

PRODUCT SPECIFICATION

The fill is manufactured by Brentwood Industries and shall meet the following specifications:

1. Scope

ACCU-PAC CF1200ma high density film fill designed for cooling of HVAC and process cooling waters.

2. Material of Construction

A. General:

The fill shall be fabricated from rigid, corrugated PVC sheets that are conducive to cooling water and UV protected. The fill packs shall be resistant to rot, fungi, bacteria and organic/inorganic acids and alkalies as commonly found in cooling towers.

B. PVC SHEETS

The PVC sheet shall be prime, rigid PVC conforming to commercial standard ASTM D1784: 12344B to 12454B and CTI STD-136. The PVC sheets shall be of uniform thickness and free from holes, air bubbles, foreign matter, undispersed raw material or other manufacturing defects which may adversely affect its performance. The sheet thickness (gauge) shall be specified by its after-forming thickness, not as a starting gauge, since the quality & method of thermoforming can produce excessive sheet thinning. The surface of the sheet shall have an engineered micrstructure to improve heat transfer.

PROPERTIES	ASTM TEST METHOD	UNIT		VALUE (min. unless otherwise noted)	
		IP	SI	IP	SI
Specific Gravity	D792	Dimensionless		1.45 max.	
Tensile Strength	D638/D882	psi	mPa	6,000	41.4
Flexural Modulus	D790	psi	mPa	425,000	2931
Flexural Strength	D790	psi	mPa	11,000	75.9
Elastic Modulus	D638/D882	psi	mPa	360,000	2,483
Izod Impact	D256	ft-lbs/in	j/cm	1.0	0.534
Impact Resistance	D4226	in-lbs/mil	j/mm	1.2	5.34
Heat Deflection	D648	°F	°C	160	71
Flame Spread Rating	E-84	Dimensionless		less than 20	
Flammability	D635			Self-extinguishing <5 sec.	

C. Chemical Resistance

Resistance to Grease Fats, & Oils	Excellent	ASTM D722-45
Resistance to Acids	Excellent	ASTM D543
Resistance to Alkalies	Excellent	ASTM D543

D. Temperature Resistance

Material of Construction	Max. Continuous Operating Temperature		Max. Peak Temp.*	
	F	C	F	C
PVC	140	60	155	68
HPVC	150	66	165	74

* Duration of peak temperatures not to exceed 2 hours

E. Fill Packs

The fill packs are fabricated from PVC sheets of above referenced quality and assembled mechanically by use of molded-in tabs, not by use of adhesives or solvents. The molded-in tabs are compressed mechanically to form a cold-formed rivet. A standard fill pack is made up of 26 sheets oriented to form crossed-flutes with a 60 degree included flute angle and will measure 12.0" (305mm) wide, 11.81" (300mm) high and up to 10' (3050mm) long. The fill shall have a beveled-tip design to promote water drainage for low pressure drop performance at high air velocities. The top and bottom edges shall be positively bonded and form a regular honey-comb pattern. The packs shall have a minimum crush strength of 1000 lb/ft² (48.0kPa). The heat transfer surface area of the pack shall be 69 ft²/ft³ (226m²/m³).

3. Installation

For optimum fill performance, the following installation guidelines shall be followed.

- A. All packs must be installed with the 'tips' down.
- B. The fill packs shall be carefully cut or trimmed to fit within 1/8 inch (or less) of any obstruction, partition or sidewall to prevent air & water bypass to ensure best thermal performance.
- C. Cutting and trimming of the fill packs may be done in the tower provided that precaution is taken to prevent any chips, broken pieces, or debris from falling into the fill packs by using proper precautions and good work practices. Each layer of fill must be cleared of any debris before a new layer of fill is installed. The top layer of fill should also be protected from damage from any subsequent work.
- D. The fill's honeycomb top edges & drainage tips should be protected from damage during installation.
- E. For optimal performance, the fill shall be installed in the tower to provide the closest possible fit with adjacent modules without damaging the packs. The fill packs within each layer must be installed with all packs aligned parallel to each other. Fill packs in subsequent layers shall be installed at right angles to the layer immediately below and above.