

# P.V.S.<sup>®</sup>

## Mechanical Engineer Specifications

for Underground Air Duct and Ducting Corrosive Fumes



### The Original Plastic Coated Steel

Plastic heat-fused to galvanized steel — a proven product since 1967.  
Suitable for underground burial without concrete encasement.

### No Other Brand Has All the Approvals

U/L Listed: Spec 181 Class 1  
See Building Inspector Notice on back page.

Fire marshals throughout the country and  
hundreds of cities and counties have approved  
P.V.S. in their building codes.

Specify P.V.S. for your underground and  
corrosive fume duct requirements.

P.V.S. is available nationwide through authorized distributors.

Meets all requirements of U/L Spec 181 including mold growth.

### Look for the trademark.

Only P.V.S. carries the registered trademark for your protection  
— don't be fooled by brand "X". P.V.S. is Wheeling Service & Supply's  
registered trademark for its brand of plastic-steel products.

## Specifications for Underground Ducts

**1** All underground duct is designated as 4x1 P.V.S. coating. Duct to be made with 4 mil to outside and .1 mil epoxy backcoat is inside and can be visually seen by trademark printing.

**2** The following diameters are to be manufactured in accordance to the following chart.

3"0 – 8"0	26 Gauge P.V.S.
9"0 – 16"0	24 Gauge P.V.S.
17"0 – 24"0	22 Gauge P.V.S.
25"0 – 32"0	20 Gauge P.V.S.
33"0 – 80"0	18 Gauge P.V.S.

**3** When duct is 14" or more in diameter, it should be corrugated with external corrugation.



**Longitudinal section of a corrugated tube wall**

**4** Load Specifications

#1 Standard	4"0 – 8"0	400 lbs./Linear Ft.	<i>See trenching and backfill, page 2 of BP-120. Any duct work installed over 3 feet caution is to be taken on compacting around duct. On great depths, bridging or supports used internal or external are recommended.</i>
	10"0 – 12"0	800 lbs./Linear Ft.	
#2 Corrugated	14"0 – 36"0	2000 lbs./Linear Ft.*	

*\*All ducts 14" or more for underground installation are corrugated.*

**5** All ducts should be constructed of P.V.S. material in accordance with manufacturer's specifications. See Anatomy of Installing P.V.S. Air Duct, form BP-120.

- (a) All pipe and fittings are to be constructed of P.V.S. material.
- (b) All duct sections should be joined by connectors using P.V.S. material.
- (c) All joints should be sealed with sealant and taped in order to insure an air-tight joint.
- (d) All ducts and fittings should be installed using a clean sand or suitable material for backfilling, having a good compaction quality.

**6** Scratched surfaces — If, through a field accident the P.V.S. coating is scratched so as to expose the bare metal, apply P.V.S. touch up paint to the injured surface. This can be sprayed or brushed on. Apply liberally and allow time for drying. The damaged surface is then ready for service.

**7** P.V.S. is available in sheets or coils.

**8** P.V.S. temperature limits — Temperature limits for P.V.S. are normal for most industrial ducting needs. It is unaffected by cold down to -40° F. and will withstand a constant heat of up to 250° F. with limited exposure to 400° F.

### P.V.S. Underground Duct Size, Gauge and Weight

Duct Diameter	Gauge	Weight Per Ft.	Duct Diameter	Gauge	Weight Per Ft.
4"	26	1.1	24"	22	12.0
6"	26	1.6	26"	20	13.5
8"	26	2.1	28"	20	15.0
10"	24	3.6	30"	20	21.9
12"	24	4.3	32"	20	23.4
14"	24	5.1	34"	18	24.8
16"	24	7.0	36"	18	26.2
18"	22	7.7	40"	18	29.3
20"	22	8.6	44"	18	32.0
22"	22	9.5	48"	18	35.0

*Diameter up to 80" 14 gauge*

## Specifications for Ducting Corrosive Fumes

- 1** When specifying P.V.S. for fume exhaust systems, utmost attention must be given to the fact that the greatest exposure will be internal not external. In most cases, 4x1 coating will be sufficient. Reversed 4 mils of P.V.S. coating on the inside surface and .1 mil epoxy backcoat on the outside. This must be stated in specifications.
- 2** In certain instances where external as well as internal exposure is anticipated, specifications should be stated as 4x4 P.V.S. This insures protection on both sides of duct work.
- 3** P.V.S. is available in sheet stock with either 4x1 or 4x4 coating. Thus, hoods, vents, etc. can be fabricated with P.V.S. keeping the system as complete and uniform as possible. Hoods, vents and other fittings may be custom made on the job by contractors or ordered per specifications through P.V.S. manufacturers.
- 4** P.V.S. is ideal for hoods where exposure to radioactive isotopes is involved. There is no existing code — stainless steel is used only because of the ease of cleanup. But P.V.S. can be cleaned just as easily.
- 5** Sealant is applied to all exposed edges and rivets.
- 6** P.V.S. Acid, see MP 101-A.

## Building Inspector Notice

- 1 Our 4x1 material meets the flame spread and smoke developed requirements of U/L Specification 181, Class 1.
- 2 In order for our factory made air ducts to carry a **U/L label** for the U/L Specification Standard 181, the ducts must have *both of these*:
  - (a) component manufacturer identifying mark, and also
  - (b) U/L listing label.
- 3 Our imprinting on the .1 side of the duct identifies that the material is a U/L listed *component*, and the U/L label identifies the U/L file and *duct* manufacturer showing the *completed* duct is a U/L listed product. The U/L listing label is applied by the approved duct manufacturer.
- 4 If the duct manufacturer's U/L listing label is not attached to the duct, it is **not** a U/L listed product.



**PVS** MANUFACTURING DIVISION

*P.V.S. is an exclusive product of:*

**WHEELING SERVICE & SUPPLY, INC.**

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*The distributor for P.V.S. products in the area is:*

*P.V.S. is a registered trademark for Wheeling Service & Supply's brand of plastic-steel products.  
Registered trademarks issued by U.S. Patent Office, Numbers 840-476 and 868,989*