

Laboratory **PTL & Analytical Laboratory, Sudarshan Chemical Industries Limited, 46, MIDC Estate, Dhatav, Roha, Dist.- Raigad, Maharashtra**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-7276 (in lieu of T-0845)** Page 1 of 9

Validity **12.05.2018 to 11.05.2020** Last Amended on 18.05.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I. INKS, DYES & PIGMENTS				
1.	Pigments for Industrial Paint (Organic & Inorganic Pigments)	Colour shade Full tone (Visual)	CPTL/223 Issue Date : 19/07/2010	Qualitative
		Colour shade Full Tone	Issue No.- 28	Qualitative
		DE		Up to 1.5
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		Colour shade Tint (Visual)		Qualitative
		Colour shade Tint		Qualitative
		DE		Up to 1.5
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		Colour strength Tint		95% to 105 %
		2.	Pigments for Air Drying Enamel Paint (Organic & Inorganic Pigments)	Colour shade Full tone (Visual)
Colour Shade Full Tone	Issue No.- 35			Qualitative
DE				Up to 1.5
DL				(-)0.8 to 0.8
Da				(-)0.8 to 0.8
Db				(-)0.8 to 0.8
Opacity				Less Opaque – More Opaque
Colour shade Tint (Visual)				Qualitative
Colour Shade Tint				Qualitative

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		DE		Up to 1.5
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		Colour strength Tint		95% to 105%
3.	Pigments for Offset Letter Press Ink (Organic & Inorganic Pigments)	Colour Shade Full Tone (Visual)	CPTL/201 Issue Date : 11/04/2018 Issue No.- 30	Qualitative
		Under Tone		Qualitative
		Print Tone		Qualitative
		Mass Tone		Qualitative
		Colour Shade Tint (Visual)		Qualitative
		Colour strength Tint (Visual)		95% to 105%
		Dispersion on NPRI/Hegman Gauge		Qualitative
		Texture on NPRI/Hegman Gauge		Qualitative
		Flow		2cm to 10cm
		Transparency Full Tone (Visual)		Less transparent – More transparent
4.	Pigments for Aqueous Ink (Organic & Inorganic Pigments)	Colour Shade Full Tone (Visual)	CPTL/231 Issue Date : 21/11/2006 Issue No.- 20	Qualitative
		Colour Strength Tint		95% to 105%
		Viscosity by Zhan Cup # 3 – Individuals		10 sec to 70 sec
5.	Pigments for Nitro cellulose Ink (Organic & Inorganic Pigments)	Colour shade Full tone (Visual)	CPTL/328 Issue Date : 24/01/2014 Issue No.- 21	Qualitative
		Colour Shade Tint (Visual)		Qualitative
		Colour strength Tint (Visual)		95% to 105%
		Viscosity by Zhan Cup # 3 (Individuals)		10 sec to 70 sec

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		Transparency (Full Tone)		Less transparent – More transparent
		Gloss (Full Tone)		Less Glossy – More Glossy
		Dispersion in microns		5 to 20
6.	Physical Properties of Pigments (Organic & Inorganic Pigments)	Oil Absorption (ml./100 gm)	CPTL/301 Issue Date : 07/09/2012	10 to 90
		Bleeding	Issue No.- 27	1 to 5
7.	Pigments for Air Drying Enamel Paint (Asian Paints) (Organic & Inorganic pigments)	Colour Shade Mass Tone	CPTL/501 Issue Date : 03/09/2015	Qualitative
		Colour Difference Full Tone	Issue No.- 48	Qualitative
		DL		(-)0.7 to 0.5
		Da		-1.2 to 1
		Db		(-)0.6 to 0.4
		DE		Up to 1.5
		Colour Shade Tint		Qualitative
		Colour Difference Tint		Qualitative
		DL		(-)0.7 to 0.7
		Da		(-)0.5 to 0.7
		Db		(-)0.6 to 0.7
		DE		Up to 1.3
		Tinting Strength		95% to 105%
		Dispersion on Hegman Gauge		1 to 20
	Contrast ratio - Mass Tone Individual		80 to 100	
	Opacity		Less Opaque – More Opaque	
	Gloss		Less Glossy – More	

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				Glossy 0.1 to2
8.	Pigments for Offset / Letterpress Ink (Coates) (Organic & Inorganic Pigments)	Shade Stability on over grinding Colour Difference in DE		
		Colour Shade Full Tone	CPTL/522 Issue Date : 11/04/2018 Issue No.- 18	Qualitative
		Mass Tone		Qualitative
		Under Tone		Qualitative
		Colour Strength Tint		95% to105%
		Dispersion on NPIRI/Hegman Gauge		Qualitative
		Texture on NPIRI/ Hegman Gauge		Qualitative
	Flow	2 to 20 cm		
		Transparency (Full Tone)	Less transparent – More transparent	
		Gloss Full Tone (Visual)	Less Glossy – More Glossy	
		Colour Shade Tint Tone Visual	Qualitative	
		Sheen / Bronziness of Print Tone of Full Tone	Qualitative	
9.	Pigments for Liquid Ink (Coates) (Organic & Inorganic Pigments)	Colour shade Full tone (Visual)	CPTL/525 Issue Date : 11/04/2018 Issue No.- 38	Qualitative
		Colour Strength Full Tone (Visual)		95% to105%
		Flow (%) of Ink (individuals)		Qualitative
		Transparency		Less transparent – More transparent
		Gloss		Less Glossy – More Glossy
		Dispersion in Micron (individuals)		1 to25
		Viscosity after 24 Hrs. /	10 sec to 60 sec	

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10.	Pigments for Plastic Moulding (Organic & Inorganic Pigment)	7 days	CPTL/271 Issue Date : 26/05/2008 Issue No.- 16	Qualitative
		Colour Shade Full Tone		Up to 1.5
		DE		(-)0.8 to 0.8
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		Dc		(-)0.8 to 0.8
		Colour Shade Tint		Qualitative
		DE		Up to 1.5
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		DC		(-)0.8 to 0.8
		Colour Strength Tint		95% to 105%
11.	Pigments for Plastic Application (Organic & Inorganic Pigment)	Colour Shade – Full Tone at 4 Minute	CPTL/639 Issue Date : 10/12/2015 Issue No.- 28	Qualitative
		Colour Shade Tint		Qualitative
		DE		Up to 1.5
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		DC		(-)0.8 to 0.8
		DH		(-)0.8 to 0.8
		Colour Strength Tint at 4 Minute		95% to 105%
		Dispersibility TT (1,2,4,6 Minute Visual)		Qualitative
Dispersibility Full Tone(Visual)	Qualitative			
Dispersibility Tint Tone (Visual)	Qualitative			

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		Transparency Full Tone Visual		Less transparent – More transparent
12.	Pigment	Volatile Matter	Ana/402 Issue Date : 09/03/2005 Issue No.- 05	0.1 % to 1.0 % 1.1 % to 5.0 % 5.1 % to 10.0 %
		pH	Ana/431 Issue Date : 09/03/2005 Issue No.- 08	1.0 to 7.0 7.1 to 12.0
		Conductivity [micro mhos.]	Ana/437 Issue Date : 02/08/2005 Issue No.- 06	10 to 300 301 to 1000 1001 to 3000
		Specific Gravity	Ana/405 Issue Date : 02/08/2005 Issue No.- 11	1.0 to 2.0 2.1 to 7.0
		Lead by mass	Ana / 514 Issue Date : 19/04/ 2018	0.0002 % to 0.0050% 0.0051% to 0.0100%
		Arsenic by mass	Issue No.- 07	0.0002 % to 0.0010% 0.0011 % to 0.0100%
		Barium by mass		0.0002 % to 0.0050% 0.0051% to 0.0100%
		Chromium by mass		0.0002 % to 0.0100% 0.0101 % to 0.1000%
		Antimony by mass		0.0002 % to 0.0100% 0.0101 % to 0.0500%
		Cadmium by mass		0.0002 % to 0.0050% 0.0051 % to 0.0100%
		Selenium by mass		0.0002 % to 0.0010% 0.0011 % to 0.0100%
		Mercury by mass		0.0002 % to 0.0010% 0.0011% to 0.0050%
17.	Pigments for Decorative Enamel Paint (Organic Pigments)	Colour shade Full tone (Visual)	SUDA701 Issue Date : 31/10/2017 Issue No.- 01	Qualitative -
		Colour Shade Full Tone		Qualitative -

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		DE		Up to 1.5
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		DC		(-)0.8 to 0.8
		DH		(-)0.8 to 0.8
		Opacity		Less Opaque–More Opaque
		Colour shade Tint (Visual)		Qualitative
		Colour Shade Tint		-
		DE		Up to 1.5
		DL		(-)0.8 to 0.8
		Da		(-)0.8 to 0.8
		Db		(-)0.8 to 0.8
		DC		(-)0.8 to 0.8
		DH		(-)0.8 to 0.8
		Colour strength Tint		95% to105%
18.	Pigments for Industrial Paint (Organic Pigments)	Colour shade Full tone (Visual)	SUDA702 Issue Date : 12/03/2018 Issue No.- 07	Qualitative
		Colour shade Full Tone		Qualitative
		DE	Up to 1.5	
		DL	(-)0.8 to 0.8	
		Da	(-)0.8 to 0.8	
		Db	(-)0.8 to 0.8	
		DC	(-)0.8 to 0.8	
		DH	(-)0.8 to 0.8	
		Colour shade Tint (Visual)	Qualitative	
		Colour shade Tint	Qualitative	
		DE	Up to 1.5	

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		DL		(-)0.8 to 0.8		
		Da		(-)0.8 to 0.8		
		Db		(-)0.8 to 0.8		
		DC		(-)0.8 to 0.8		
		DH		(-)0.8 to 0.8		
		Colour strength Tint		95% to105%		
19.	Pigments for NC –PU based liquid Ink (For Organic & Inorganic Pigments)	Colour shade Full tone (Visual)	SUDA706 Issue Date : 11/04/2018 Issue No.- 02	Qualitative		
		Transparency _ Gray Scale		Less transparent – More transparent		
		Viscosity by Zhan Cup # 3 (Individuals) in sec		10 to 70		
				Color Shade Tint _ DE		Up to 1.50
				Color Shade Tint _ DL		(-)0.8 to 0.8
				Color Shade Tint _ Da		(-)0.8 to 0.8
				Color Shade Tint _ Db		(-)0.8 to 0.8
		Color Shade Tint _ DC		(-)0.8 to 0.8		
		Color Strength –Tint		95% to105%		
20.	Pigments for Aqueous Ink (For Organic Pigments)	Colour shade Full tone (Visual)	SUDA710 Issue Date : 01/04/2016 Issue No.- 01	Qualitative		
		Viscosity by Zhan Cup # 3 (Individuals) in sec		10 to30		
				Color Shade Tint _ DE		Up to 1.5
				Color Shade Tint _ DL		(-)0.80 to 0.80
				Color Shade Tint _ Da		(-)0.80 to 0.80
				Color Shade Tint _ Db		(-)0.80 to 0.80
				Color Shade Tint _ DC		(-)0.80 to 0.80
		Color Strength Tint		95% to 105%		
21.	Pigments for PVC application (For Organic	Colour shade Full tone (Visual)	SUDA711 Issue Date : 20/01/2012 Issue No.- 00	Qualitative		
		Color Shade Tint _DE		Up to 1.5		

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	Pigments)	Color Shade Tint _DL		(-)0.80 to 0.80
		Color Shade Tint _Da		(-)0.80 to 0.80
		Color Shade Tint _Db		(-)0.80 to 0.80
		Color Shade Tint _DC		(-)0.80 to 0.80
		Color Strength Tint		95% to105%
22.	Pigments for Thin wall articles in Plastic application (Organic & Inorganic Pigments)	Filter Indexin Bars/gm	SUDA712 Issue Date : 20/01/2012 Issue No.- 00	0.2 to5.0