



# ArchBar Splash Fill

A result of **EvapTech's** constant Research & Development efforts and our commitment to Leading the Industry, **ArchBar®** splash fill's open mesh design provides truly remarkable thermal performance in a crossflow splash fill. ArchBar's durable HDPE construction give superior durability and its classic arched shape provides long span capability to reduce construction costs.

## ArchBar Features:

- **Open Mesh Design** – ArchBar's open mesh design eliminates the streaming and channeling of water that plagues PVC splash bar designs, while perfecting the mixing of water drops and air while two (2) splash layers in each bar create more tiny water droplets.
- **Durable HDPE Construction** – ArchBar's High Density Polyethylene material and arched shape is stronger than all other plastic splash bars. HDPE does not become brittle in freezing temperatures, resists chemical and biological attack and can operate up to 145°F.
- **Low Flame Spread** – ArchBar's standard HDPE formulation has a flame spread rate of 25 or less per ASTM E84.
- **No Wear Pads or Retainer Clips** – Whether installed on steel grids, or in **EvapTech's TufLock** nylon grid system, ArchBar's HDPE material properties eliminate the need for wear pads.



## Superior performance. Tested! Proven!

## ArchBar Benefits:

- **Colder Water** – Whether building new or upgrading outdated PVC fill bars, ArchBar provides up to 15% improved thermal performance compared to commonly available extruded hole-punched PVC splash bars.
- **Increased Efficiency** – Colder return water means increased plant capacity. Less airflow resistance of open mesh bar means bars can perform effectively in either parallel or perpendicular arrangements.
- **Lowest Installed Cost** – ArchBar's longer unsupported spans mean less structure cost and faster installation than other splash bar designs.
- **Resistance to Temperature Spikes** – When the unexpected happens, ArchBar resists temperature upsets that PVC bars simply cannot handle.
- **Reduced Maintenance Costs** – ArchBar's superior strength reduces winter ice damage. And, no retainer clips mean less cleanup of debris in strainers.

### EvapTech, Inc.

A wholly owned subsidiary of Evapco, Inc.

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**EvapTech ArchBar** is an open-mesh crossflow splash fill bar designed to maximize the air/water interface in cooling towers, and promote longer water suspension time resulting in maximum heat transfer. The bars are manufactured from fire retardant high density polyethylene (HDPE) with a flame spread rating of 25 or less per ASTM E84. The HDPE construction allows ArchBar to withstand severe operational and maintenance situations. As an option, ArchBar is also available in a non-FR formulation where secondary fire protection systems are present.

### Suggested Specification

Fill shall be open-mesh-type HDPE bars supported in glass reinforced nylon or 12ga stainless steel wire grids. Polypropylene plastic grids shall not be used due to inadequate strength. Fill grids shall be supported by FRP fill support channels or I-beams. Grids shall include a locking tab to hold the fill bar in place, or a separate plastic bench support. Grids and fill shall be certified fire retardant with a flame spread rating of 25 or less when tested in accordance with ASTM E84. Splash bars shall be cut to a length appropriate to fit within the bay with room for expansion. They shall be oriented with respect to air flow and spaced on centers as necessary to achieve the required thermal performance. Each bay of splash bars shall be supported by two or more grids on 45" centers maximum.

### ArchBar Specifications

Material	Fire Retardant High Density Polyethylene PVC
Flame Spread Rating	< 25 per ASTM E84
Standard Length	Variable up to 18' - 0"
Bar Height, Inches	1.875" (+/- 1/16")
Bar Width, Inches	3.875" (+/- 1/16")

Physical Property	ASTM Test	Units	Value
Density	ASTM-D 1505	g/cm <sup>3</sup>	+/- 0.953
Tensile Strength (yield)	ASTM-D 638	psi	> 4,000
Elongation	ASTM-D 638	%	> 1,000
1% Flexural Modulus	ASTM-D 790	psi	> 170,000
Tensile Impact	ASTM-D 1822	ft.lbs/in <sup>3</sup>	> 30
Low Temp Brittleness	ASTM-D 746	Deg. C	< -90
Heat Deflection Temp	ASTM-D 648	Deg. F	> 75

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