

“ADVANCED ENGINEERED TANK TECHNOLOGIES”

Material Specification

Aluminium Geodesic Dome Roof

All materials of construction will be provided in accordance with the provisions of per conditions of API-650, EN 10415, PGS 29 and EEMUA 159, unless per written agreement between purchaser and Maxwell

PART/ITEM	Dimensions / Thickness / Size	Material Description	
		Code	Remark
FULLY TRIANGULATED DOME SPHERICAL STRUTS			
I Beams	Mill Finish Aluminium	AA 6061 T6 / AA 6065	
Perimeter Tension Ring/Compression Ring Beams	Mill Finish Aluminium	AA 6061 T6 / AA 6065 T5	
Beam Joint Plate	Mill Finish Aluminium	AA 6061 T6 / AA 6065	
Structural Frame Gussets (Node Plate)	Mill Finish Aluminium	AA 6061 T6 / AA 6065 T5	
COVER(S)			
Triangular Closure Panel Skin	Mill Finish Aluminium – 1,2 mm	AA 3003 H16	
Manway	Mill Finish Aluminium – 1,2 mm	AA 3003 H16	
Peripheral Skirt	Mill Finish Aluminium – 1,2 mm	AA 3003 H16	
COVER FASENERS – ATTACHMENT EXTRUSIONS			
Systems I-Profile, L-Profile, Bars	Mill Finish Aluminium	AA 6063 T5	
Systems Angles, Billets, etc.	Per engineered design	AA 6063 T5	
Systems Dormers, Doors, and Hatches (if specified)	2,5 mm Nominal Thickness	AA6061-T6/AA5058-H34 or AA5052-H36	
Fasteners Structural	Hex or Lock type	7075-T73 Anodized Aluminium or Series 300 Austenitic Stainless	
Fasteners Joints	Hex type	Austenitic Stainless	
Seals Batten Bar Extrusion Gas-	Extrusions	Silicon	
Seals Caulking	Tubes	Silicon	
Anchors Support Leg	Per engineered design	Carbon Steel/Stainless Steel	
Anchors Gussets	Per engineered design	Carbon Steel	
Anchors Friction Bearing Pad	Per engineered design	PTFE (Teflon)	
Anchors Isolation Bearing Pad	Per engineered design	Austenitic Stainless	
Anchors Anchor Bolts	Per engineered design	Series 300 Austenitic Stainless Steel	

Material notes:

Purchaser/construction company should ensure and confirm suitability of the dome design for the service conditions, and media to be stored. Water tightness should also be confirmed as a design objective, where this can be tested with a water spray test or during adverse weather conditions.

The use of any materials in the dome structure other than aluminium or stainless steel is expressly forbidden. Cadmium plated bolts, galvanized bolts, or other dissimilar materials can introduce serious concerns for galvanic corrosion, and as such cannot be used.

The use of mastic batten bar gaskets, or rubber batten bar gaskets such as Neoprene, EPDM, Viton or other rubbers is not allowed to avoid accelerated ageing of the dome structure.

The above are Standard material specifications and may be changed to meet Project specifications and/or material compatibility. All thicknesses are nominal and are subject to change without notification.