Rail Coach Factory, Kapurthala

MD35131 Dated: as signed

Sub: Issue of amedment-1 to specification no. MDTS-156 Rev 7 with corrigendum-1 of Technical Specification for Self-Adhesive Stickers of Exterior & Interior Notices of Railway Coaches

Following is the amedment-1 to MDTS-156 Rev-7 with corrigendum-1 of **Technical Specification for Self-Adhesive Stickers of Exterior & Interior Notices of Railway Coaches** for information and necessary action at your end:

SN	Para	Earlier	Modified
1	S. no. 8 of Table 5, Clause 11.1	All requisite test certificate from OEM/NABL accredited laboratory for the tests mentioned in this specification. The tests may have been got done by the OEM from NABL approved lab.	Except tests for thickness, colour, shape appearance and visual check all requisite test certificate from OEM/NABL accredited laboratory for the tests mentioned in this specification. If any test(s) does not fall under NABL scope then test certificate for the same from Government lab or lab accredited for NABL test for any other test(s) mentioned in this specification
2	S. no. 2 of Table 7, Clause 11.3	Test Certificates for type & routine tests (as detailed in the QAP). The tests may have been got done by the OEM / NABL approved lab.	Test Certificates for type & routine tests (as detailed in the QAP) from OEM/NABL accredited laboratory. If any test does not fall under NABL scope then test certificate for the same from Government lab or lab accredited for NABL test for any other test(s) mentioned in this specification.
3	S. no. 3 of Table 7, Clause 11.3	Test Certificates for acceptance tests (as detailed in the QAP). The tests may have been got done by the OEM from NABL approved lab.	Except tests for thickness, colour, shape appearance and visual check all test Certificates for acceptance tests (as detailed in the QAP) from OEM/NABL accredited laboratory. If any test does not fall under NABL scope then test certificate for the same from Government lab or lab accredited for NABL test for any other test(s) mentioned in this specification.

NOTE -If any Vendor opts for test(s) from Government Lab instead of NABL accredited laboratory in that case firm must submit the declaration that the test(s) are not covered under NABL accreditation at the time of bid. Later, if the claim made by the firm is found incorrect/false, the bid of the firm shall be summarily rejected and the firm shall be disqualified from participation in the tender.

(All test certificates shall be submitted and uploaded together with the Bid & along with supply of material)

This has the approval of competent authority.

JUGAL Digitally signed by JUGAL KISHOR Date 2024.0530 Dy. CME/DF

SSE (LIB. Design) SSE (Records) SSE/FUR-III

Dy. CMM/Fur/LHB Dy CMM/G Dy.CPLE-III

CDE CQM CPLE CWE (Fur) CWE/Shell CMM/HSQ CMM/TKJ CMT

MD35131 Dated: as signed

Sub: Issue of corrigendum-1 to specification no. MDTS-156 Rev 7 of TECHNICAL SPECIFICATION FOR SELF ADHESIVE STICKERS OF EXTERIOR & INTERIOR NOTICES OF RAILWAY COACHES.

Following is corrigendum-1 to MDTS-156 Rev- 7 of **TECHNICAL SPECIFICATION FOR SELF ADHESIVE STICKERS OF EXTERIOR & INTERIOR NOTICES OF RAILWAY COACHES** for information and necessary action at your end:

SN	Para	Earlier	Modified
1	5.3 (I)	hand-cut) shall be covered with pre- spacing tape for the easy placement of	All sticker/markings (Whether plotter or hand-cut except Multi-color Overlaminate printed Sticker) shall be covered with pre-spacing tape for the easy placement of the stickers on the required location/position.

This has approval of competent authority.

JUGAL Dig JUGAL NOT Dat 11:3

Digitally signed by JUGAL KISHOR Date: 2024.01.17 11 分裂引 地路的 Dy. CME/D-2

SSE (LIB. Design) SSE (Records) SSE/FUR-III

Dy. CMM/Fur/LHB Dy CMM/G Dy. CPLE-III

CQM CPLE CWE (Fur) CWE/Shell CMM/HSQ CMM/TKJ CMT

Copy for kind information to:

Dy.CME/D-II/DP

CDE

रेल कोच फैक्ट्री, कपूरथला

पत्र संख्या- MD35131

जारी करने की तिथि - 24/07/2023

विषय: विशिष्टता प्रकाशन संख्या MDTS-156 Rev.-07.

आपको सूचित किया जाता है विनिर्देश दस्तावेज़ आधिकारिक तौर पर जारी कर दिया गया है। कृपया जानकारी और अन्य आवश्यक कार्रवाई के लिए निम्नलिखित विशिष्टताओं की संलग्न प्रति प्राप्त करें

S. No	Description	Specification No.
1.	Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches	MDTS-156 Rev -07

JUGAL KISHOR KISHOR KISHOR Late: 2023.07.24 09:48:02

Dy.Cme/Design Project

CQM-I,II CPLE CWE/Fur CMM/ HSQ CMM/TKJ CWE/Shell

Dy.CMM/LHB/HSQ Dy.CMM/G CMT Dy. CPLE-I,II Dy.CMM/Fur

SSE/Filing Section

SSE/Library, Mech. Design

SSE Record (Original copy)

SSE/Dev.

Copy for kind information to:

CDE

Dy.CME/D-2//S&B

Specification for Self Adhesive Stickers of Ex			
Document No: MDTS-156		Revision No: 07	14 July 2023

Document Control

Name	Designation	Signature	Reason
Harish kumar	SSE/Dev	HARISH KUMAR Digitally signed by HARISH KUMAR Date: 2023.07.14 09:43:58 +05'30'	Prepared
Jugal kishor	Dy CME/DP	JUGAL KISHOR Date: 2023.07.14 09:46:34 +05'30'	Checked
Abhey Priya Dogra	Dy.CME/Design-II	ABHEY PRIYA DOGRA DOGRA Digitally signed by ABHEY PRIYA DOGRA Date: 2023.07.20 05:27:42 -07'00'	Reviewed
Akhilesh Misra	Chief Design Engineer	AKHILESH MISRA Digitally signed by AKHILESH MISRA Date: 2023.07.24 08:33:04 +05'30'	Approved

List Of Amendments

S.N	Amendment	Revision	De	tails
	Date			
1	20.04.2022	01	1.	In clause 2.3, 3.1.2, 3.1.6.1, 4.2.4.2 controlled tack
				adhesive, bubble based adhesive, and adhesion based
				on release technology using glass bubbles has been
				deleted.
			2.	Annexure A deleted.
			3.	Peel of angle added in clause 4.2.4.1
2	09.03.2011	02	1.	Specification re-drafted and made more descriptive.
			2.	Requirement of submission of test sample by supplier
				with prototype sample (para 4.1.iii) and each supply
				(para 2.1.viii) added.
			3.	Operating condition for stickers added (para 3).
			4.	Test standards for checking of thickness of stickers,
				durability and weathering, adhesive power, wash and
				attrition resistance added and requirements of these
				tests modified.
			5.	Requirement of submission of test certificates for
				para 3.1.2 and 3.7.1 to 3.7.8 added.
			6.	Prototype approval requirements modified.

2 o contituit i (e)		terior & Interior Notices	•
Document No:	MDTS-156	Revision No: 07	14 July 2023

S.N	Amendment	Revision	D	etails
	Date			
3	11.07.2012	Rev.03	1. 2. 3. 4.	Para 2 and 3 modified, name of manufactures of self adhesive film/sheet and converter added. Para 3.4.2, 3.6.2 & 3.7.3 modified. Para 2.1.ix & 4.1.iv added. Tolerance of ±10% added for gloss (Para 3.7.2) and Durability & Weathering Resistance added (para 3.7.3) Thickness of base film was 0.08mm to 0.13 mm with tolerance of +/-15% of the nominal thickness in para 3.1.2. Pantone shade added in color and tint (para 3.1.3).
			6. 7.	Width of test specimen added in para 4.2.1. In para 3.7.6, "shrinkage of sticker of dimension 200mm shall not exceed" was 0.4mm.
4	18-04-2013	Rev.04	2.	Para 2.1 (General requirements), para 3.7.9(Marking of product), para 4.1.a (Prototype approval) & 4.2.1 (adhesive power) modified. Para 4.1.b (Acceptance approval) & 3.8 Luminous/Night Glow Stickers added
5	09-09-2014	Rev.05	1. 2. 3.	Test certificates (in para 2.1.iii), Authorization letter (in para 2.1.vi), edge sealing (in para 3.2) & Prototype approval (in para 4.1.a) deleted. Para 3.6.3 and 6.2 clause modified as per IRS conditions of contract. Acceptance criterion modified (in para 4.1)
6	07.08.2020	Rev-06	1.	Para's 3, 4.1, 3.5.1, 3.5.2 & 3.6.3 modified and classification of test (Para 7.0) added. Para 3.7 deleted.
7	13.07.2023	Rev -07	1. 2. 3.	Specification format modified. Para's 2, 3 & 7 to 11 added & modified as required. Para 5.3(II, III, IV), Para 5.6, Para 6.3.1, Para 8(I-III) added. Para 5 updated and Brand name removed. Para 5.2 (I & III), 5.6, 10(I) modified. Name of OEM omitted.

Printed on-14	July 2023
	Page 2 of 14

CONTENT

1	Obj	ectives & Scope:	4
2	List	of standards Referred:	4
3		previation/Terminology:	
4	Gen	neral requirements	5
	4.1 4.2	Ambient conditions: Maintenance conditions:	
5	Mat	terial Requirements:	5
	5.1 5.2 5.3 5.4 5.5	Requirements of Self-Adhesive Base Films Requirement of Release Paper/Liner: Pre Spacer tape: Requirements for Adhesives: Printing of Stickers:	5 6 6 6 7
	5.6	Luminous Film	
6	Cha	racteristics of Self adhesive sticker prior to application:	
	6.1 6.2	The Self adhesive stickers when tested shall meets the following parameters: Durability & Weathering Resistance: 1	
7	Qua	ılity Assurance, Tests & Documents:	0
8	Maı	rking of the Product: 1	2
9	Pac	king: 1	2
10) G	Guarantee and replacement:	2
11	Ir	nformation to be provided by bidder / supplier:	2
	11.1	The following information shall be provided by the bidder / supplier	2
	11.2	Information to be supplied upon release of letter of acceptance / purchase order: 1	3
	11.3	Information to be supplied with the material consignment:	3
	LIS	T OF TABLE	
		List oF Standard Referred	
		:Abbreviation/Terminoloy used	
		Characteristics of Self Adhesive Sticker.	
		Quality Assurance, Tests & Documents	
Ta	able 5	Information to be provided with the bid	3
Та	ible 6:	Information to be provided upon release of letter of acceptance / purchase order 1	3
Та	ible 7:	Information to be provided with material consignment	4

Document No:	MDTS-156	Revision No: 07	14 July 2023	
Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches				

1 Objectives & Scope:

This specification covers technical, general and testing requirements/procedure of Self Adhesive Stickers to be used for exterior and interior notices of Railway Coaches in all type coaches of Indian Railways.

This schedule is intended to cover the technical requirements/provisions relating to materials, constructions and tests and does not include all the necessary provisions of the contracts. This schedule draws references to some of the relevant ASTM, UIC and other Indian Standard specifications. Unless otherwise specified, the latest version of the relevant specifications shall be taken as reference.

2 List of standards Referred:

SN	Standard	Title
1.	ASTM	Standard Test Method for Thickness of Pressure-Sensitive
	D3652	Tapes
2.	IS:2500-	Sampling Procedure For Inspection By Attributes
	2006	
3.	ASTM E -	Standard Practice for General Techniques for Obtaining
	1252	Infrared Spectra for Qualitative Analysis
4.	ASTM G	Standard Practice for Operating Open Flame Carbon Arc
	152	Light Apparatus for Exposure of Nonmetallic Materials
5.	ASTM D	Standard test method for specular gloss
	523	
6.	ASTM-D-	Peel Adhesion Pressure Sensitive Adhesive Tapes
	3330	
7.	ASTM-D-	Conditioning standard for transit simulation testing
	4332	
8.	IS: 5	Colors for Ready Mixed Paints and Enamels
9.	ASTM G-	Xenon arc light apparatus for exposure of non-metallic
	155	materials

Table 1:List oF Standard Referred

3 Abbreviation/Terminology:

S.No.	Abbreviation	Expansion/Explanation	
	/Terminology		
1	QAP	Quality Assurance Plan	
2	FAI	First Article Inspection	
3	RCF	Rail Coach Factory	
4	KXH	Indian Railways station code for Kapurthala	
5	LHB	Linke-Hofmann-Busch the transfer of technology	

Printed on-14 July 2023
Page 4 of 14

200000000000000000000000000000000000000	f Adhesive Stickers of Ex		•
Document No:	MDTS-156	Revision No: 07	14 July 2023

		partner for RCF/KXH.	
6	OEM	Original Equipment Manufacturer	
7	WTC	Work test certificate	
8	PO	Purchase order	
9	PU	Poly-urethane	
10	RAL	RAL Color chart	

Table 2: Abbreviation/Terminoloy used

4 General requirements

4.1 Ambient conditions:

The coaches on which self adhesive stickers are fitted are subjected to following climatic conditions and self adhesive stickers shall perform satisfactorily under these conditions:

(i) Ambient temperature : -4° C to 70° C

Altitude : Sea level to 2500m

Max. Sun temperature : 70° C

Relative humidly : 40% to 100%

(ii) The rainfall is fairly heavy.

- (iii) During dry weather, the atmosphere is likely to be dusty.
- (iv) Temperature variations can be quite high in the same journey or short period of time.
- (v) Coaches operate in coastal areas with continued exposure to salt laden air.

4.2 Maintenance conditions:

The coach exteriors are cleaned with mildly acidic cleaning agents and using brushes with nonmetallic bristles or automatic car washing plants.

5 Material Requirements:

Self adhesive Film/sheets from which Stickers are to be manufactured; shall be procured from the manufacture/OEM who has got direct presence in India with their in-house testing facilities.

5.1 Requirements of Self-Adhesive Base Films

5.1.1 Self adhesive Stickers:

I. The film shall be manufactured from an elastic, thermoplastic material, such as copolymer based on polyvinyl, polyester, poly-acrylate or polyurethane. The film may consist of several layers. The film shall be homogeneous, non-porous and free from bends and other defects. Weather and light-resisting coloring agents, pigment and metal powder may be incorporated in the film. Softener and other materials must not emerge or exude. The films shall not include any materials having harmful effect on human beings, painted surfaces or environment.

Dail Canab Factory Vanuethala	Printed on-14 July 2023
Rail Coach Factory ,Kapurthala	Page 5 of 14

200000000000000000000000000000000000000	f Adhesive Stickers of Ex		,
Document No:	MDTS-156	Revision No: 07	14 July 2023

- Thickness of Base Films: The nominal thickness of the unpainted film including adhesive II. without sealing shall be between 0.07mm to 0.13 mm and shall be measured as per test procedure laid down in ASTM D 3652.
- III. Color & Tint: The color & tint of the film and stickers shall match with RAL shade card IS:5 and/ or should close match with the present samples as per requirement laid down in the drawing/Purchase order. In this regards purchaser decision shall be final.

5.2 **Requirement of Release Paper/Liner:**

- I. The release paper shall protect the adhesive against dirt and to prevent the film from unintended agglutination. Size of liner shall not be less than size of stickers. It should be rectangle in shape and should not be cut in shape of stickers.
- II. The release paper shall be easy to remove from the finished panel. The release paper shall be resistant to climatic changes so that the self adhesive stickers can perfectly be used for required usages.
- III. The release paper shall not warp or distort into tunnel formation with-in a period of two years, if the self adhesive stickers have been stored in their original packaging.
- IV. In addition, the adhesive power of the release liner shall not be so strong that the adhesive detaches on removal of the release liner.

5.3 **Pre Spacer tape:**

- I. All sticker/markings (Whether plotter or hand-cut) shall be covered with pre-spacing tape for the easy placement of the stickers on the required location/position.
- II. Pre-spacer tape should not enlarge or contract during removal of stickers and application of stickers on coach and it should not lose it shape during application.
- III. Pre-spacer tape should not be pasted in parts on single stickers and shall cover liner completely.
- IV. The pre-spacer tape shall be marked as a pre-spacer on surface and should be of high strength with low tack adhesive to enable easy release of sticker after application.
- V. The Pre Spacer shall be paper, coated with polyethylene on both sides to have resistance to moisture and application

Requirements for Adhesives:

I. The adhesive shall be pressure activated type.

Printed on-14	July 2023
	Page 6 of 14

200011101101101	If Adhesive Stickers of Ex		
Document No: MDTS-156		Revision No: 07	14 July 2023

- II. The adhesive shall stick, without the use of an activator such as solvents or heat, on any metallic and painted, primed, polished and clean surfaces, free from any grease or silicone without producing wrinkles, rolling up, tearing or detaching on stickers.
- III. After removal of release paper/liner, the sticker shall be able to slide freely on the surface so that film can be placed exactly on the right position without the use of auxiliary tools, before the adhesive start to the stick to surface enter into an non-moveable position.

5.5 Printing of Stickers:

- I. For single color stickers, printing is not permitted. For single color stickers, base film shall be pre-pigmented and color of the film shall be same as required. Screen printing is permitted only for multi color stickers.
- II. For multi-color stickers, the majority color should be the base film color. Films shall be printed with digital/ screen printing technology with eco-friendly low emission ink.
- III. The printing inks shall be approved by the manufacturer of the film and should carry a comprehensive warranty as per IRS condition of contract against any kind fading of colors and cracking.

5.6 Luminous Film

The illumination strip should be compliant to as per ASTM E2072-14 or latest and proof of same shall be submitted at the time of bid. Inspecting agency nominated by RCF have to check these during Quality check of material.

6 Characteristics of Self adhesive sticker prior to application:

6.1 The Self adhesive stickers when tested shall meet the following parameters:

S.N	Description	Required Parameters	Test Standard	Remarks
1	Thickness with sealing and print	0.15mm+/-15%	ASTM-D- 3652	
	color			
2	Gloss	70±10% at 60°	ASTM D 523 /ISO 2813	Gloss value retention after at any time during service life of eighteen months should not be less than 50 at 60°. The average loss in gloss value in a six month period should not be more

Printed on-14 July 2023
Page 7 of 14

Document No:	MDTS-156	Revision No: 07	14 July 2023			
Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches						

				than 07.
3	Adhesive Power	25N (Min)	ASTM-D- 3330, ASTM D- 4332 (For conditioni ng)	25 mm wide test specimen for 180 ° peel strength on a standard test panel of stainless steel or anodized aluminum and at a peel off velocity of 300mm/min. Controlled release adhesion shall be tested visually for presence of air channel on the side of base of film after removal of release liner.
3.1		substrate surface painted surfaces laminate), and FR commonly act as Adhesive power substrate surface stays in place and	when applying when applying winyl-wraps of the contracted proving and it should does not pee	te the right adhesive power for the ing stickers or markings. In coaches oped surfaces, HPL (high-pressure reinforced plastic) ceiling/paneling are for pasting of stickers or markings. He sufficient adhesion with respect to defensures that the sticker or marking of the surface is minimum adhesive power can't be less
4	Temperature Resistance	Self adhesive sticker shall be resistant to temp. between -10°C and +90°C without any visible changes as detaching, cracks and bubble formation or color changes.	Exposed to alternate seven cycle of high of (90°C for 16 hrs) and low temperatur e (-10°C for 8 hrs)	Two specimen of size 25mm x 200 mm stucked on test plates of stainless steel (completely polished plane surface); stored at standard reference atmosphere of 23±1°C and 50% relative humidity as required. After exposure brought back to room temperature and after one hour the stickers are examined.
5	Dimensional Stability	0.2% i.e. Shrinkage of sticker of dimension 200mm shall not exceed 0.6mm ±10%.	Measure the shrinkage at two location points in longitudin al and	4 Nos of 160x160mm test specimen are stuck onto degreases and etched aluminium plates with dimension of 150x150x8mm and are stored for 72 hours in at standard reference atmosphere of 23±1°C and 50% RH. The projecting test specimen is then cut with a sharp knife (razor

Document No:	MDTS-156	Revision No: 07	14 July 2023
Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches			

6	Resistance to detergents	Shall be resistant to detergent used by Indian Railways for coach cleaning Surface shall not soften or waves or bubbles and the color and the adhesive power shall not change.	para 6.1 para 6.1 t t c t c t	blade) along the test plate. Afterwards, the test specimens are stored for 48 hours at + 70°C and are then cooled down for 2 hours in standard atmosphere and measure.
6.1	Shall not change. The test is to be carried out with the two-test solution: Duration of test: 24 hours.		solution:	
	40% phos 15% emu	phoric acid lsifying agent r (distilled)	2 nd Solution: 10% Fatty alcohol polyethylene Glycol ether Sodium cumene sulphonate (40% solution) NTA liquid (40% solution) Trilon A, BASF) Tri-ethanolamine Totally de-mineralized water	
	Emulsifying agent: Oleyl-slearlyl alcohol mix (with iodine value 50) ethylene oxide. Max. Application concentration for Ist and 2nd Solution: 1:4 respectively		,	
7	Wash and Attrition Resistance	Stickers and over-laminate shall not suffer any visible colour and gloss changes, detachments, cracks, bubbles etc. during external coach	1044 using two test solution as per para 6.1	

	Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railw	ay Coaches
_		
	washing in	
	accordance with	
	Indian Railway	
	field practices.	
	Stickers shall not	
	expand.	

Revision No: 07

14 July 2023

Table 3: Characteristics of Self Adhesive Sticker.

6.2 Durability & Weathering Resistance:

Document No:

The self adhesive sticker shall have a durability of at least 5 years in permanent outdoor-exposure use. No detachment cracks, bubbles or similar effects shall occur during 5 years of application.

After 2 years in service of the self adhesive stickers, the following shall be the gloss values as per ISO2813:

High-gloss films 60° reflectometer shall be $60\pm10\%$

MDTS-156

The supplier shall submit proof of test from reputed independent laboratory (Govt. Accredited) of accelerated weathering, ultraviolet and environmental exposure as per ASTM G 152 (carbon arc) or ASTM G-155 (xenon arc). using xenon arc/QUV panel machines at 0.63 nanometer UV A lamps, with 4-hour condensation and 4 hour UV exposure for min of 250hrs. Post cycle specular gloss value, delta E color change, visual discoloration has to be reported. The color change should not be more than delta E=3, measured by approved photo spectro-densito meter (The instrument measures color value).

7 Quality Assurance, Tests & Documents:

The following table provides the overview of the system for quality assurance.

Requirement	Requirement Detail	Remarks
Description		
Quality	The manufacturer shall have the detailed quality	The QAP shall be
Assurance plan	assurance plan. The Plan shall be submitted for	submitted in PDF
	the approval by RCF/KXH. The QAP	soft copy digitally
	document shall clearly document the following	signed by the head
	and control the test record formats.	of Quality
	1. Sampling Plan	department of the
	2.Type Tests	manufacturer for
	3.Routine Tests	approval.
	4.Acceptance tests	

Rail Coach Factory ,Kapurthala	Printed on-14 July 2023
Kan Coach Factory, Kapurniaia	Page 10 of 14

Document No:	MDTS-156	Revision No: 07	14 July 2023		
Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches					

Type Tests	These tests shall be done on a sampled lot of prototype. Such Tests are required only on initial approval, change of design and change of manufacturing process or raw material. These tests are to be repeated after every 36 months or as specified. • Durability & weathering resistance	The records of the type tests shall be maintained by the manufacturer and shall be made available upon demand. These records shall be traceable and verifiable.
Routine Tests	These tests are required to verify the functional working of the system. These may require simulated in-puts for testing the operation under full range of inputs. These tests shall be done by the manufacturer during manufacturing and record maintained for inspection. These tests are to be repeated after every 12 months or as specified.	The records of the type tests shall be maintained by the manufacturer and shall be made available upon demand. These records shall be traceable and verifiable.
	 Temperature resistance Dimensionally stability Resistant to detergent Wash & and attrition 	
Acceptance tests	These tests shall be done on all or samples of lot for bulk supply. Testing & sampling shall be done as SQC processes defined in IS2500-Part1. The inspecting agency shall prepare an inspection plan and conduct the inspection. These tests shall normally consist of routine tests and additionally specified in the contract. These tests are to be carried out on each lot or as specified: • Thickness • Gloss degree • Adhesive power • Color, shape, appearance • Visual Checks • Any other parameters in this specification &	The records of the acceptance tests shall be enclosed along with the supply consignment. These records shall be traceable and verifiable.
	• Any other parameters in this specification & drawing	

Table 4:Quality Assurance, Tests & Documents

Document No:	MDTS-156	Revision No: 07	14 July 2023
Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches			

8 Marking of the Product:

- I. For identification the box of the accepted finished products shall be clearly marked with a capital letters having height of more than 50mm either by printing, stamping or needle perforation.
- II. The marking should consist of the date of manufacture (month and year for example 12/04) of the finished product as well as that of the base material (stickers).
- III. To have proper traceability, one tile on each coach shall carry identification code of the OEM and applicator and the month & year of application. The codes shall be assigned by OEMs in consultation with RCF or any other railway agency as specified in the tender.

9 Packing:

Packing shall be done as per packing instructions mentioned in the purchase order.

10 Guarantee and replacement:

- I. The time period of guarantee should be 3 years for un-stuck film.
- II. The time period of guarantee shall be as per IRS condition of contract. The supplier shall replace all the stickers rejected on final acceptance due to their non-compliance with the requirements and those product that show deficiencies during the time period of guarantee by products complying with the requirements within a period of six weeks.

11 Information to be provided by bidder / supplier:

11.1 The following information shall be provided by the bidder / supplier.

S. No.	Information to be provided	Important Note			
1.	Tender specific authorization from OEM along-with product				
	designation (make and catalogue no). The authorisation				
	given by the distributor shall not be entertained.				
2.	Letter of consent / MOU with manufacturer of the film. The	This document is required in			
	document must have unambiguous authorization and address	case the manufacturer is			
	the warranty requirements specified in this specification.	authorizing another entity to			
		bid on their behalf.			
3.	Proof of Manufacturers or authorized dealer of	The document shall contain			
	manufacturers (successful past suppliers of subject item to	the contact details (phone			
	Indian Railways) for application on exterior or interior self	number / email-ID) of the			
	adhesive stickers for passenger coaches.	purchasers. These may be			
Dail Case	Printed on-14 July 2023				
Kan Coac	ch Factory .Kapurthala	D 40 044			

Page 12 of 14

Document No:	MDTS-156	Revision No: 07	14 July 2023	
Specification for Sel	Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches			

		contacted performance	by e feed	RCF lback.	for
4.	Details of in-house infra-structures and quality control and traceability system available.				
5.	Details of manufacturing & testing facilities available with the OEM.				
6.	ISO9001 / IRIS certification of the OEM.				
7.	Printed / Published/ Brochure of technical data, material safety data sheet of the product in original (base film, ink/pigmentation, adhesive, pre-spacer, etc) proposed to be used.				
8.	All requisite test certificate from OEM/NABL accredited laboratory for the tests mentioned in this specification. The tests may have been got done by the OEM from NABL approved lab.				
9.	Clause-wise & deviation statements with respect to specification, if any.				
10.	Proof of compliance of luminous film as per ASTM E2072-14 or latest.				

Table 5 Information to be provided with the bid

11.2 Information to be supplied upon release of letter of acceptance / purchase order:

The following information shall be supplied prior to the supply of the ordered material:

S. No.	Information to be provided	Important Note
1.	Copy of the detailed QAP for the fittings ordered.	The document must contain the
		details as specified in the clause
		on quality assurance in this
		specification.
2.	All requisite test Certificates and Printed / Published/	The test certificates shall be
	Brochure of technical data,/material safety data sheet	traceable and verifiable.
	of the product in original of all parameters mentioned	
	in the spec., proposed to be used	
3.	Work Test Certificate in original from the manufacturer	Details along with address of the
	of the film and the methodology adopted by OEM to	laboratory where the testing for
	ensure testing/compliance of the product supplied by	the finished graphics shall be
	them.	carried out prior to supply along
		with test equipment list available.

Table 6: Information to be provided upon release of letter of acceptance / purchase order

11.3 Information to be supplied with the material consignment:

S. No.	Information to be provided	Important Note
1.	Copy of the detailed QAP for the fittings ordered.	The document must contain the
		details as specified in the clause
		on quality assurance in this

Rail Coach Factory ,Kapurthala	sh Factory Vananthala	Printed on-14 July 2023
	тастогу , каригшата	Page 13 of 14

Document No:	MDTS-156	Revision No: 07	14 July 2023				
Specification for Self Adhesive Stickers of Exterior & Interior Notices of Railway Coaches							

		specification.
2.	Test Certificates for type & routine tests (as detailed in the QAP). The tests may have been got done by the OEM / NABL approved lab.	The test certificates shall be traceable and verifiable.
3.	Test Certificates for acceptance tests (as detailed in the QAP). The tests may have been got done by the OEM from NABL approved lab.	
4.	ISO9001 / IRIS Certification.	
5.	Printed / Published / Brochure of technical data, material safety data sheet of the product in original (base film, ink/pigmentation, adhesive tape, pre-spacer, etc) proposed to be used.	
6.	Details of in-house infra-structures and quality control and traceability system available.	
7.	Details of manufacturing & testing facilities available with the OEM.	
8.	Product designation (make and catalogue no) for self adhesive stickers.	
9.	Work Test Certificate in original from the manufacturer of the film and the methodology adopted by OEM to ensure testing/compliance of the product supplied.	Details along with address of the laboratory where the testing for the finished graphics shall be carried out prior to supply along with test equipment list available.
10.	Tender specific authorisation from OEM along-with product designation (make and catalogue no).	
11.	Commercial invoice of purchase of base film by the firm from OEM.	
12.	Test sample (300 mm x 600mm) of base film of self adhesive stickers be supplied along with each supply.	
13.	Undertaking and self-declaration by firm that they have used the original film for printing/lamination of self adhesive stickers.	
14.	Complete packing list for the consignment.	

Table 7:Information to be provided with material consignment