

## AirTech® Guide Specification

### Polyvinylidene Fluoride (PVDF) Fume Exhaust Systems

Scope: This Specification encompasses Polyvinylidene Fluoride (PVDF) thickness's, and welding methods used for corrosive exhaust ventilation piping, 2" (63mm) thru 24" (630mm).

#### 1.0 Material

Pipe shall be extruded from virgin, pure, unpigmented homopolymer KYNAR 740® resin, as manufactured by ARKEMA Chemicals, Inc. Material shall meet or exceed requirements of Table 1 of ASTM D-3222. Pipe manufacturing shall not employ any stabilizers, antioxidants, fillers, pigmentation or additives of any kind. Kynar homopolymer resins may be safely used in articles for repeated contact with food per Title 21, Code of Federal Regulations, Chapter 1, part 177.2510. Kynar homopolymer resin grades have been listed with NSF under Standard 61, Standard 51 and Standard 14

#### 1.1 Flammability

KYNAR homopolymer resins meet both the Factor Mutual 4910 (FM 4910) and corresponding UL 2360 burn test criteria. Specification test reports available upon request.

#### 1.2 Duct

Shall be seamless, extruded from the specified material and shall have uniform, consistent wall thickness and roundness. Wall thickness as detailed in paragraph 1.5.

#### 1.3 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.

#### 1.4 Welding rod

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

##### 1.4.1 Use of Welder

Welding is to be performed using a hot air welder having a source of clean dry air or inert air. Compressed air shall not be used for welding.

#### 1.5 Wall Thickness

Minimal Wall thicknesses will be as follows:

<u>Diameter</u>	<u>Thickness</u>	<u>Diameter</u>	<u>Thickness</u>
2" (63mm)	3.0mm	12" (315mm)	5.0mm
3" (90mm)	3.0mm	14" (355mm)	5.0mm
4" (110mm)	3.0mm	16" (400mm)	5.0mm
6" (160mm)	3.0mm	18" (450mm)	6.0mm
8" (200mm)	3.0mm	20" (500mm)	6.0mm
10" (250mm)	4.0mm	24" (630mm)	8.0mm

#### 2.0 Static Loading

Duct and fittings shall be capable of a maximum 1 bar (14.5psi) static pressure and a maximum of 0.5 bar negative static pressure.

#### 3.0 MANUFACTURER

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