



BUREAU VERITAS
Certification No.
IND.24.1828/QM/U



CMS Chemical & Metallurgical Services LLP

ISO / IEC 17025:2017 NABL Accredited Laboratory for Testing Services

T.S. No. 63A, SIDCO Industrial Estate, Ekkaduthangal, Chennai - 600 032. INDIA.
Phone : 91-44-2225 2944 Mobile : 9445067918, 9566681569
E-mail : cmslab81@gmail.com Website : www.cmslab.org



TC - 5039

TEST REPORT

Page: 1 of 2

Customer Name & Address: Assistant General Manager (Engg-Civil)-I Airport Authority of India, Chennai Airport, Chennai-600016.	ULR No. : TC503925000002885F
	Report No. : CMS/2025/06/2966
	Report Date : 27-06-2025
	Date of Received : 17-06-2025
	Date of Testing : 17-06-2025
Customer Ref No: AAI/ENGG (C)/CMD-I/Paint/2025/86 Dt. 11-06-2025	Sample Quantity : 2 Litre
	Nature of Test : Paint Test
Sample Drawn By: Customer	Test Method : AAI & ASTM 4061

TEST RESULTS

Name of works:- M/R to Runways at Chennai Airport, Chennai during the year 2024-25
SH :- Supply of Runway Marking Retro Reflective Paints, Emulsion paints and Reflective Glass Beads etc.

Contractor : M/s. ITS Coating Pvt Ltd.

2. Sample: Retro Reflective Runway Marking Paint Temp: 27 °C
Specification: AAI & ASTM 4061 Colour: Deep Red RH: 65 %

Sl. No.	Test Conducted	Observed Values	Requirement as per Spec: AAI & ASTM 4061
1.	Colour	Deep Red	Deep Red
2.	Gloss	Matt	Matt
3.	Volume solids (%)	60.86 %	Approx. 61 %
4.	Drying time at 30 degree centigrade, Surface dry	08 minutes	20 minutes , max
5.	Flexibility of paint film	No Crack observed Remarks:- Passes the test	To passes the test

P. Senthilnathan
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P. Senthilnathan



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TEST REPORT

Page: 2 of 3

Customer Name & Address: Assistant General Manager (Engg-Civil)-I Airport Authority of India, Chennai Airport, Chennai-600016.	Report No. : CMS/2025/06/2968
Customer Ref No: AAI/ENGG (C)/CMD-I/Paint/2025/86 Dt. 11-06-2025	Report Date : 27-06-2025
	Date of Received : 17-06-2025
Sample Drawn By: Customer	Date of Testing : 17-06-2025
	Sample Quantity : 2 Litre
	Nature of Test : Paint Test

TEST RESULTS

Name of works:- M/R to Runways at Chennai Airport, Chennai during the year 2024-25
SH :- Supply of Runway Marking Retro Reflective Paints, Emulsion paints and Reflective Glass Beads etc.

Contractor : M/s. ITS Coating Pvt Ltd.

4. Sample: Water Based Emulsion Paint **Tem: 27 °C**
Specification: IS : 164-2023 Type II & AAI **Colour: Deep Red** **RH: 65 %**

Sl. No.	Test Conducted	Observed Value	Requirement as per Spec: IS: 164-2023 Type II & AAI	Method of test
10. (a)	Gloss (before wear)	4	3.5 min	IS : 164 & AAI
(b)	Gloss (after wear 400 revolutions)	5	3 min	IS : 164 & AAI
11 (a)	Opacity (before wear)	78.10 %	74 % min	IS : 164 & AAI
(b)	Opacity (after wear 400 revolutions)	69.10 %	66 % min	IS : 164 & AAI
12.	Residue on 63 microns sieve	0.12 %	0.10 to 0.30 % max	IS : 164 & AAI
13.	Resistance to bleeding	The paint film does not shown bleeding. Remarks:- Passes the test	Shall not show any bleeding	IS: 164-2023 Annexure-F

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Sanjay Kumar Sahu
Authorized Signatory

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TEST REPORT

Page: 1 of 3

Customer Name & Address: Assistant General Manager (Engg-Civil)-I Airport Authority of India, Chennai Airport, Chennai-600016.	ULR No. : TC50392500002888F
	Report No. : CMS/2025/06/2969
	Report Date : 27-06-2025
	Date of Received : 17-06-2025
	Date of Testing : 17-06-2025
Customer Ref No: AAI/ENGG (C)/CMD-I/Paint/2025/86 Dl. 11-06-2025	Sample Quantity : 2 Litre
	Nature of Test : Paint Test
Sample Drawn By: Customer	

TEST RESULTS

Name of works:- M/R to Runways at Chennai Airport, Chennai during the year 2024-25
SH :- Supply of Runway Marking Retro Reflective Paints, Emulsion paints and Reflective Glass Beads etc.

Contractor : M/s. ITS Coating Pvt Ltd.

5. Sample: Water Based Emulsion Paint
Specification: IS : 164-2023 Type II & AAI Colour: Black

Tem: 27 °C
RH: 65 %

Sl. No.	Test Conducted	Observed Values	Requirement as per spec: IS: 164-2023 Type II & AAI	Method of test
1.	Colour	Black	Close match to ISC colour Where specified or to the approved	IS: 101-Pt-4/sec. 2
2.	Finish	Smooth & matt to Semi Glossy	Smooth & Matt to Semi Glossy or full glossy	IS: 101-Pt-3/sec. 4
3.	Consistency	Smooth, Uniform and suitable for application by brush/spray	Smooth, Uniform and suitable for application by brush/spray	IS: 101-Pt-1/sec. 5
4.	Drying time a) Surface dry b) Hard Dry	07 minutes 35 minutes	10 minutes , max 60 minutes, max	IS: 101-Pt-3/sec. 1 IS: 101-Pt-3/sec. 1
5.	Flexibility & Adhesion	No any visible Cracking, Flaking, or Chipping Remarks:- Passes the test	No any visible Cracking, Flaking, or Chipping	IS: 101-Pt-5/sec. 2
6.	Volume Solid	57.10 %	55 % minimum	IS: 101-Pt-8/sec. 6
7.	Non Volatile Matter	72.10 %	70 % minimum	IS: 101-Pt-4/sec. 2
8.	Mass in kg/10 litre	14.02 Kg/10 litre	-----	IS: 101-Pt-1/sec.7
9.	Taber Abrasion resistance, mg weight loss after 500 cycle using CS 10 wheel with 500 g on each load	40 mg	75mg, max	ASTM D4060

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Customer Name & Address: Assistant General Manager (Engg-Civil)-I Airport Authority of India, Chennai Airport, Chennai-600016.	Report No. : CMS/2025/06/2969
Customer Ref No: AAI/ENGG (C)/CMD-I/Paint/2025/86 Dt. 11-06-2025	Report Date : 27-06-2025
	Date of Received : 17-06-2025
Sample Drawn By: Customer	Date of Testing : 17-06-2025
	Sample Quantity : 2 Litre
	Nature of Test : Paint Test

TEST RESULTS

Name of works:- M/R to Runways at Chennai Airport, Chennai during the year 2024-25
SH :- Supply of Runway Marking Retro Reflective Paints, Emulsion paints and Reflective Glass Beads etc.

Contractor : M/s. ITS Coating Pvt Ltd.

5. Sample: Water Based Emulsion Paint
Specification: IS : 164-2023 Type II & AAI Colour: Black

Tem: 27 °C
RH: 65 %

Sl. No.	Test Conducted	Observed Value	Requirement as per Spec: IS: 164-2023 Type II & AAI	Method of test
10. (a)	Gloss (before wear)	Negligible	Negligible	IS : 164 & AAI
(b)	Gloss (after wear 400 revolutions)	Negligible	Negligible	IS : 164 & AAI
11 (a)	Opacity	Opaque	Opaque	IS : 164 & AAI
(b)	Opacity (after wear 400 revolutions)	Opaque	Opaque	IS : 164 & AAI
12.	Residue on 63 microns sieve	0.25 %	0.10 to 0.30 %	IS : 164 & AAI
13.	Resistance to bleeding	The paint film does not shown bleeding. Remarks:- Passes the test	Shall not show any bleeding	IS: 164-2023 Annexure-F

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Sanjay Kumar Sahu
Authorized Signatory

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Customer Name & Address: Assistant General Manager (Engg-Civil)-I Airport Authority of India, Chennai Airport, Chennai-600016.	Report No. : CMS/2025/06/2970
	Report Date : 27-06-2025
	Date of Received : 17-06-2025
	Date of Testing : 17-06-2025
Customer Ref No: AAI/ENGG (C)/CMD-I/ Paint/ 2025/86 Dt. 11-06-2025	Sample Quantity : 1 kg
	Nature of Test : Physical & Chemical Test
Sample Drawn By: Customer	Test Method : ASTM D1155, ASTM D1214

TEST RESULTS

Name of works:- M/R to Runways at Chennai Airport, Chennai during the year 2024-25
SH :- Supply of Runway Marking Retro Reflective Paints, Emulsion paints and Reflective Glass Beads etc.

Contractor : M/s. ITS Coating Pvt Ltd.

Description: Refractive Index of glass beads

Temp: 27 °C
RH: 65 %

Sl. No.	Test Conducted	Result	Requirement as per Federal Specification Type III
1.	Refractive Index	1.92	1.90 to 1.93
2.	Roundness (%) by mass	82.10 %	80 % min
3.	Appearance	Transparent clean, dry, free flowing and free bubbles and foreign matter. Remarks:- Passes the test	Shall be transparent clean, dry, free flowing and free bubbles and foreign matter.
4.	Gradation for Glass beads 1180 microns 850 microns 600 microns 425 microns 300 microns	% of Passing	% of Passing
		100	100 min
		69	65 to 100
		58	55 to 75
		26	15 to 35
5.	Specific gravity	4	0 to 5
		4.38 g/cc	4.00 to 4.50 g/cc

****END****

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Customer Ref No: AAI/ENGG (C)/CMD-I/ Paint/ 2025/86 Dt. 11-06-2025	Report Date : 27-06-2025
	Date of Received : 17-06-2025
Sample Drawn By: Customer	Date of Testing : 17-06-2025
	Sample Quantity : 1 kg
	Nature of Test : Physical & Chemical Test
	Test Method : ASTM D1155, ASTM D1214

TEST RESULTS

Name of works:- M/R to Runways at Chennai Airport, Chennai during the year 2024-25
SH :- Supply of Runway Marking Retro Reflective Paints, Emulsion paints and Reflective Glass Beads etc.

Contractor : M/s. ITS Coating Pvt Ltd.

Description: Refractive Index of Glass Beads

Temp: 27 °C
RH: 65 %

Sl. No.	Test Conducted	Result	Requirement as per Federal Specification Type III
6.	Resistance of acid	Passes the test	Shall not develop any surface haze or dulling
7.	Resistance of calcium chloride	Passes the test	Shall not develop any surface haze or dulling
8.	Resistance of sodium sulfide	Passes the test	The sodium sulfide should not darken the beads
9.	Water Resistance	Passes the test	Shall not produce haze or dulling of the beads and not more the 4.5 ml of 0.1 N HCl used in titration.

Remarks:- The above Refractive Index of Glass beads conforms to Federal Specification Type III as per the result reported.

****END****

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