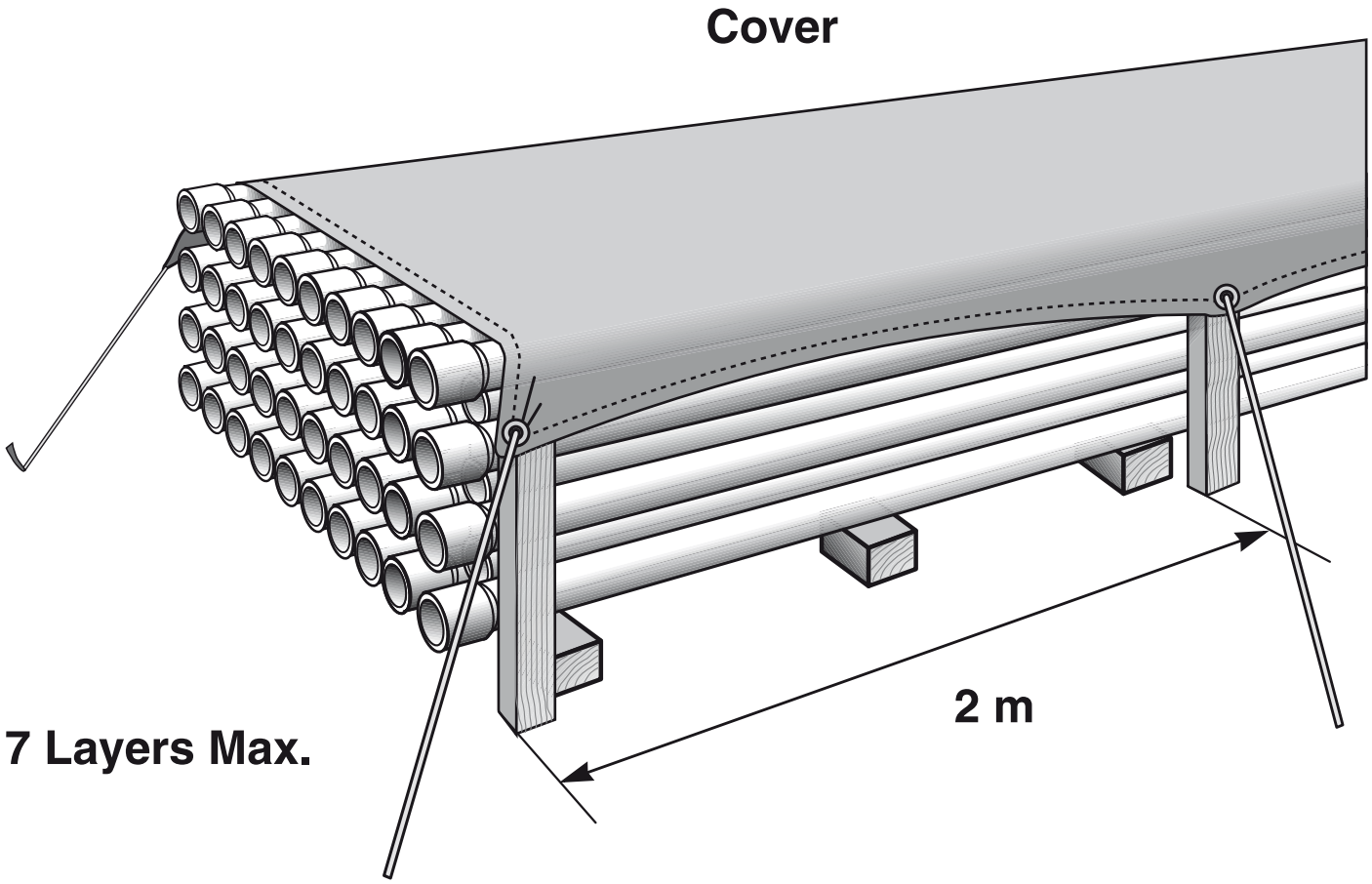
Pipes should not be stored in direct sunlight for longer than twelve months without a hessian or similar cover. Black plastic should be avoided as it can create excessive heat build-up.

Stringing

Laying the pipes along the line of the trench is known as stringing.

The following points should be observed:

- Socket should face the direction in which work will be going.
- Pipes should be unloaded on the opposite side of the trench to the soil.
- Pipes should be placed at 6 metre intervals.
- Sockets should be placed so that the flow enters the socket end of the pipe.
- The identification marketing strip should be laid uppermost to aid in identifying the pipe should it be uncovered at any time in the future.


Cover
7 Layers Max.
2 m

Installation Solvent Socket

How to make a Solvent Cement Joint

Mark & chamfer

Mark the socket depth on the pipe end.

Cut a 15° chamfer on larger pipes.

Clean

Clean, dry, degrease the socket and spigot.

Check the fit

Insert the spigot into the socket (without solvent cement). An interference fit should occur between 1/3 and 2/3 of full entry.

Apply Priming Fluid

Apply an even coat of priming fluid to the socket and then the spigot. Note: Solvent Cement should be applied before Priming fluid completely dries off.

Apply Solvent

Apply an even coat of solvent to the socket and then the spigot to the full marked length.

Joint

Insert the spigot the full marked depth in the socket and HOLD for a minimum of 30 seconds, depending on temperature.

Clean Off

Remove the surplus solvent cement.

Solvent Cement Coverage

The approximate number of joints that may be jointed with one litre is as follows:

Solvent Options

* USE BOTH PRIMER AND CEMENT FROM THE ONE MANUFACTURER.

MARLEY "GOLD" (AS/NZS 3879)
(For both High and Low Pressure Applications)

MG125	MARLEY GOLD 125ml
MG250	MARLEY GOLD 250ml
MG500	MARLEY GOLD 500ml
MG4000	MARLEY GOLD 4 litre

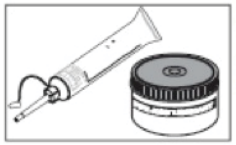
MARLEY "CLEAR"
(For Low Pressure Applications Only)

SC125C	MARLEY CLEAR 125ml
SC250C	MARLEY CLEAR 250ml

SOLVENT JOINT PRIMER
(Pink Tint) AS/NZS 3879

CF500	MARLEY JOINT PRIMER 500ml
CF4000	MARLEY JOINT PRIMER 4 litre

JOINT LUBRICANT



JL250	RRJ LUBRICANT 275ml (TUBE)
JL500	RRJ LUBRICANT 500ml
JL2000	RRJ LUBRICANT 2 litre

Installation Rubber Ring

How to make a Rubber Ring Joint

1.

Check Spigot End

Ensure pipe spigot has full 15° chamfer around circumference and insertion depth mark. This should be 10-15mm less than the socket depth.

2.

Clean Socket & Rubber Ring

Clean socket and ring groove of dirt and loose gravel.

Clean Rubber Ring.

3.

Fit Rubber Ring

Place rubber ring in groove correct way around and check for proper seating.

Fin must point into pipe for Z-ring.

4.

Align pipes

Align pipes horizontally and vertically. Do not try to insert pipe at an angle to socket.

5.

Lubricate Spigot

Clean off dust and dirt and apply jointing lubricant to chamfer.

Keep end free from dirt.

6.

Insert Pipe

Insert spigot into socket to the marked distance. Do not use undue force. If force is required, check ring seating, using a torch to look up pipe.

The Marley Optim DWV System Offer

QUALITY ASSURANCE

- Rigorous quality testing
- IANZ accredited onsite laboratory

CERTIFICATION

- Made to AS/NZS 1260 Standard
- ISO 9001 accreditation

PROVEN RELIABILITY

- Over 30 years experience
- Manufactured for the NZ market

FULL RANGE

- Over 300 pipes and fittings
- Compatible system

SUPPORT

- Nationwide Territory Managers
- Award-winning customer service

RECYCLABLE

- uPVC recycling programme
- ISO 14001 certified

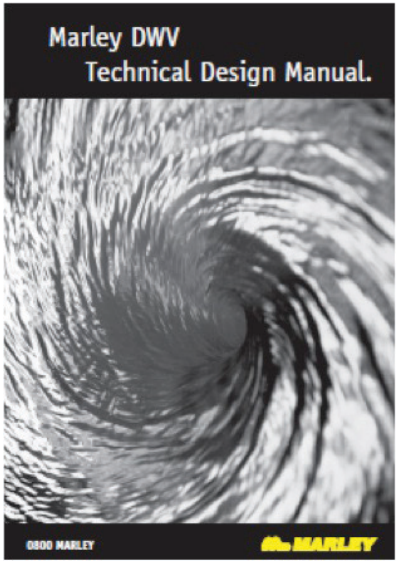
DWV Standards

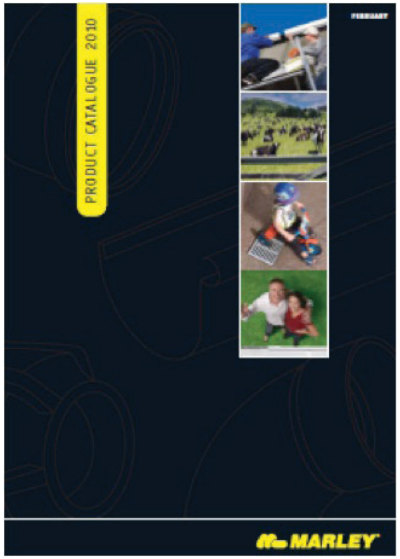
- Marley DWV pipe and fittings are manufactured to AS/NZS 1260 “PVC pipes and fittings for drain waste and vent applications”.
- Marley DWV system is audited by Bureau Veritas and holds the license no. 2365
- Marley DWV pipe and fittings assist in complying with Building Industry Code G13 and B2, and installation and design practices to AS/NZS 3500.2.2
- Marley DWV pipe and fittings assist in complying with Building Industry Code G13 and B2, and installation and design practices to AS/NZS 3500.2.2

Warranty/Design Life

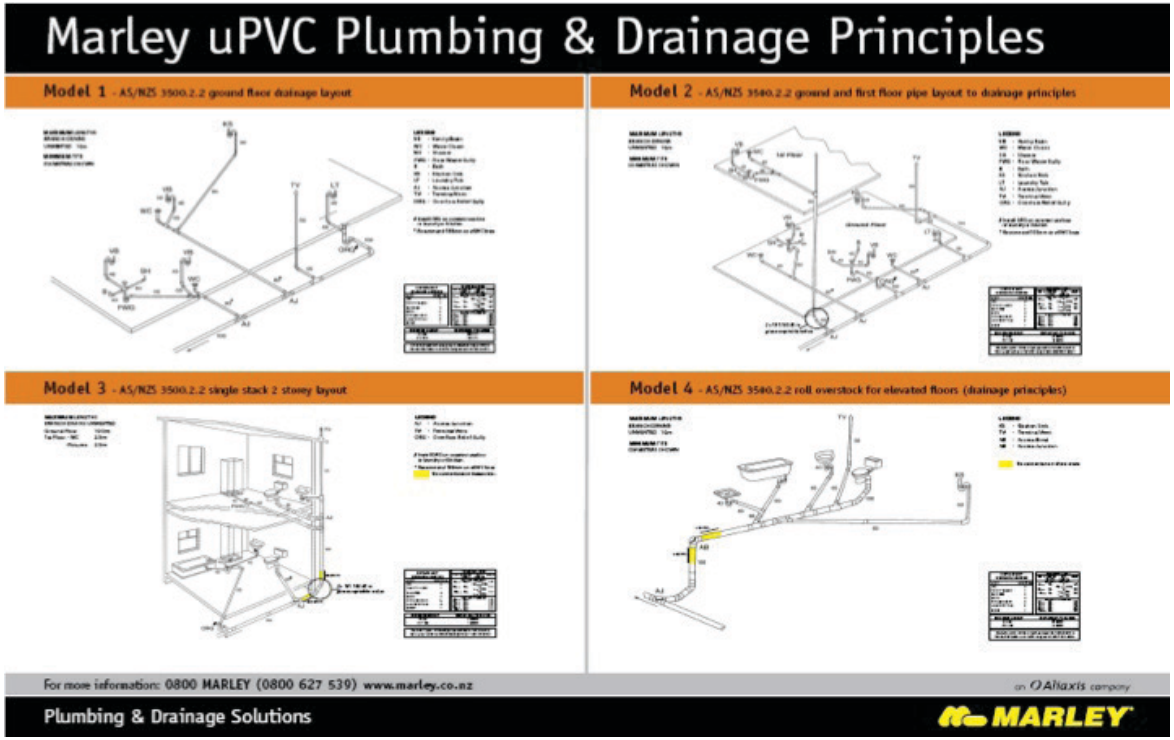
- Marley Pipe and Fittings comply with the requirements of the New Zealand Building Code references to Durability – this requires a minimum durability life of 50 years (Building Code B2).
- Marley design and manufacture to meet those requirements and perform regular test on all products in the lanz accredited laboratory.

Reference Material





Plumbing Principals Posters Available



Quick Test 10–15

- What is the name the Marley uPVC Pipe system?
- What Solvent do you use with DWV pipe for low and high pressure situations?
- Is uPVC recyclable?
- How long is the durability requirement for DWV pipe and fittings according to the Building Code?

Marley Contact Details

Phone **0800 627 539**

Visit **www.marley.co.nz**

Nationwide Sales Team **contact your Territory Manager**

MAR3842 August 2019