

PRODUCT APPLICATION GUIDE DATA CENTERS

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EFFECT

IDEAL KUUL TECHNOLOGY: Kuul Evolution FirePro™ Evaporative Media

For sustainable cooling of Data Centers, Kuul Evolution FirePro delivers high cooling efficiency for enhanced Direct Cooling power at extremely low pressure drop, answering the needs of the PUE (Power Usage Effectiveness) constraints of this industry. Not only does Kuul evaporative media last longer, but its reliability ensures the cooling systems remain operational at high efficiency for on demand cooling, which is considered mission critical. Effective, clean cooling, stronger, and longer-lasting evaporative media with low pressure drop for the lowest total cost of ownership with the UL-900 fire safety rating.


Why Kuul Evolution performance makes a difference:

- Provides the cooling performance when you need it most, reliably, ensuring higher average air mass-flow through the AHU fans.
- Much lower air-pressure drop through the media allows for greater ventilation rates with less power consumed by the AHU delivery fans. This makes for lower PUE.
- Higher sustainability due to higher net efficiency of the cooling system resulting from lower temperature air at a higher airflow rate, with less energy consumption.
- The strongest media in the industry. Lasting much longer than other brands, and allowing more years of service before the need for replacement.

Temperature drop cooling table for your climate zone

		Dry bulb temperature in °F												
		60	65	70	75	80	85	90	95	100	105	110	115	120
Wet bulb temperature in °F	60	0	5	9	14	18	23	27	32	37	Outside of climate possibility.			
	65	Air is fully saturated. No cooling will take place.	0	5	9	14	18	23	27	32	37	41		
	70			0	5	9	14	18	23	27	32	37	41	46
	75				0	5	9	14	18	23	27	32	37	41
	80					0	5	9	14	18	23	27	32	37
	85						0	5	9	14	18	23	27	32
	90							0	5	9	14	18	23	27
	95								0	5	9	14	18	23
	100									0	5	9	14	18
	105										0	5	9	14
	110											0	5	9
	115												0	5
120													0	

— POWERED BY —



EVAPORATIVE COOLING MEDIA™

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Kuul FirePro™ – the energy-friendly choice

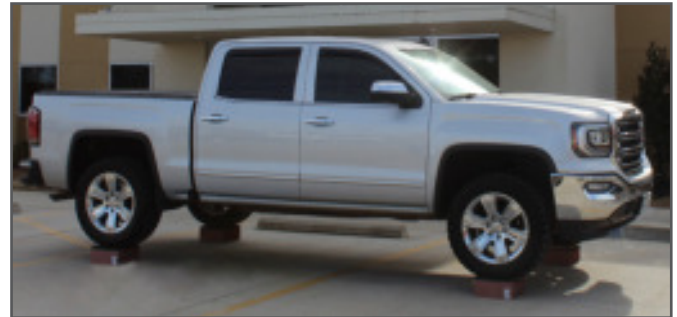
Extremely low pressure drop at typical media velocity ranges of between 500 and 700fpm means as much as 30% less air resistance compared to competitor's media. This translates to more cool air at a given induction pressure. This means:

- Higher overall net PUE. Higher net cooling power.
- Predictable AHU performance during peak ambient heat.



Kuul FirePro™ – the toughest evaporative media on the market

Kuul FirePro™ is produced with the highest quality virgin materials according to a unique design and production technique. Kuul FirePro™ is the strongest and toughest media designed for the arduous conditions of the Data Center environment. This ensures the media lasts much longer than the competitors', equating positive ROI.



We took four pieces of our standard 6" thick Kuul evaporative media and let them fully support the weight of a 4000+ pound truck. The media suffered little to no damage.

Kuul FirePro™ – the hygienic choice

Keeping the indoor environments safe for OHS requirements means that cooling systems must be sterilized using oxidizers to ensure the occupants of the data center complexes are kept safe from biological organisms. Here again, FirePro™ is strong, tough, and able to resist oxidizers like chlorine in higher concentrations.

Kuul FirePro™ – the most economic choice with the total lowest cost of ownership

Kuul FirePro™ has been designed for the data center industry to ensure it checks all the right boxes for the lowest cost of ownership over an extended period.

- Higher AHU cooling output with the lowest energy footprint.
- Lower PUE makes Kuul Evolution FirePro™ the sustainable choice.
- FirePro™ is designed to answer the increasing pressure surrounding power and water availability.
- Predictable, reliable performance when it's needed most.
- Media can last twice as long as competitors over many years.
- Higher chemical resistance and compressive strength allows FirePro™ to be able to utilize less water for improved WUE. FirePro tolerates the mass of scale due to its high strength in higher scaling water environments.



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