***AirTech®* Guide Specification**

**PVC (Polyvinyl Chloride) Fume Exhaust Systems**

**Scope:** This Specification encompasses PVC (Polyvinyl chloride) thicknesses, and welding methods used for corrosive exhaust ventilation piping, 3” (90mm) thru 36” (900mm).

**1.0 Material**

Pipe and fittings shall be manufactured from virgin rigid PVC (Polyvinyl chloride) vinyl compounds with a Cell Class of 12454 as identified in ASTM D 1784. Pigmented to RAL 7011

**1.1 Duct**

Shall be seamless, extruded from the specified material and shall have uniform, consistent wall thickness and roundness. Wall thickness as detailed in paragraph 1.4.

**1.2 Fittings**

All directional fittings shall be molded from the specified material. Mitered and hot air welded fittings are not allowed except for assemblies which are not manufactured as a molded component. Fittings and coupling shall have socket ends which fit snugly around the entire periphery of the pipe. Joints are completed by back welding with hot air and welding rod, or solvent cement.

**1.3 Joining**

Installation shall comply with the latest installation instructions published by Simtech and shall conform to all local plumbing, building, and fire code requirements.

**1.3.1 Welding rod**

Welding rod shall be the same material as the pipe and fitting.

**1.3.1a Hot Air Welding**

Welding is to be performed using a hot air welder having a source of clean dry air. Compressed air shall not be

used for welding.

**1.3.2 Solvent Cement**

Solvent cement joints shall be made in a two-step process with primer manufactured for thermoplastic piping systems and solvent cement conforming to ASTM D 2564. Systems shall be hydrostatically tested after installation.

**1.4 Wall Thickness**

 Minimal Wall thicknesses will be as follows:

 Diameter Thickness Diameter Thickness

 3” (90mm) 2.7mm 16” (400mm) 3.2mm

 4” (110mm) 2.5mm 18” (450mm) 3.6mm

 6” (160mm) 2.5mm 20” (500mm) 4.0mm

 8” (200mm) 2.5mm 24” (600mm) 5.0mm

 10” (250mm) 2.9mm 28” (700mm) 6.0mm

 12” (315mm) 2.9mm 32” (800mm) 6.3mm

 14” (355mm) 2.9mm 36” (900mm) 10.0mm

**2.0 Velocity**

Recommended velocity not to exceed 10 meters per second. ( 32.8 feet per second)

**3.0 MANUFACTURER**

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