2024 International Fuel Gas Code Task Force
SECOND MEETING – February 27th, 2025
10:00 AM – Room 302
Minutes

10AM MEETING BEGINS

WELCOME ……..Ted Miltiades, Program Director

- Introduction of Task Force Members, DCA Staff and Guests

MEETING MINUTES

- Maury Wilson made a motion to approve the previous meeting minutes with Ben Entrekin as Second. Andrea Papageorge Abstained. Motion passed.

PRESENTATION……..……..….Isaac Favata

- Isaac Favata Amendment Presentation (see attached '502.1_503.4.1_GA Amendment Supplement)
- 2024 IFGC Amendment Chart Meeting 2 #19 & #20

IFGC CHAPTER REVIEW……..……..……...….Daniel Baiamonte, Chair

- See attached Chart '2024 IFGC Amendment Chart Meeting 2' for motions.

11:45AM – 12:30PM LUNCH BREAK

IFGC CHAPTER REVIW……..……Daniel Baiamonte, Chair

- See attached Chart '2024 IFGC Amendment Chart Meeting 2' for motions.

CHAPTER VOTES……...……..……Daniel Baiamonte, Chair

- Chapter 2: Andrea Papageorge made a motion to approve as amended with Joel Rodriguez as Second. Motion passed unanimously.
- Chapter 3: Andrea Papageorge made a motion to approve as amended with Windell Peters as Second. Motion passed unanimously.
- Chapter 4: Andrea Papageorge made a motion to approve as amended with Windell Peters as Second. Motion passed unanimously.
- Chapter 5: Andrea Papageorge made a motion to approve as written with Joel Rodriguez as Second. Motion passed unanimously.
- Chapter 6: Andrea Papageorge made a motion to approve as amended with Windell Peters as Second. Motion passed unanimously.

- Chapter 7: Andrea Papageorge made a motion to approve as written with Windell Peters as Second. Motion passed unanimously.
- Chapter 8: Ben Entrekin made a motion to approve as written with Windell Peters as Second. Motion passed unanimously.
- Appendices: Ben Entrekin made a motion to approve as written with Andrea Papageorge as Second. Motion passed unanimously.

ADOPTION OF THE 2024 INTERNATIONAL FUEL GAS CODE

- Andrea Papageorge made a motion to recommend the adoption of the 2024 IFGC as amended with Windell Peters as Second. Motion passed unanimously.

NEXT MEETING SCAC JUNE 24th

1:06 PM CONCLUSION OF MEETING

- Andrea Papageorge made a motion to adjourn with Maury Wilson as second. The motion passed unanimously

IN ATTENDANCE

Task Force: Daniel Baiamonte, Chad Payne, Windell Peters, Joel Rodriguez, Maury Wilson, Ben Entrekin, Andrea Papageorge

DCA Staff: Ted Miltiades, Donna Brown, Christian Poulos, Jimmy Reynolds, Craig Messina, Shacarri Cheves

Guests: Mike Sokaris, Centrotherm; Isaac Favata, Centrotherm; Christian Baiamonte; Michael Conte, Harry Warren of GA; James Brooker, City of Alpharetta; Jacob Hill, Forsyth County; Ron Anderson, GPTA Inc.

Venting Amendments to IFGC for the Department of Community Affairs

Amendment to 502.1

Original

Vents, except as provided in Section 503.7, shall be *listed* and *labeled*. Type B and BW vents shall be tested in accordance with UL 441. Type L vents shall be tested in accordance with UL 641. Vents for Category II and III appliances shall be tested in accordance with UL 1738. Plastic vents for Category IV appliances shall not be required to be *listed* and *labeled* where such vents are as specified by the *appliance* manufacturer and are installed in accordance with the *appliance* manufacturer's instructions.

Revised

Vents, except as provided in Section 503.7, shall be *listed* and *labeled*. Type B and BW vents shall be tested in accordance with UL 441. Type L vents shall be tested in accordance with UL 641. Vents for Category II, III, **and IV** appliances shall be tested in accordance with UL 1738.

Amendment to 503.4.1

Original

Where plastic *piping* is used to vent an *appliance,* the *appliance* shall be *listed* for use with such venting materials and the *appliance* manufacturer's installation instructions shall identify the specific plastic *piping* material. The plastic pipe venting materials shall be *labeled* in accordance with the product standards specified by the *appliance* manufacturer **or** shall be *listed* and *labeled* in accordance with UL 1738.

Revised

Where plastic *piping* is used to vent an *appliance,* the *appliance* shall be *listed* for use with such venting materials and the *appliance* manufacturer's installation instructions shall identify the specific plastic *piping* material. The plastic pipe venting materials shall be *labeled* in accordance with the product standards specified by the *appliance* manufacturer **and** shall be *listed* and *labeled* in accordance with UL 1738.

Why the change?

- The current wording allows unlisted, untested materials to be used in a life safety application
  - The standard (ASTM D1785) which has become prolific explicitly states that ASTM listed PVC is plumbing pipe which is not to be used for the application of venting
  - The standard also calls out UL 1738 as the standard which should be used for venting

Table 2E PVC/CPVC Vent Pipe and Fittings

Approved PVC/CPVC Vent Pipe and Fittings		
Item	**Material**	**Standard**
Vent pipe	PVC Schedule 40, 80	ANSI/ASTM D1785
	PVC - DWV	ANSI/ASTM D2665
	CPVC Schedule 40, 80	ANSI/ASTM F441
Vent fittings	PVC Schedule 40	ANSI/ASTM D2466
	PVC Schedule 80	ANSI/ASTM D2467
	CPVC Schedule 80	ANSI/ASTM F439
	PVC - DWV	ANSI/ASTM D2665
Pipe Cement / Primer	PVC	ANSI/ASTM D2564
	CPVC	ANSI/ASTM F493
NOTICE: DO NOT USE CELLULAR (FOAM) CORE PIPE		

NOTE: In Canada, CPVC and PVC vent pipe, fittings and cement/ primer must be ULC-S636 certified.

ASTM D1785-21a

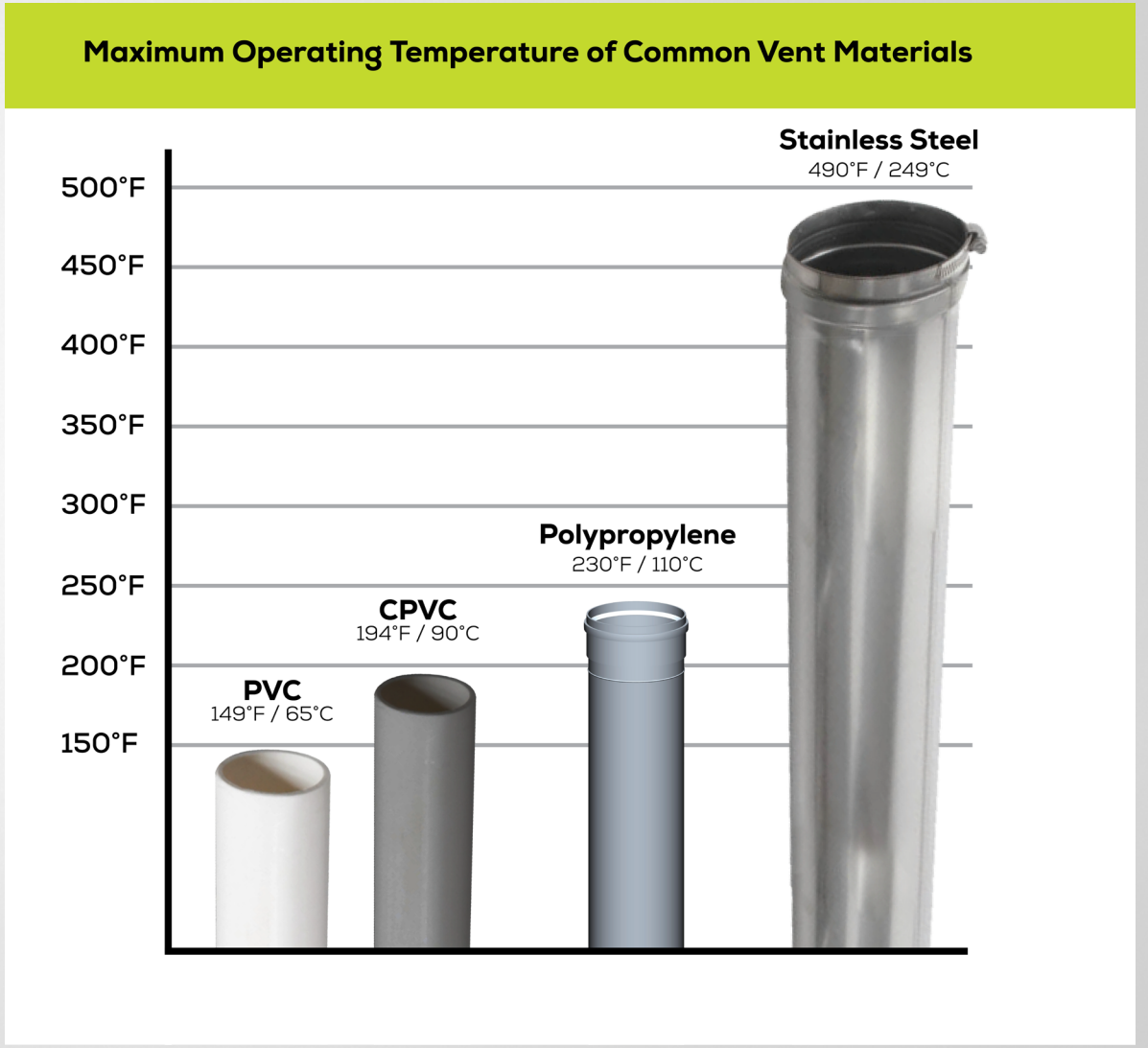
Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

1.2 The products covered by this specification are intended for use with the distribution of pressurized liquids only, which are chemically compatible with the piping materials. Due to

NOTE 2: This standard specifies dimensional, performance and test requirements for plumbing and fluid handling applications only. It does not include provisions for the use of these products for venting of combustion gases. UL 1738 is a standard that does include specific testing and marking requirements for flue gas venting products, including PVC.

Temperature Considerations

- Operating temperature of appliances increase over time & regularly exceed 150 degrees
- UL 1738 accounts for this condition by integrating a 70 degree factor of safety
  - i.e. UL 1738 listed Polypropylene is tested at 300 degrees & UL 1738 listed PVC is tested at 219 degrees
- ASTM D1785 is a plumbing standard so it does not test for venting applications



What do PVC manufacturers say?

- Manufacturers of ASTM listed PVC will **not** warranty the product if it is used in the venting application, as it is "being used for other than its intended use"

This Limited Warranty will not apply if:

1) The Products are used for purposes other than their intended purpose as defined by local plumbing and building codes, and the applicable ASTM standard.

agrees that this Warranty shall be effective only during the Warranty Period so long as the Products are used solely for the normal purposes for which they are intended and in conformance with industry established standards, engineering, installation, operating, and maintenance specifications, recommendations and instructions including explicit instructions by the Company; the Products are properly installed, operated and used, and have not been modified; and all the other terms of this Warranty are complied with. Any violation thereof shall void this Warranty and relieve Company from all obligations arising from this Warranty and the Products.

12.4 THIS LIMITED WARRANTY IS VALID ONLY AND WILL ONLY APPLY IF ALL OF THE FOLLOWING CONDITIONS ARE MET:

12.4.1 The Product must have been used only in applications and under conditions (handling, installation, testing, use, water temperature, maintenance, repairs, etc.) that are strictly in compliance with these terms and conditions and the Vendor's technical manuals and installation instructions currently available from the Vendor at the time of installation.

12.4.2 The alleged defect must not be due to faulty installation, misalignment of products, vibration, ordinary wear and tear, corrosion, erosion, U.V. degradation, incompatible lubricants, pastes and thread sealants, unusual pressure surges or pulsation, water hammer, temperature shocking, or fouling.

What does ICC Commentary say?

503.4.1 Plastic Piping

"… The definition of 'Vent' does **not** include plastic pipe, such as PVC, ABS, and CPVC, because such pipes are **not** currently listed as factory-built venting systems… The PVC, ABS, and CPVC pipe manufacturers do **not** recommend that their pipes be used for appliance venting because such products are not currently listed for such applications. There are polypropylene and possibly other types of plastic venting systems on the market that **are listed to UL 1738** as appliance venting systems, and they would fall under the definition of 'Vent'.

Repercussions of Vent System **Failures**

- **Carbon Monoxide** poisoning due to venting
  - 19 deaths per year
  - 7590 poisonings per year
  - Two failure modes
    - Disconnected vents
    - Improper venting
  - Average age of appliance was only 9.6 years

Source: Consumer Products Safety Commission, National Center for Health Statistics

Faulty Heating Connection Leads to Carbon Monoxide Death of Family

Community stunned after prominent family found dead at Aspen vacation home.

There's also a possibility, he theorized, that even the manufacturer of the faulty equipment -- maybe the glue or pipes, if it wasn't working properly -- could also be held liable.

Robust Competition

IPEX by aliaxis

duravent™

Centrotherm solutions beyond

METAL-FAB INC. An OLYMPICSTEEL Company

Z-FLEX® CHIMNEY & VENTING SOLUTIONS

Coming Soon:

SPEARS®

Cost of Construction Impact (Data from 2024)

- Total high efficiency installs: 111,136
- Total vent replacement with thermal plastic: 83,352
- Assumed average labor rate: $175/hr
- Total cost of material increase: $4,833,622.14
- Total labor savings: $5,478,711.44
- Total cost change (material and labor): $645,049.30 statewide
- Average cost of UL 1738 PP install: **$228.51**
- Average cost of ASTM D1785 Sched. 40 PVC install: **$236.25**
- Cost delta per install: **$7.74**
- Cost delta per person in Georgia: **$0.06**

Jurisdictions with UL 1738 Enforcement for Category IV

- Massachusetts: Statewide
- New York City: requires UL 1738 and bans PVC as a venting material outright
- Tennessee: much of Middle Tennessee including Nashville and surrounding jurisdictions
- Alabama: most major cities including Auburn, Birmingham, and Mobile
- Colorado: requires pressure testing for non-UL 1738 listed systems
- Idaho: requires pressure testing for non-UL 1738 listed systems
- Illinois: multiple jurisdictions in the process of implementing UL 1738
- Anchorage: beginning enforcement of UL 1738 late 2025

Example of UL 1738 Enforcement: Alabama

Inspection Services Director [redacted]

Chief Building Inspector

Chief Mechanical/Energy Inspector [redacted]

Engineering Manager – Development/Inspections [redacted]

Chief Electrical Inspector [redacted]

Chief Plumbing Inspector [redacted]

MOBILE COUNTY PUBLIC WORKS

[redacted]
Public Works Director

Attention!
Please read important information below

Effective Immediately: 6/19/21

Mobile County will be requiring plastic piping used for flue gas venting of category II, III and IV appliances to be listed and labeled in accordance with UL 1738.

2018 IFGC Section 503.4.1 and 503.4.2 (Special gas venting- A vent listed and labeled for use with listed category II, II and IV appliances.)

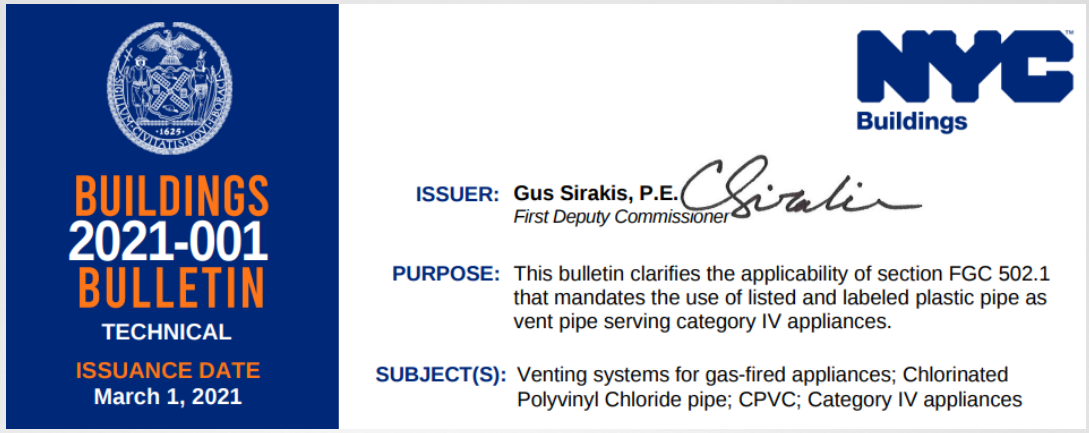
While appliance manufacturers may specify schedule 40 PVC pipe for venting material, PVC pipe manufacturers have not tested schedule 40 material for flue gas venting, and do not warranty or recommend its use for this application.

AN ORDINANCE PROVIDING FOR THE ADOPTION OF CERTAIN STANDARD TECHNICAL CODES RELATING TO RESIDENTIAL, COMMERCIAL AND INDUSTRIAL CONSTRUCTION; ADOPTING ELECTRICAL PERMIT AND INSPECTION FEES; AMENDING CHAPTERS 5 AND 9 OF THE *CODE OF ORDINANCES* OF THE CITY OF OPELIKA, ALABAMA; PROVIDING A REPEALER CLAUSE; PROVIDING A SEVERABILITY CLAUSE AND PROVIDING AN EFFECTIVE DATE

BE IT ORDAINED by the City Council City of Opelika as follows:

503.4 Type of venting system to be used. The type of venting system to be used shall be in accordance with Table 503.4. PVC shall not be used. All plastic pipe venting materials shall be in accordance with UL 1738.

Example of UL 1738 Enforcement: NYC



BUILDINGS
2021-001
BULLETIN
TECHNICAL
ISSUANCE DATE
March 1, 2021

NYC Buildings

ISSUER: Gus Sirakis, P.E.
First Deputy Commissioner

PURPOSE: This bulletin clarifies the applicability of section FGC 502.1 that mandates the use of listed and labeled plastic pipe as vent pipe serving category IV appliances.

SUBJECT(S): Venting systems for gas-fired appliances; Chlorinated Polyvinyl Chloride pipe; CPVC; Category IV appliances

- "The 2014 FGC governs the installation, alteration, maintenance, design, minimum safety requirements, repair and approval of vents and connectors serving gas-fired appliances. Section FGC 502.1 requires that vents, except as provided in FGC 503.7 (Single-wall metal pipe), be listed and labeled. **Since vents for Category II and III appliances must be tested in accordance with UL 1738, Standard for Venting Systems for Gas-Burning Appliances, Categories II, III, and IV, the Department accepts that vents for Category IV appliances also be tested in accordance with UL 1738.**"
- "The 2014 FGC, Section 502.1 requires that plastic piping used for venting appliances be listed. **Note that PVC piping, even when listed, is not allowed.**"