ABS Pipe
The product of choice for over 60 years!
ABS Pipe and Fittings Benefits

In 1960, the FHA (Federal Housing Administration) approved the use of ABS pipe and fittings for Drain, Waste and Vent applications (DWV). Since then, it has become a leading material for DWV applications due to its many benefits.

EXCELLENT VALUE:

- Ease of installation
- Lightweight
- DWV material for ease of handling
- Cold temperature impact strength at -40°F (-40°C)
- High operating temperatures up to 140°F (60°C)
- Excellent chemical resistance

ABS pipe and fittings are excellent value for DWV systems. Excellent physical properties and ease of assembly makes ABS pipe and fittings ideal for residential homes, commercial and industrial buildings, manufactured housing, recreational vehicles, and underground installations. Contractors have installed more than 10 billion feet of ABS pipe in residential and commercial construction.

LIGHT WEIGHT DWV MATERIAL:

ABS pipe and fittings offer easy handling. A ten-foot section of 3” ABS cell core pipe only weighs about 7 pounds.

EASE OF INSTALLATION:

Joining only requires one-step solvent cement for fast, low cost joining. No primers or hot lead are used.

SAFE WORKSITE:

The lightweight nature of the pipe and fittings combined with the use of solvent weld cement results in a safer worksite.

LOWER COST THAN METAL PIPE:

ABS pipe is less expensive per foot than metal pipe. With the ease of handling and joining, up to six hours of labor can be saved in a typical two-bath home installation.

A TOUGH PERFORMER:

ABS pipe retains outstanding impact strength at sub-freezing temperatures down to -40°F, -40°C. ABS pipe has the strength to withstand crushing loads of soil, slab foundations and high surface loads without collapse. It is also resistant to the impact of incidental abuse common to construction and plumbing operations.

FIRE SAFETY:

ABS piping can be used in fire-resistive construction in accordance with state, federal, and local building and fire codes. Two of the greatest fire dangers in plumbing installation come from torches and lead pots. ABS eliminates these fire hazards.

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PRODUCT STANDARDS:
- American Society for Testing and Materials (ASTM)
- ASTM D 2661 (schedule 40 solid wall pipe and fittings)
- ASTM F 1488 (composite ABS pipe with PVC foam core)
- ASTM F 628 (schedule 40 cellular core pipe)
- ASTM D 3611 (drainage patterns for fittings)
- NSF International
- NSF/ANSI Standard 14
- Canadian National Standards Association (CSA)
- CSA CAN/CSA B181.1 A Schedule 40

MODEL PLUMBING CODES:
- International Association of Plumbing and Mechanical Officials (IAPMO)
- Uniform Plumbing Code (UPC)
- National Standard Plumbing Code (NSPC)
- International Code Council (ICC)
- International Plumbing Code (IPC)

THE STANDARD FOR DURABILITY:
Unlike metals, ABS will not rust, corrode, or oxidize. ABS pipe offers excellent chemical resistance to the most used chemicals.

Access the the Plastic Pipe and Fittings Association website at www.ppfahome.org for a more extensive list of chemicals.

MARKINGS:
Schedule 40 ABS pipe carries a variety of informational markings. The cellular core is typically marked “ASTM F628 Coex ABS Cellular Core DWV.” Solid pipe is typically marked “ASTM D2661 ABS DWV.” Composite ABS pipe is marked with ASTM F1488, IPS sch 40 DWV, and a material designation for each layer.

Markings for all types of ABS pipe typically include the manufacturer’s name and trademark code for resin manufacture, lot number, and date of manufacturer, as well as nominal pipe size.

Other markings may be needed or permitted by local codes. All fittings are solid wall. Fitting markings vary slightly because of space limitations. Fitting markings typically include ASTM D 2661, the manufacturer’s name or trademark, part number, code approval, material type, cavity, and size.
“Sharp Plumbing has installed ABS pipe in the Las Vegas area for over 13 years. The product is easy to assemble with one step cement. We have successfully plumbed both residential and commercial units where the ABS pipe is used both inside and outside the building. Even with the extreme temperature changes we have in the desert environment, ABS pipe and fittings have performed well. Our pipe is stored outside, loaded on trucks, and hauled to the job site, all in temperatures that can range from 20°F (-7°C) to 120°F (49°C). It is the most economical and durable DWV product to install.”

Henry Sharp, Sharp Plumbing
Las Vegas, Nevada

“I have installed many thousands of feet of ABS Cellular Core pipe both inside and outside of buildings and find that it withstands the handling and installation process very well and have yet to see any adverse effect from temperatures as low as −20°F, −29°C. Even sewer lines that have frozen or clogged and have been thawed, maintain their integrity. We have used power augers, hot jet machines and even steam to clear blockages without a problem.”

Cliff Bond, M & B Plumbing & Heating
Anchorage, Alaska
SPECIFYING ABS DWV PIPE AND FITTINGS:

Every major standards organization and model code authority in the United States and Canada recognize ABS pipe and fittings. Architects, mechanical engineers, and builders specifying ABS pipe and fittings should know the following: “All soil lines, waste lines, vents, and buildings drains shall be installed with Schedule 40 ABS pipe and fittings conforming to ASTM F 628, ASTM F1488, or ASTM D 2661 standards” in their specifications.

- Conforming products bear the seal of a nationally recognized listing or certifying agency
- ABS pipe and fittings are also listed by major third party certifiers such as CSA, NSF International, and IAPMO
- When selecting ABS pipe, be sure to choose “Schedule 40 ABS DWV” which conforms to nationally recognized standards
- Mixing of ABS and PVC pipe and fittings within the same system is not recommended
- However, you can join the two when connecting building drains to building sewers by using transition cement
- Consult local codes and pipe manufacturers for specific instructions

Working With Versatile ABS DWV Systems:

- Sewage treatment plants use ABS pipe because it stands up to highly corrosive and abrasive liquids
- ABS pipe and fittings use an efficient solvent cement that requires no primer, which makes ABS environmentally friendly
- Elimination of the primer reduces emissions
- ABS pipe is manufactured to close tolerances to ensure a satisfactory “interference” fit between pipe and socket during assembly
- The cement temporarily softens the joining surfaces
- This brief softening period enables you to seat the pipe into the socket’s interference fit
- Only ABS solvent cement that meets ASTM Standard D2235 should be used

- Transition joints between ABS and PVC non-pressure-piping components may be joined with a transition joint solvent cement specified in ASTM D3138
- You can join ABS pipe to other sewer materials by using proper transition adapters or alternative methods, as approved by local plumbing codes
- Never thread or tap Schedule 40 ABS pipe or fittings; instead, use molded threaded adapters

LINEAR EXPANSION RATE:

The linear expansion rate for ABS is approximately 0.66 in. for each 10°F (5.5°C) temperature change for each 100-feet of piping. Regardless of pipe size, the linear rate remains the same. ABS pipe should be supported similarly to other piping systems. Composite ABS pipe made to ASTM F1488 will see a 20-25% lower expansion rate. ABS pipe and fittings can be used in fire-rated construction, such as high-rise dwellings in accordance with state, federal, and local building and fire codes.

Model building codes specify that ABS pipe must be protected at the penetration of fire-rated assemblies by a through penetration protection assembly (commonly referred to as a firestop device) that has been tested and rated in accordance with ASTM E84. This rating is known as the “F” rating. The “F” rating of the firestop device must be a minimum of the hourly rating of the fire-resistance-rated assembly that the ABS pipe penetrates. Various firestop devices and systems are commercially available. These products include caulks, putties, wrap strips, restricting collars, and plastic pipe devices.

For a complete listing of fire stop consultants and manufacturers of systems and materials access the Plastic Pipe and Fittings Association website at www.ppfahome.org.