

## PVC FITTINGS 19/13

# PVC PIPES



### ✓ Technical features

- Elson pipe and fittings are approved by NSF International 14 and 61
- NSF standard 14: Plastic piping system components and related materials
- NSF standard 61: Drinking water system components - Health effects

### 🔍 Models

PRODUCT CODE	DESCRIPTION	SIZE	OUTSIDE DIAMETER	WALL THICKNESS	INSIDE DIAMETER	MAX. OPERATING PRESSURE	WEIGHT
P8V156	SCH80 PVC PIP	1/2"	21.34	3.73	13.4	5.86	0.311
P8V206	SCH80 PVC PIP	3/4"	26.67	3.91	18.3	4.76	0.421
P8V256	SCH80 PVC PIP	1"	33.40	4.55	23.8	4.34	0.618
P8V326	SCH80 PVC PIP	1-1/4"	42.16	4.85	31.9	3.59	0.855
P8V406	SCH80 PVC PIP	1-1/2"	48.26	5.08	37.5	3.24	1.037
P8V506	SCH80 PVC PIP	2"	60.32	5.54	48.6	2.76	1.435
P8V656	SCH80 PVC PIP	2-1/2"	73.02	7.01	58.2	2.90	2.190
P8V806	SCH80 PVC PIP	3"	88.90	7.62	72.8	2.55	2.932
P8V1H6	SCH80 PVC PIP	4"	114.30	8.56	96.2	2.21	4.288
P8V106	SCH80 PVC PIP	5"	141.30	9.53	121.1	2.00	5.950
P8V1F6	SCH80 PVC PIP	6"	168.28	10.97	145.0	1.93	8.186
P8V2H6	SCH80 PVC PIP	8"	219.08	12.70	192.2	1.72	12.433
P8V2F6	SCH80 PVC PIP	10"	273.05	15.06	241.1	1.59	18.436
P8V3H6	SCH80 PVC PIP	12"	323.85	17.45	286.9	1.59	25.365
P8V3F6	SCH80 PVC PIP	14"	355.60	19.05	315.2	1.52	30.430
P8V4H6	SCH80 PVC PIP	16"	406.40	21.41	361.0	1.52	39.125
P8V4F6	SCH80 PVC PIP	18"	457.20	23.80	406.8	1.52	48.943
P8V5H6	SCH80 PVC PIP	20"	508.00	26.19	452.5	1.52	59.596
P8V6H6	SCH80 PVC PIP	24"	609.60	30.94	544.0	1.45	84.974

## ADVANTAGES OF SCH80 PVC PIPE

- High chemical resistance and easy installation
- Reasonably priced, which can lead to the reduction of construction costs
- PVC can or should replace other materials of construction for all sorts of piping systems
- PVC (Polyvinyl Chloride) is a rigid pipe which has two highly desirable characteristics:
  - Good mechanical strength at high temperatures
  - Higher chemical resistance compared to metal
- SCH80 PVC Pipe sizes range from 1/2" through to 24"
- PVC fittings and PVC valves are available for light, medium, and heavy duty use
- PVC IS environmentally friendly polymer in terms of low carbonic acid gas emission in the manufacturing process

PVC FITTINGS 19/13

# PVC PIPES

## CHEMICAL RESISTANCE

PVC pipes are resistant to attack from strong acids, alkalis, salt solutions, alcohols, and many other chemicals. They are dependable on corrosive applications, transmit no tastes or odors to materials carried within them, nor do they react with materials carried or act as a catalyst. All possibility of contamination, or chemical process changes, and all dangers of clouding and slugging.

## STRENGTH

PVC pipes are highly resilient, tough and durable products that have high tensile and high impact strength. They will withstand surprisingly high pressure for long periods.

Fire resistant PVC pipe products are self extinguishing and will not support combustion. They have an ASTM E-84 flame spread rate of 25 or less.

## FREEDOM FROM TOXICITY, ODORS AND TASTES

PVC piping are non-toxic, odorless, and tasteless. They have been listed by the National Sanitation Foundation for use with potable water.

## CORROSION FREE

With many other pipe materials, slight corrosion may occur. The corroded particles can contaminate the piped fluid, complicating further processing, or causing bad taste, odors, or discoloration. This is particularly undesirable when the piped fluid is for domestic consumption. With PVC there is no corrosive by-products, therefore, no contamination of the piped fluid.

## LOW FRICTION LOSS

The smooth interior surfaces of PVC pipes, compared to metal and other piping materials, assure low friction loss and high flow rates. Additionally, since PVC pipes will not rust, pit, scale, or corrode, the high flow rates will be maintained for the life of the piping system.

## LOW THERMAL CONDUCTIVITY

PVC pipes have a much lower thermal conductivity factor than metal pipes. Therefore, fluids being piped, maintain a more constant temperature. In most cases, pipe insulation is not required.

## INTERNAL CORROSION RESISTANCE

PVC pipes resist chemical attack by most acids, alkalis, salts, and organic media such as alcohols and aliphatic hydrocarbons, within certain limits of temperature and pressure. They provide the needed chemical resistance, while eliminating the disadvantages of special metals, lined piping, glass, wood, ceramics, or other special corrosion-resisting materials, which formerly had to be used.

## EXTERNAL CORROSION RESISTANCE

Industrial fumes, humidity, saltwater, weather, atmospheric, or underground conditions, regardless of type of soil or moisture encountered, cannot harm rigid PVC plastic pipes. Scratches or surface abrasions do not provide points which corrosive elements can attack. PVC pipes are inherently immune to galvanic or electrolytic action. They can be used underground, underwater, in the presence of metals, and can also be connected to metals.

## EASY INSTALLATION AND LOW INSTALLATION COST

PVC pipes are lightweight, convenient to handle, relatively flexible, and easy to install. For example, it is approximately 1/5 to 1/6 of the weight of metal. They have smooth, seamless interior walls. No special tools are required for cutting. They can be installed using solvent cementing, threading, flanging techniques. These features lead to lower installed costs than conventional metal piping.

## MAINTENANCE FREE

Once a PVC piping system is properly installed, it is virtually maintenance free. It will not rust, scale, pit, corrode, or promote build-up on the interior. Therefore, years of trouble-free service can be expected when using Eslon PVC.

## STANDARD APPROVED

PVC pipes comply with the industry standards and requirements as set forth by the American Society for Testing and Materials (ASTM) and the National Sanitation Foundation (NSF International).

## PROPERTIES OF PVC PIPE

GENERAL	TEST METHOD	SI UNIT	
		UNIT	PVC
<b>GENERAL</b>			
Cell Classification	ASTM D1784	-	23447
Maximum Usable Temp.	-	C	93
Specific Gravity @ 73°F(23°C)	ASTM D792	g/cc	1.55+0.02
Water Absorption % increase 24 hrs@ 73°F(23°C)	ASTM D570	%	0.04
Hardness, Rockwell	ASTM D785	-	115-125
Poisson's Rao @ 73°F(23°C)	ASTM D638	-	0.36
<b>MECHANICAL</b>			
Tensile Strength @ 73°F(23°C)	ASTM D638	Mpa	53.1
Tensile Strength @ 194 °F(90°C)	"	Mpa	22.1
Tensile Modulus of Elasticity @ 73°F(23°C)	"	GPa	2.62
Tensile Modulus of Elasticity @ 194°F(90°C)	"	Gpa	1.52
Flexural Strength @ 73°F(23°C)	ASTM D790	Mpa	89.6
Flexural Modulus of Elasticity @ 73°F(23°C)	"	Gpa	2.69
Compressive Strength @ 73°F(23°C) ε =10%	ASTM D695	Mpa	96.5
Compressive Modulus of Elasticity @ 73°F(23°C)	"	Gpa	1.00
Izod Impact, notched @ 73°F(23°C)	ASTM D256	J/m	1.60
<b>THERMAL</b>			
Coefficient of Linear Expansion	ASTM D696	m/m/c	7.0-8.0x10
Coefficient of Thermal Conductivity	ASTM C177	Watt /m/k	0.13
Heat Deflection Temperature Under Load (264psi, annealed)	ASTM D648	c	110
Specific Heat	ASTM D2766	J/K/g	1.1
<b>ELECTRICAL</b>			
Volume Resistivity	ASTM D257	ohm/cm	>1.0 X 10
Dielectric Strength	ASTM C149	volt/mm	>1000
Dielectric Constant	ASTM D150	-	3
Power Factor	"	-	0.01-0.02
Electrical Conductivity	"	-	Non conductor
<b>FIRE PERFORMANCE</b>			
Flammability Rating	UL-94	-	V-0,5VB,5VA
Flame Spread Index	"	-	<10
Average Time of Burning	ASTM D635	SEC	<5
Average Extent of Burning	"	mm	<10
Burning Rate	"	mm/min	Self extinguishing
Limiting Oxygen Index (LOI)	ASTM D2863	LOI	<10



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