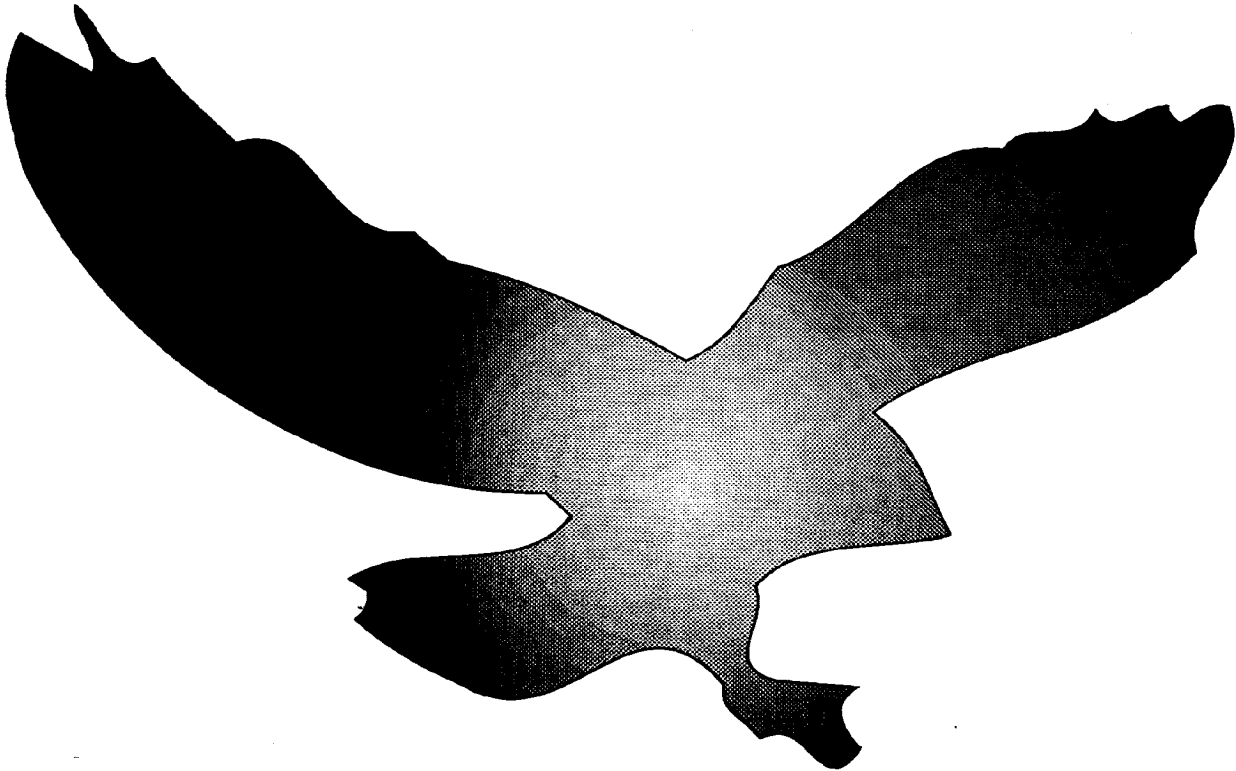


HAWK PLASTICS LLC
EXTRUDERS OF PVC PLASTIC PIPE

PSM SEWER PIPE
PSM HEAVY WALL SEWER PIPE
PSM PERFORATED PIPE



THE JOINT THAT
HOLDS LIKE A TALON

MANUFACTURING

193 First Road
Childersburg, AL 35044
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HAWK PVC SEWER PIPE

PVC Sewer Pipe locked-in joint

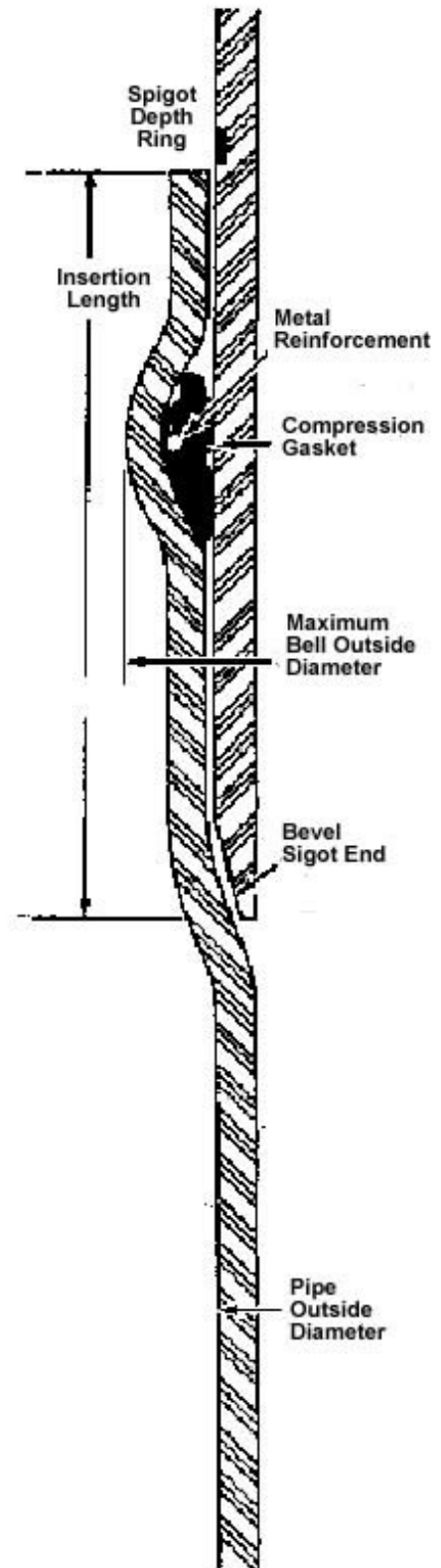
The installers know how to appreciate PVC Sewer Pipe joints that can be trusted. Good pre-stressing and anchoring of the gasket achieved under controlled production conditions at the pipe factory, are prerequisites in the case of a “locked-in” joint. Such properties prevent sand or other impurities from penetrating into the sealing zone (i.e. between the gasket’s top and the circular groove in the socket), even by assembly under severe weather conditions. Move over, they preclude wrong placement of the sealing ring or dislocation of same.

The truly locked-in gasket

A substantial compression of the rubber between the steel-ring and the groove wall of the PVC Sewer Pipe is achieved during the belling operation. Thus the Reiber process establishes the most crucial part of the sealing under controlled conditions in the factory. Conventional gaskets (with or without plastic rings or steel spirals) do not provide any active sealing effect until the gasket is compressed by the insertion of the spigot.

The Reiber forming process

The steel-reinforced Reiber ring is placed onto the mandrel and pushed to a position against a back-up collar. The gasket is firmly anchored to the mandrel surface as the rubber between the mandrel and the steel-ring is compressed by approximately 20%. The hot pipe end is pushed over mandrel and gasket to form bell with locked in gasket. This makes the Hawk sewer pipe the best choice for running sewer lines.



SPECIFICATIONS FOR PLASTIC GRAVITY SEWER PIPE TYPE OF PIPE

This specification covers polyvinyl chloride (PVC) gravity sewer pipe and fittings manufactured in accordance with ASTM Standard D-3034 and intended for use in drainage of sanitary and industrial wastes, storm water, and similar liquids. The pipe shall be made by continuous extrusion of green unplasticized PVC plastic and marked HAWK, as well as other markings prescribed by the ASTM Standard.

CHEMICAL RESISTANCE

The resistance of the pipe and fittings to chemical reagents shall be tested in accordance with ASTM D-543 "Test for Resistance of Plastics to Chemical Reagents) and changes, if any, in weight or tensile strength must not exceed the limits specified in Table 2, ASTM D-1784.

FITTINGS

All fittings shall be of the same material as the pipe and shall be consistent therewith in strength, dimensions and utility. Adapters shall be provided for transitions to other pipe products.

DIMENSIONS

Dimensions of pipe and fittings up to 15" in diameter shall conform to ASTM D-3034 for "Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings". Nominal laying lengths shall be 14 feet. Other lengths are available on special order.

JOINTS

Pipe Joints are to be made either by the use of solvent cement or an integral bell with elastomeric gasket.

MATERIAL

Both pipe and fittings shall be made of PVC plastic having a cell classification of 12454-B as prescribed in ASTM D-1784. It shall be highly resistant to hydrogen sulfide, sulfuric acid, gasoline, oil, and other chemicals commonly found in sewage and industrial waste. It shall have a smooth internal surface for minimum flow resistance. When properly bedded and back-filled it shall withstand normally encountered loads without rupturing or leaking at the joints. In normal atmospheres, the pipe shall have a self-extinguishing flammability characteristic.

FOR CEMENTED JOINTS

The solvent cement used in cemented joints shall meet the requirements of ASTM D-2564, "Standard Specification For Cement For Polyvinyl Chloride (PVC) Plastic Pipe And Fittings". It shall produce a watertight joint that will have sufficient strength within five minutes after assembly to permit normal installation, handling and moving.

FOR GASKETED JOINTS

Gasketed joints shall be used where service conditions may subject the installation to expansion, contraction, angular displacement or deformation of the pipe. To facilitate the assembly of gasketed joints, each pipe bell end shall have an internal groove to hold the gasket in place while inserting the spigot end of a mating pipe or fitting. Spigot ends shall have a chamfer and smooth external surface so that they may be readily mated with bell ends without cutting or deforming (pinching) the gasket.

The pipe joint meets ASTM D-3212 for joints for drain and sewer pipes using flexible elastomeric seals, and the seals meet ASTM F-477 for elastomeric seals. All gaskets are factory installed and have a steel reinforcing ring (Locked-in). *The Reiber JOINT*

HAWK PVC SEWER PIPE

PS 46 lb/in. – in.

HAWK PLASTICS

14447 PLANT ROAD – ALPINE, AL 35014

(256) 378-5931

ASTM D-3034 SDR 35 GASKET

Size	Outside Diameter	Wall	Weight Per Foot	Pieces Bundle	Feet Per Bundle	Bundles Truck-load	Truck-load Pieces	Truck-load Footage
4"	4.215	.120	1.1	84	1176	18	1,512	21,168
6"	6.275	.180	2.35	40	560	18	720	10,080
8"	8.400	.240	4.16	36	504	12@36	432	6,048
10"	10.500	.300	6.55	12 15	168 210	9@12 9@15	243	3,402
12"	12.500	.360	9.45	16	224	12@16	192	2,688
*15"	15.300	.430	14.2	9	126	12	108	1,512

* Consult Sales For Availability

Standard 14.0' Laying Length – 20.0' Length Special - * Other Lengths Available

All Hawk pipe products are packaged using the Ultimate Packaging Aid: The Molded Plastics Ragglegstick (Pat#5, 893,395) offered by RagglegStick Packaging, LLC. Pipe packaged on plastic ragglegsticks ride on our trucks and your trucks with more stability. The self-contained stack allows you to work from a broken bundle one piece at a time without having to chase them around your yard or build a special rack to contain them.

HAWK PVC HEAVY WALL SEWER PIPE

PS 115 LB./IN. – IN.

ASTM D-3034 HEAVY WALL SDR 26 GASKET

Size	Outside Diameter	Wall	Weight Per Foot	Pieces Bundle	Feet Per Bundle	Bundles Truck-load	Truck-load Pieces	Truck-load Footage
4"	4.215	.162	1.4	84	1176	18	1,512	21,168
6"	6.275	.241	3.2	40	560	18	720	10,080
8"	8.400	.323	5.7	36	504	12	432	6,048
10"	10.500	.404	8.9	12 15	168 210	9@12 9@15	243	3,402
12"	12,500	.481	12.6	16	224	12	192	2,688

ASTM D-3034 SDR 35 Cement Joint

Size	Outside Diameter	Wall	Weight Per Foot	Pieces Bundle	Feet Per Bundle	Bundles Truck-load	Truck-load Pieces	Truck-load Footage
4"	4.215	.120	1.1	84	840	24	2016	20160
6"	6.275	.180	2.35	40	400	24	960	9,600
8"	8.400	.240	4.16	36	360	16	576	5,760
10"	10.500	.300	6.14	12/15	120/150	9 of each	243	2430
12"	12.500	.357	8.71	16	160	16	256	2560

Standard 10.0' Laying Length – 20.0' Length Special - * Other Lengths Available

**NOTE: SDR41 Available from factory. This lighter wall pipe manufactured at request.

*Consult Sales For Availability

INSTALLATION SPECIFICATIONS

1. The pipe shall be installed in accordance with recommended practice ASTM D-2321.
2. Joining with Solvent Cement shall be performed in accordance with ASTM D-2855 "Making Solvent Cemented Joints with PVC Pipe and Fittings" so that mating surfaces are tightly fused.
3. Gasket joints are to be assembled as follows:
 - A. With a dry rag, clean the mating surfaces of both the bell and spigot ends to be jointed. Make sure the gasket groove is clean.
 - B. Cover the beveled lip of the spigot with lubricant.
 - C. Push the spigot end into the bell until you feel the resistance of the gasket.
 - D. With pipe sections in straight alignment push the spigot into the bell by applying force to the far (bell) end of the pipe length or fitting being added to the line. If a pry bar is used to apply force, the pipe and bell should be protected by a short two-by-six board placed across the pipe end. If normal force is not sufficient to complete the joint, disassemble the joint and examine the parts to make sure they are free of obstructions. AT NO TIME should a back-hoe or similar device be used to assemble pipe.
4. Testing - After backfilling, the pipeline may be tested for leakage. The leakage from any section of PVC Sewer, manhole to manhole, shall not exceed 50 gallons per inch diameter per mile per day.

EXTERNAL EARTH LOAD

The prime consideration when designing a flexible conduit line is the degree of deflection possible under various conditions. The bedding conditions surrounding the flexible conduit rather than the wall thickness of the pipe is the single most important factor affecting the degree of deflection of the line.

PVC sewer pipe should be designed for not more than 7.5% deflection. The engineer should specify Class 1, 2 or 3, as found in ASTM D-2321 bedding depending upon the soil conditions and the depth of the cover.

INSTALLATION AND HANDLING EASE

Lightweight (approximately one-sixth the weight of steel and one-half the weight of aluminum.) Smooth Seamless walls require no specialty cutting tools. A “Reiber Seal” provides easy installation by simply pushing the “Reiber Seal” gasketed pipe together with a plain spigot. PVC Sewer Pipe should be installed in accordance with ASTM D-2321 “ Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.”

CHEMICAL/CORROSIVE RESISTANCE

HAWK PLASTICS, LLC Rigid PVC pipe has inert qualities which resist internal chemical attack by most acids, alkalics, salts, and organic media such as alcohols and aliphatic hydrocarbons when applied within specified temperature and pressure limits. It cannot react with materials carried, nor act as a catalyst. This eliminates the disadvantages of special metals, lined piping, glass, wood, ceramics, or other special corrosion resisting materials. The possibilities of contamination through chemical process, clouding, sludging or discoloration are also negated.

Externally, there is no possibility that industrial fumes, humidity, salt water, weather (atmospheric or underground) conditions (regardless of soil or moisture content) can lower its protective quality. Scratches or surface abrasions are unaffected by corrosion attack.

GALVANIC OR ELECTROLYTIC ACTION

HAWK PLASTICS, LLC PVC Pipe is inherently immune to galvanic or electrolytic action and can be applied underground, underwater, in the presence of metals, in connection with, or as an insulator for other materials.

All HAWK pipe products are packaged using the Ultimate Packaging Aid; The Molded Plastics Raggletstick (Pat.#5,893,395) offered by Ragglet Stick Packaging, LLC. Pipe packaged on plastic raggletsticks ride on our trucks and your trucks with more stability. The self-contained stack allows you to work from a broken bundle one piece at a time without having to chase them around your yard or build a special rack to contain them.

HAWK PLASTICS PERFORATED PRODUCTS

HAWK PLASTICS PERFORATED PRODUCTS; UNDERDRAIN & EDGE DRAIN
 CONFORM TO THE FOLLOWING STATE'S DEPARTMENT OF TRANSPORTATION SPECIFICATIONS
 ALDOT, FDOT, MDOT, SCDOT , NCDOT, GDOT, TXDOT, TDOT

<<< STOCK PRODUCTS ARE ASTM F 758 AND AASHTO M 278 HOLE PATTERNS >>>
 Φ CUSTOM HOLE PATTERNS ARE POSSIBLE UPON REQUEST AND AFTER RECEIPT OF ORDER Φ

HAWK PVC PERFORATED PIPE

Airport and Highway Underdrain

Also meets AASHTO M-278 Class 50 PVC Smooth Wall Perforated Pipe

ASTM D-3034 F-758 SDR 35 PS46 CEMENT JOINT

Size	Outside Diameter	Wall	Weight Per Foot	Pieces Bundle	Feet Per Bundle	Bundles Truck-load	Truck-load Pieces	Truck-load Footage
4"	4.215	.120	1.1	84	840	24	2016	20160
6"	6.275	.180	2.35	40	400	24	960	9,600
8"	8.400	.240	4.16	36	360	16	576	5,760
10"	10.500	.300	6.14	12/15	120/150	9 of each	243	2430
12"	12.500	.357	8.71	16	160	16	256	2560

ASTM D-3034, ASTM F-758 SDR 35 {PS46} GASKET x 14'

JOINTS : GASKET PUSH ON TYPE CONFORMING TO ASTM D3212 AND ASTM F477.

Size	Outside Diameter	Wall	Weight Per Foot	Pieces Bundle	Feet Per Bundle	Bundles Truck-load	Truck-load Pieces	Truck-load Footage
4"	4.215	.120	1.1	84	1176	18	1,512	21,168
6"	6.275	.180	2.35	40	560	18	720	10,080
8"	8.400	.240	4.16	36	504	12@36	432	6,048
10"	10.500	.300	6.55	12 15	168 210	9@12 9@15	243	3,402
12"	12.500	.360	9.45	16	224	12@16	192	2,688

SDR 35 GASKETED (*Reiber Joint*) x 14 FT. , WITH STANDARD HOLE PATTERN ;
 PERFORATIONS SHALL BE 1/4" DIAMETER HOLES, SPACED 3" ON CENTERS IN FOUR
 ROWS PARALLEL TO AXIS OF PIPE ALL EQUALLY SPACED AND POSITIONED WITHIN
 150° OF ONE HALF OF THE PIPE.

HAWK PVC PERFORATED PIPE

Airport and Highway Underdrain

ASTM D-3034, ASTM F 758 **SDR 41 {PS28}** CEMENT JOINT ONLY

Size	Outside Diameter	Wall	Weight Per Foot	Pieces Bundle	Feet Per Bundle	Bundles Truck-load	Truck-load Pieces	Truck-load Footage
4"	4.215	.103	0.88	84	840	24	2016	20160
6"	6.275	.152	1.88	40	400	24	960	9,600
8"	8.400	.205	3.37	36	360	16	576	5,760
10"	10.500	.256	5.27	12/15	120/150	9 of each	243	2430
12"	12.500	.305	8.54	16	160	16	256	2560

ASTM D-3034 F 758 **SDR 23.5 PS 153*****CEMENT JOINT ONLY

Size	Outside Diameter	Wall	Weight Per Foot	Pieces/ Bundles	Feet Per Bundle	Bundles Truckload	Truckload Pieces	Truckload Footage
4"	4.215	.179	1.497	84	840	24	2016	20,160
6"	6.275	.267	3.319	40	400	24	960	9,600

*NOTE: Gasketed perforated pipe, a non-stock item, is available by request only.

**NOTE: STANDARD 10-0' Laying Length-20.0' Length Special. Other SDR perforated pipe available from Factory upon request. Consult sales for your requirements.

***NOTE: Same stiffness as 6" Schl. 40 Pipe.

ASTM D-2665 **Schedule 40** BE x 10 ft. Solvent Cement Joint PERFORATED AND SOLID WALL ..NO NSF LABEL

Size {Equivalent (DR)}	Outside Diameter	Wall Schl, 40	Weight Per Foot	Pieces Bundle	Feet Per Bundle	Bundles Truck-load	Truck-load Pieces	Truck-load Footage
4" (19)	4.500	.237	2.07	77	770	24	1848	18,480
6" (24)	6.625	.280	3.65	35	350	24	840	8,400
8" (27)	8.625	.322	5.50	25	250	16	400	4,000

**10 FEET LENGTHS & NARROW BUNDLE PACKAGING FOR LTL
(led than truckload) FRIENDLY SHIPMENTS**

HAWK PLASTICS PERFORATED PRODUCTS; UNDERDRAIN & EDGE DRAIN
CONFORM TO THE FOLLOWING STATE'S DEPARTMENT OF TRANSPORTATION SPECIFICATIONS
ALDOT, FDOT, MDOT, SCDOT , NCDOT, GDOT, TXDOT, TDOT

<<< STOCK PRODUCTS ARE ASTM F 758 AND AASHTO M 278 HOLE PATTERNS >>>
Φ⊕ CUSTOM HOLE PATTERNS ARE POSSIBLE UPON REQUEST AND AFTER RECEIPT OF
ORDER Φ⊕

HAWK PVC PERFORATED PIPE

Airport and Highway Underdrain

SDR 35 {PS46} CEMENT JOINT, BE x 10'

Also meets AASHTO M-278 Class 50 PVC Smooth Wall Perforated Pipe

ASTM D-3034,ASTM F-758

Size	Outside Diameter	Wall	Weight Per Foot	Pieces/Bundle	Feet Per Bundle
4"	4.215	0.12	1.02	90	900
6"	6.275	0.18	2.27	42	420
8"	8.4	0.24	4	25	250
10"	10.5	0.30	6.27	12	120
12"	12.5	0.36	9.454	9	90

HAWK PVC PERFORATED PIPE

SDR 41 {PS28} CEMENT JOINT BE x 10'

Airport and Highway Underdrain

ASTM D-3034, ASTM F-758 Also meets AASHTO M-278 Hole Patterns

Size	Outside Diameter	Wall	Weight Per Foot	Pieces/Bundle	Feet Per Bundle
4"	4.215	0.103	.83	90	900
6"	6.275	0.153	1.88	42	420
8"	8.4	0.205	3.37	25	250
10"	10.5	0.256	5.27	12	120
12"	12.5	0.305	7.77	9	90

HAWK PVC PERFORATED PIPE

SDR 23.5 {PS153} CEMENT JOINT BE x 10'

Airport and Highway Underdrain

ASTM D-3034, ASTM F-758 Also meets AASHTO M-278 Hole Patterns

Size	Outside Diameter	Wall	Weight Per Foot	Pieces/Bundle	Feet Per Bundle
4"	4.215	0.179	1.56	90	900
6"	6.275	0.267	3.32	42	420
8"	8.4	0.357	5.76	25	250

HAWK PVC PERFORATED PIPE

SCHEDULE 40 CEMENT JOINT BE x 10'

**Airport and Highway Underdrain Hole Patterns *ONLY* Meet ASTM F 758
ASTM D-2665, NON-NSF**

Size	Outside Diameter	Wall	Weight Per Foot	Pieces/Bundle	Feet Per Bundle
4"	4.5	0.237	2.07	90	900
6"	6.625	0.28	3.65	42	420
8"	8.625	0.322	5.5	25	250