

**MRS1: Pre-Bid query for GFRP panels**

<b>Sl. no.</b>	<b>Clause no.</b>	<b>Bidders Queries</b>	<b>BEML Reply</b>
1	Clause 5 : Design Criteria	Anti-Graffiti Protection Standard NFF 31-112) is out of our scope. we will supply raw based panel.	Anti-Graffiti protection is applicable for painted panels and not for raw panels.
2	Clause 6.4.3: Strength test for Grab handle on Interior panel	There is no relevant test equipment in HFG anymore. Thus, this test procedure or method needs to be amended or changed.	Please follow tender requirements
3	Clause 6.8 : Service Life	35years means design service life. Panel warranty period is 3 years.	It is service life of panels.  Please follow tender requirements.
4	Clause 8.3 : Submission of documents	- material test is okay. - fire performance test should be carried out as painted condition, however, our product is raw panel without painting, thus, fire test for raw panel is meaningless.	Fire performance test to be carried out both for raw panels , paints and painted panels separately.
5	Clause 8.4 : Submission of samples	sample means raw panel condition?	Sample shall be both raw panel and painted panel.  Please follow Addendum to PTS
6	Clause 9.1 : Visual inspection of panels	ASTM D 2563 is applied for polyester, epoxy, gel coat type panel. This test is not proper for our phenolic panel.	ASTM D 2563 is standard for visual defects applicable for all GFRP panels.  Please follow tender requirements.
7	Clause 5 : Design Criteria	(i) The vehicle interior layouts shall incorporate a modern aesthetic approach with considerations to optimise passenger comfort, safety and security as well as to minimise noise in the saloon. (ii) The design of interior fittings shall be safe under all conditions of passenger impact, during emergency braking and buffing under fully loaded condition.  Design is BEML scope, so this clause is not applicable for FRP manufacture.	These are general information about the car interiors which have to be taken note by the Panel manufacturer.  Please follow tender requirements.
8	Clause 6.4.3	There is no test equipment in HFG. However, we can submit previous reference data.	Please follow tender requirements.  Previous reference data is not acceptable. Tests have to be carried out on the panels manufactured for this project.
9	Clause 11: Point 8 &9	Please explain in detail about no. 8 and 9 document.	Subcontractor to submit satisfactory revenue

			performance certificates documents for qualification criteria and submit the filled vendor approval form with supporting documents.
10	Clause 6	Cab mask and Skirt is made of 4 mm solid laminate instead of 10 mm sandwich honeycomb structure used for interior panels. Weight criteria of 4 + 0.3 kg/m <sup>2</sup> can be achieved for 10 mm sandwich panel as per PTS document. But it is impossible to achieve mentioned 4 + 0.3 kg/m <sup>2</sup> weight criteria for cab mask and cab skirt. As per our testing we would achieve 7 kg + 0.5 kg/m <sup>2</sup> weight criteria for 4 mm thick prepreg laminate used for Cab mask and Cab skirt. We would require deviation on weight criteria for Cab mask and Cab skirt.	Please refer Addendum to PTS.
11	Clause 6	For interior panels, as per PTS document 2.3 + 0.2 mm thickness is required. If we are able to meet the required mechanical properties as well as weight criteria at laminate region, will 2 + 0.2 mm thickness acceptable for laminate region.	Please follow tender requirements.
12	-	Layup sequence of 4mm thk monolithic laminate	OEM to decide the layup sequence.
13	-	Required Changes in cab mask and cab skirt drawings	Please follow tender requirements.
14	General	Requirement of 3D Drawing for faster design & commercial working as also for development of tools/molds, etc.  It is difficult to review detail design with PDF file	3D & 2D drawings cannot be shared.