

# Plastic Drainage Pipes – What Are the Different Types and Strengths?

by Jim Gordon, West Chester Machinery | [Plastic Drainage Pipes](#)



## Plastic Drainage Pipes

Plastic drainage pipes are used to move water and other liquid material from one place to another. There are many different types and grades (strengths) of pipe. Some of the more common types associated with outdoor landscaping are detailed below. Some have smooth inner and outer walls, and some may be corrugated. Each type has a purpose, and the correct type should be used for the particular application.

### Weather Resilient

All the types of plastic drainage pipes are resilient to all the weather conditions excluding the most extreme conditions. Plastic pipes are the preferred drainage pipe due to its versatility and availability. It is lightweight and easy to use for installation. There are several plastic drainage pipes to serve different purposes and they come in various diameter sizes to accommodate different amounts of water. The most common diameter used for outdoor landscape projects is a 4-inch diameter pipe.

**Here is some basic info about drainage pipes according to strength:**



## **HDPE/N 12 Corrugated Dual Wall Pipe – Strongest**

It is built using polyethylene of high density, in layman's terms, really strong plastic. The N-12 pipes have a smooth interior wall and a corrugated exterior wall and are exceptionally strong. This pipe is equivalent in strength to concrete pipe, although lighter in weight and much easier to cut, and more economical as well. It can be used in multiple applications but more commonly where a high strength rating is required. For example, a commercial driveway where trucks would be driving over the area where the pipe is underground. Due to the lighter weight, the HDPE pipes have less handling concerns and there is no requirement for heavy lifting equipment to move it, especially if larger diameter pipes are needed. It can be cut with a basic PVC saw or reciprocating saw. The price is typically considerably less than concrete pipe, especially with labor installation time considered.



## **SDR 35 Sewer Main Pipe**

The SDR 35 PVC drainage pipes are mainly used for the purpose of municipal sewer systems but can be used for other applications as well. In regard to storm water management it is most commonly used when a contractor would like to or needs to have a stronger pipe with a smooth outer and inner wall compared to schedule 20 pipe, mentioned below. The size for SDR 35 PVC pipes begins at 4 inches and can go up to 3 feet in diameter. However, most residential applications will not exceed the need for a 6-inch diameter. SDR pipe does have a reputation for being cumbersome to install due to the rubber gasket connection, however that flaw is overshadowed due to its price and availability. Although not as strong as N12 or Schedule 40 it is more than adequate for the bulk of residential and light commercial applications.



### **Schedule 20 Sewer Drainage Pipes**

Schedule 20 sewer and drainpipe is the most common pipe used for the drainage and storm water applications. The wall of this pipe would be considered light duty but can still handle the common loads of pressure that are encountered in most residential landscape projects. Cost is very reasonable for this pipe, another reason it is very commonly used. The outer diameter of Schedule 20 pipes is also the same as that of schedule 35. The fittings are interchangeable with each other which adds to the versatility of this and SDR 35 pipe. It is recommended to use where any type of vehicular traffic would not cross the area. At that point a transition can, be made to SDR 35 to withstand areas where that traffic may cross.



### **Schedule 40 Sewer Drainage Pipes**

The Schedule 40 Drainage pipes are used widely across the world, mostly for indoor plumbing applications, however they are also used outdoors for various landscape projects. It is a higher strength, rigid pipe with a smooth inner and outer wall. When strength is needed, it would be more economical to use N-12 pipe, but on some projects schedule 40 fits the need better due to the smooth outside wall, which allows for a more common adaptability to the lighter duty pipes that will be mentioned in this blog. Many customers also prefer the look of the smooth white pipe if there are areas where the pipe is to be exposed, such as where a gutter downspout connects to the plumbing system and the is exposed above the grade.



## **Corrugated Flexible Drainage Pipes**

In terms of strength, this pipe would be at the bottom of the scale. However, the price is the most cost effective if there is no need for a sturdier choice of pipe. Due to its low wall strength this pipe is extremely flexible and typically comes in 100 ft coils. The most common application this pipe is used for is a French Drain which would be a perforated version of this pipe, but there are other uses for it as well. Such as retaining wall drainage, or on properties where there would be many turns in order to run the pipe to its final drain point, or “daylight”. The flexibility allows for these turns without having to use many fittings like all of the previous pipes mentioned would. This saves installation labor as well as cost due to the lack of fittings needed.

### **PIPE – ORDERS & INFORMATION**

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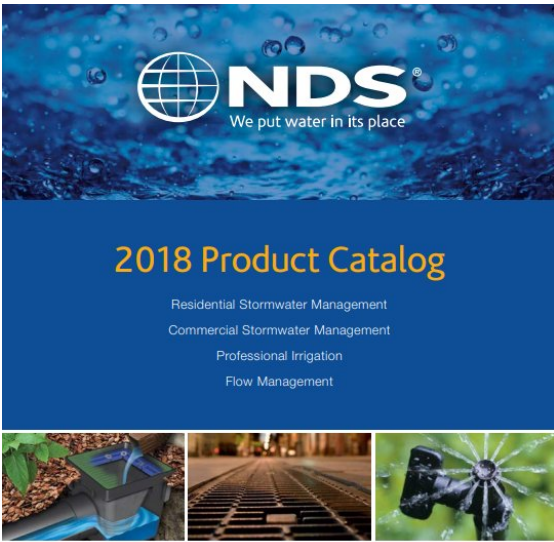
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## Pipes & Fittings

We offer a wide assortment of pipes and fittings to meet an array of construction needs. All of our pipe is top quality and comes bell ended to eliminate the need for coupling. The following is a current list of our offerings of pipes by order of strength, if you have any questions however give us a call.

- **HDPE/N12 Corrugated Double Wall Pipe:** Exceptionally strong pipe, comparable in strength to RCP Concrete Pipes. Available in sizes from 4" to 24" in stock, other sizes can be special ordered upon request
- **Schedule 40:** Available in sizes 1.5"-6" in stock, other sizes can be special ordered upon request.
- **SDR35:** Available in sizes 4", 6" and 8", other sizes can be special ordered upon request
- **Schedule 20 (Sewer & Drainpipe):** Available in 4" & 6" only
- **Corrugated Flexible Pipe:** Available in sizes 3", 4" and 6" in stock.
- **Fittings** for many types of pipes available either up to 12" in stock or by special order.



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- Heavy Duty Concrete Trench Drains
- All of the above are available with cast iron grating and knockout sides to fit various sizes of pipe

## Plastic Drainage

- 9" square, 12" square, 18" square drain basins
- Trench drains in various sizes for all types of applications
- Drywells

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