

Cooling Tower Materials – Comparison Chart

This chart compares the most common materials used in building cooling towers, highlighting their advantages and disadvantages for different applications.

Material	Advantages	Disadvantages
Reinforced Concrete	<ul style="list-style-type: none">• Very durable (40+ years)• Fire/weather resistant• Strong structural support	<ul style="list-style-type: none">• High initial cost• Heavy, needs strong foundation
Fiberglass Reinforced Plastic (FRP)	<ul style="list-style-type: none">• Lightweight, corrosion-resistant• Low maintenance• Easy to install	<ul style="list-style-type: none">• Can be more expensive than steel in large sizes
Wood (Treated Timber)	<ul style="list-style-type: none">• Cost-effective• Easy to work with	<ul style="list-style-type: none">• Requires chemical treatment• Susceptible to decay/termites
Galvanized Steel	<ul style="list-style-type: none">• Strong, cost-effective• Widely available	<ul style="list-style-type: none">• Prone to corrosion over time
Stainless Steel	<ul style="list-style-type: none">• Highly corrosion-resistant• Long lifespan	<ul style="list-style-type: none">• Higher cost• Heavier than alternatives
PVC Fill Media	<ul style="list-style-type: none">• Lightweight, cheap• Corrosion-resistant	<ul style="list-style-type: none">• Not suitable for very high temps• Can clog in dirty water
Polypropylene Fill	<ul style="list-style-type: none">• Stronger than PVC• Handles dirty water better	<ul style="list-style-type: none">• More expensive than PVC
FRP Fan Blades	<ul style="list-style-type: none">• Strong yet lightweight• Excellent corrosion resistance	<ul style="list-style-type: none">• Higher cost than aluminum
Aluminum Fan Blades	<ul style="list-style-type: none">• Lightweight, affordable	<ul style="list-style-type: none">• Less durable than FRP or steel
Concrete Basin	<ul style="list-style-type: none">• Very durable• Good for large towers	<ul style="list-style-type: none">• Heavy, costly construction
FRP Basin	<ul style="list-style-type: none">• Lightweight, low maintenance	<ul style="list-style-type: none">• Less durable than concrete

Prepared as a quick reference guide for selecting cooling tower materials.