

	TECHNICAL DELIVERY CONDITION	Project: Train B28
Aggregate	Aluminium Brackets & sheet	DOC No.: FPIIC/TD/077
BEML Enquiry/ RFQ Reference:		

Sl. No.	Technical Delivery Conditions	COMPLIED	NOT COMPLIED
1	Each of the aluminium bracket and profile shall confirm to the tender drawing requirements.	☐	☐
2	The firm shall submit material test certificate for chemical composition and mechanical properties as per ASTM B 209 A5052-H32 / EN AW 5754-H22, EN 485 and, ASTM B 209 A 5083-H111/ EN AW-5083-H111, EN 485 along with each supply.	☐	☐
3	Anodization, if called in the drg., shall be as per IS 1868 to Grade AC 10.	☐	☐
4	If parts are painted, 1. DFT 70-90 microns, 2. RAL shade shall as per drawing 3. Shall comply to mechanical properties as per annexure-1	☐	☐
5	Colour sample shall be submitted for approval, before mass production.	☐	☐
6	100% quantity of the bracket and profile shall be subjected to visual, dimensional inspection and anodization (if applicable) inspection. Inspection reports shall be submitted along with supplies.	☐	☐
7	The bracket and profile shall be of smooth finish without burrs & sharp edges. Scratches on the anodized surfaces (if applicable) are not acceptable	☐	☐
8	The bracket and profile shall be packed to ensure that no damage will occur during transit & storing at BEML.	☐	☐
9	Part number shall be marked on all brackets and profiles. However, use of label for mentioning the part number is not acceptable. Care shall be taken such that marking part number shall not damage the anodized surface.	☐	☐

Signature of the Bidder with Seal
(Name, Designation & Address)

Annexure-1**Mechanical properties of Painted surface**

Sl. No.	Test Description	Test Method	Requirements
1	Chip Resistance	Class 2	BS AU 148 Part 15/ASTM D 3170
2	Scratch Resistance	No failure (for 2kg)	BS 3900 Part E2, BS EN ISO 1518:2001
3	Impact test (Falling ball)	No failure	BS 3900 Part E7/ASTM D 3170
4	Abrasion resistance	Max 29 mg	ASTM D 4060 CS10 wheel 500 cycles – 1000 gm load
5	Adhesion	5B	ASTM D 3359 (Method B)
6	Gloss Level	Semi-gloss	BS 3900 D5, EN ISO 2813:2000
7	Film Hardness	H	ASTM D 3363
8	Anti-graffiti	Level 8	ASTM D 6578
9	Acid & Alkali Resistance	No defect	ISO 2812-3
10	Accelerated Weathering Test (QUV x 500 hrs)	Gloss (60°)>90% DE < 2	ASTM G154
11	Colour Difference	$\Delta E < 1$	ASTM D 6578
12	Fire Safety	EN 45545-2	HL2, R1