

ILLUSTRATED MATERIAL CATALOG

Membrane, Steel & Coating Specifications

This catalog presents the architectural membranes, structural steel and protective coatings used in Champion Metal Structure fabric buildings, illustrated with photos from our own manufacturing facility. All materials are engineered to international standards and selected to suit your climate, span and service-life requirements.



Champion Metal Structure — manufacturing facility



In-house welded steel trusses

1. Architectural Membrane — PVC & PVDF

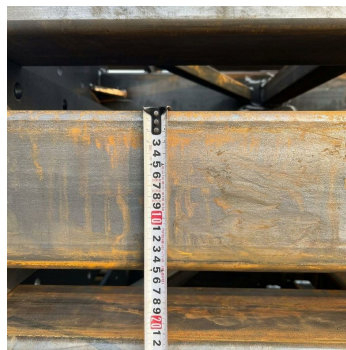
PVC-coated high-tenacity polyester base cloth. Heavier PVDF (Polyvinylidene Fluoride) grades from 1100 to 1450 gsm deliver the highest tensile/tear strength, superior UV and chemical resistance, and the longest service life. Flame retardant to B1 / M2 / NFPA 701. Service temperature -40 C to 70 C.

Grade	Weight (gsm)oz/yd ²	Coating	Tensile warp/weft	Service Life	Typical Use	
Standard PVC	610	18	PVC lacquer	3000/2800	8-12 yrs	Temporary, small spans
Heavy-Duty PVC	750	22	PVC/PVDF	4000/3800	12-15 yrs	Industrial, agriculture
Premium PVC	900	27	PVDF lacquer	5500/5200	15-20 yrs	Mining, high-wind
PVDF Industrial	1100	32	2-side PVDF	7000/6500	20-25 yrs	Heavy snow, salt/fertilizer
PVDF Heavy	1200	35	2-side PVDF	8000/7500	25 yrs	Bulk, port, aggregate
PVDF Extreme	1350	40	2-side PVDF	9000/8500	25+ yrs	Alpine snow, cyclonic
PVDF Maximum	1450	43	2-side PVDF	9800/9200	25-30 yrs	Largest spans, critical

2. Structural Steel



Welded truss sections



Dimension-verified steel members



Hot-dip galvanized tube

Standard	Grade	Yield	Typical Use
GB/T (China)	Q235B	235 MPa	Purlins, bracing
GB/T (China)	Q355B	355 MPa	Main trusses, columns
ASTM (US)	A36	250 MPa	General structural
ASTM (US)	A572 Gr.50	345 MPa	High-strength members
EN (Europe)	S235JR / S355JR	235/355 MPa	Eurocode projects

Tube sizes: round 48-219 mm diameter, wall 2.0-6.0 mm; square/rectangular hollow sections; C-purlins; hot-rolled I-beams. Fabrication: CNC cutting & drilling, welding to AWS D1.1 / ISO 3834.

3. Hot-Dip Galvanizing (ISO 1461 / ASTM A123)



Galvanized end plates



Galvanized tube trusses

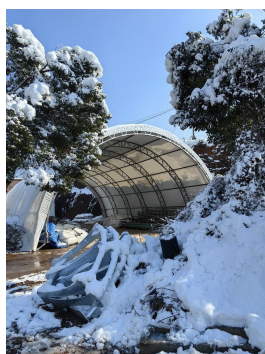


Export-ready galvanized frames

Steel Thickness	Min Coating (micron)	Min Coating (g/m ²)	Corrosivity Suitability
> 6 mm	85	610	C5 marine / mining
3 - 6 mm	70	505	C4 coastal / industrial
1.5 - 3 mm	55	395	C3 urban / industrial
< 1.5 mm	45	325	C2 rural

Process: degrease -> pickle -> flux -> molten zinc bath (~450 C) -> inspect. Optional epoxy/powder topcoat for C5 environments. Maintenance-free life 20-50+ years depending on environment.

Proven in Extreme Conditions



Champion fabric structure under heavy snow load



Container-optimized export packing

Contact our engineering team for project-specific material recommendations and stamped specifications. Email sales@championmetalstructure.com | Tel +86 139 2871 7650 / +86 133 4871 1867 | www.championmetalstructure.com