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TEST REPORT

Clear Optic Material Samples Graffiti

Prepared For:

Sam Truong
Optic Clear Solutions
46 Tessera Avenue
Foothill Ranch, CA 92610

PROJECT NO.:	PR062771			
P.O. NO.:	Credit Card 133758			
REVISION NO.:	R1			
ISSUE DATE:	05/10/17			
SECURITY CLASSIFICATION:	Unclassified			
DESCRIPTION OF ITEMS	Clear Optic Material Samples			
TESTED:	SN00006 and SN00007			

Approval:

PREPARED BY:		5 0 -
	Erik Rohr – Test Technician III	ERIK HOHR
APPROVED BY:		ast .
	Jit Gupta – Quality Manager	σ

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PROJECT NO.

PR062771

PO NO.

CC 133758

Page

2

43

of

Pages

TABLE OF CONTENTS

TEST SUMMARY	3
GRAFFITI TEST REPORT	4
TEST PROCEDURE	4
TEST RESULTS	
PHOTOGRAPHS	
REVISIONS	43



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PROJECT NO. PR062771 PO NO. CC 133758 Page 3 of 43 Pages

TEST SUMMARY

Test Title	Test Dates	Specification	Results
Graffiti	05/08/17 to 05/09/17	OCS-TP-0002 ref ASTM D6578-13	Conform



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PROJECT NO.

PR062771

PO NO.

CC 133758

Page

4

of 43

Pages

GRAFFITI TEST REPORT

TEST DATES

05/08/17 to 05/09/17

TEST SPECIMENS

Two (2) Clear Optic Material Samples

REFERENCES AND REQUIREMENTS

OCS-TP-0002 ref ASTM D6578-13

TEST PROCEDURE

A grid of markings was applied to each material sample, and six types of solvent were used to remove the markings, as follows:

- 3.1.1. Marking Materials
 - 3.1.1.1. Solvent-Based Permanent Ink Marker "BLUE"
 - 3.1.1.2. Solvent-Based Acrylic Spray Paint "RED"
 - 3.1.1.3. Solvent-Based Alkyd Spray Paint "RED"
 - 3.1.1.4. Wax Crayon "BLUE"
 - 3.1.1.5. Ballpoint Ink
 - 3.1.1.6. Water-based Ink Marker, "BLACK"
- 3.1.2. Cleaning Agents
 - 3.1.2.1. Dry, Lint-Free Cotton Cloth
 - 3.1.2.2. Mild Detergent 5% sodium phosphate
 - 3.1.2.3. Isopropyl Alcohol
 - 3.1.2.4. Mineral Spirits
 - 3.1.2.5. Xylene
 - 3.1.2.6. Methyl Ethyl Ketone (MEK)

Form-5.10-001 Rev: R11 Dated: 03/21/2017

Form Prepared by: Testing

Form Approved by: Quality



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PROJECT NO. PR062771 PO NO. CC 133758 Page 5 of 43 Pages

LIST OF ANY DEVIATION/EXCLUSION FROM AGREED TEST METHOD

None

TEST RESULTS

Testing was conducted as described in the test procedure section above. All markings were removed by scrubbing with the dry cotton cloth. The cleanability rating was 10. Note however, that the blue solvent based marker and red alkyd spray paint could not be removed using the mild detergent after either 4 hour or 24 hours. All other cleaners removed all other markings.



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PROJECT NO. PR062771 PO NO. CC 133758 Page 6 of 43 Pages

PHOTOGRAPHS



Solvent-Based Permanent Ink Marker - Blue (Sharpie)

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PROJECT NO. PR062771 PO NO. CC 133758 Page 7 of 43 **Pages** premium**decor** HIGH GLOSS Waterbased Acrylic Enamel INDOOR FAST DRYING OUTDOOR SOAP & WATER ONE COAT CLEANUP COVERAGE One 1/2 Pint (236 m) PDL-96 Fiesta Red 705212

Solvent-Based Acrylic Spray Paint - Red



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PROJECT NO. PR062771 PO NO. CC 133758 Page 8 of 43 **Pages** TRUSTED QUALITY SINCE 1921 GLOSS PROTECTIVE ENAMEL SUPERIOR COVERAGE & DURABILITY NET WT. 12 0Z. 3409

Solvent-Based Alkyd Spray Paint - Red



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Wax Crayon - Blue



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Page PROJECT NO. PR062771 PO NO. CC 133758 10 of 43 **Pages**

Ballpoint Pen Ink





Water-Based Ink Marker - Black



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Dry, Lint-Free Cotton Terry Cloth



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PROJECT NO. PR062771 PO NO. CC 133758 Page 13 of 43 **Pages** SAVOGRAN Trisodium Phosphate **Heavy duty cleaner Use TSP before painting** Limpiador para tareas difíciles Use TSP antes de pintar **■ Cleans surfaces in preparation for painting** for better durability and adhesion ■ The original deck and siding cleaner Effectively controls lead paint dust WARNING: HARMFUL IF SWALLOWED. EYE AND SKIN IRRITANT. MAY CAUSE BURNS (see other cautions on back panel) NET WT. 16 OZ. (1 LB) - (454 g) 10621

Mild Detergent – 5% Sodium Phosphate



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PROJECT NO. PR062771 PO NO. CC 133758 Page 14 of 43 **Pages** BDH1133-4LP | Size: 4L ACS Lot: 063016D | Use by/Exp: 12/2017 Date Opened/Ouvert: Isopropyl Alcohol CAS NO 67-63-0 | MW/PM 60.11 g/mol | Formula/e C3H8O Stient Specifications (Refer to C of A for Complete List) Alcool Isopropylique Suitable for General Laboratory Use (Also suitable for Histology / Cytology) Meets ACS Specifications

Isopropyl Alcohol



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PROJECT NO. PR062771 PO NO. CC 133758 Page 15 of 43 **Pages** USED IN: 99909 sunnyside
Perker mineral Solventes Minerales Low odor Ideal for cleanup after painting Thins oil based paints ONE GALLON ■ (3.785 LITERS)

Mineral Spirits



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PROJECT NO. PR062771 PO NO. CC 133758 Page 16 of 43 **Pages** sunnyside **Xylol** xileno Enamel reducer, Powerful solvent for: Porch & deck enamels. Anti-rust paints. 32 FL.OZ.(1QT.) ■.9463 LITER

Xylene

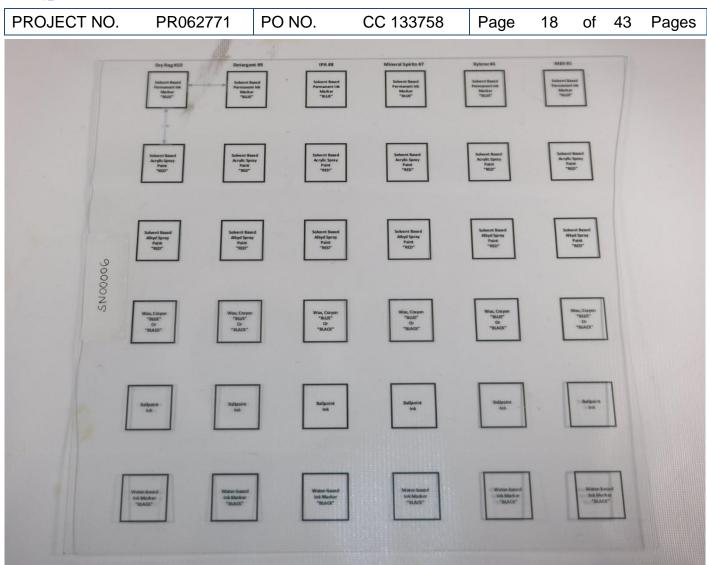


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Page PROJECT NO. PR062771 PO NO. CC 133758 17 of 43 **Pages** Alfa Aesar Received: 02/05/15

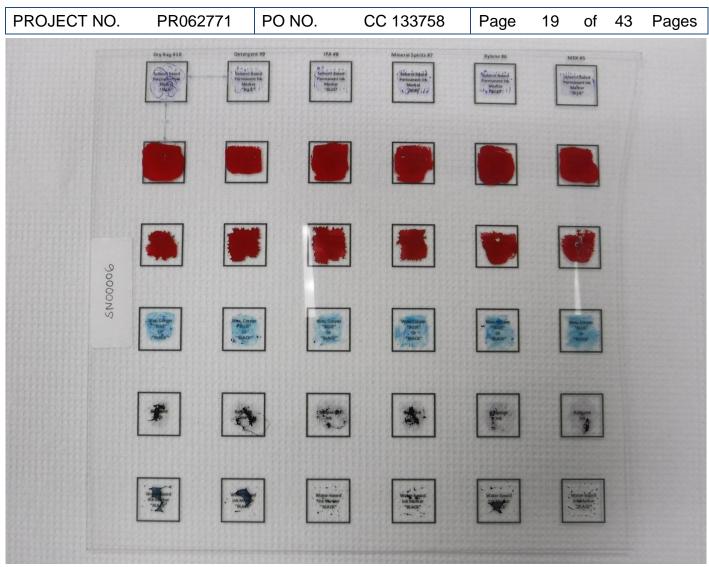
Methyl Ethyl Ketone (MEK) (2-Butanone)





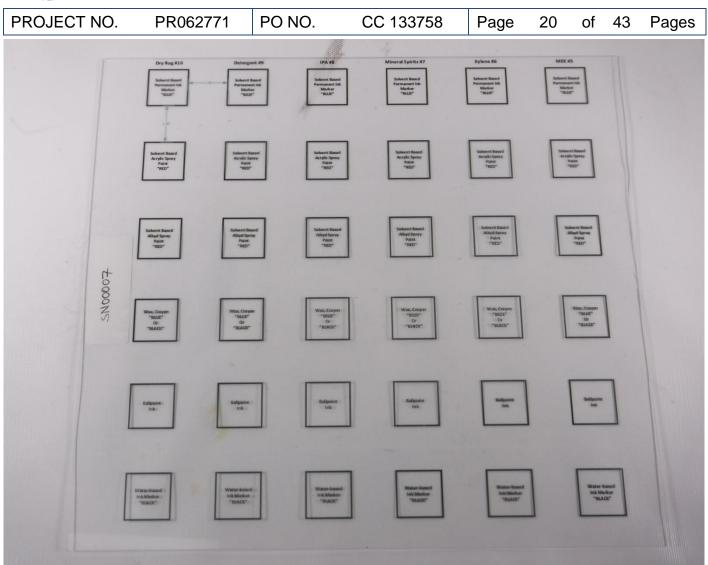
SN00006 Before Test





SN00006 During Test





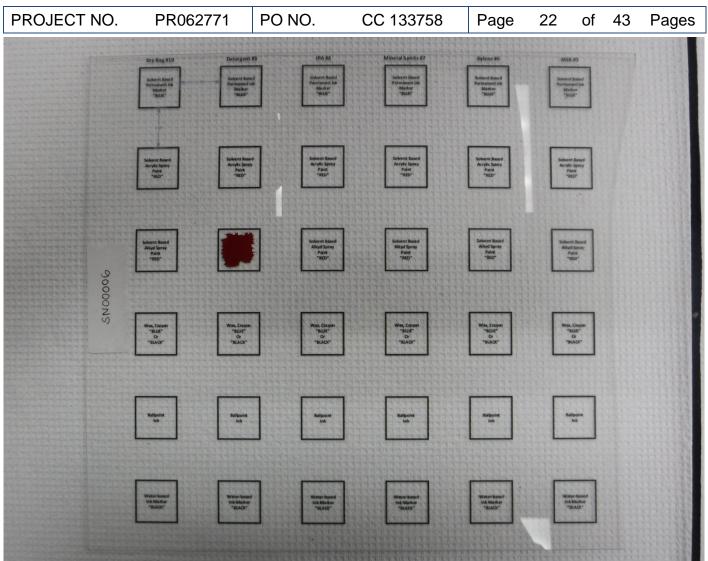
SN00007 Before Test



PROJECT NO.	PR06277	′1 PO N	IO. C	C 133758	Page	21 of	43	Pages
	Ory Rag #10	Detergent #9 Solvent Raved Remained the Market , "BESS"	Scherrt Based Formaniers (etc. Moker - 1984)	Mineral Spirits 87 Solvent Basis Permanent isk Minister "SULE"	Xylene #6 Solvent Soud Found Add to the Parket South Factor Factor South Factor Facto	MEK #5 Dolore time Permanent in Maker Mak		
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70000NS		An Com-	Sing Coupling of State of Stat	sas, Carion A sur Side	Was Crops Sales Sales Sales	But Coyon		
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	-Materians Programme Control		The Agranged State of the State	Control of the Contro	William height	Write his a line of the line o		

SN00007 During Test





SN00006 After Test



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Page PROJECT NO. PR062771 PO NO. CC 133758 23 of 43 **Pages** SN00008

SN00006 (and Comparison SN00008) After Test

Form-5.10-001 Rev: R11 Dated: 03/21/2017 Form Prepared by: Testing



PROJECT NO.	PR062771	PO NO.	CC 133758	Page	24 of 43	Pages
	Ony Rag 810 Solvent Based Permanent Ink Marker "SALE" Solvent Rased Permanent Ink Marker "SALE"	THE RESERVED IN	Mineral Spirite #7 Soles of Base d Person for de Market C	Solviero Sued Solviero Sued Servine per la de Solviero "SUUI"	Solvent Sound Pointered Soil Contract Soil Contract Soil	
	Solvent Based Acytic Spray Point "BED" Solvent Base Acytic Spray Point "BED" Solvent Base Acytic Spray Point "BED"	Sobern Based Acrylic Soney Print Tall D'	Solvent Based Acrylic Spory Paint "RED"	Solvent Based Acrylic Spray Paint "RED"	Solvent Based Acres (sery Palet *860*	
+	Solvent Based Altyd Spray Paint *RED*	Solvent Based Alteral Sonor Pair "NEO"	Solvent Based dilyd Spriny Paire "RED"	Solvent Based Allyd Spray Paint "RED"	Solvent Based Aloyd Sprey Point "RED"	
70000NS	Was, Cayyon "BULF" "BULF" "C" "BLACK" "BLACK"	Wax, Crayon "BLUE" Or "BLACK"	Was, Coyon "BLUE" O' "BLACK"	Wei, Crayon BUUF Or TRIACX	Was, Cayen Was, Cayen Or TRACT	
	Ballpoire Ballpoire Ink	Ballyoint tok	Ballpoire	Salpoint Ink	Ralpoirt est	
	Water-based bis Marker - bis Marker - bis Marker - bis Marker - 'BLACK' "BLACK'	wid Water-based lob blacker "SLACK"	Water-based Into Marker *BLACK*	Water-based to Micker "BACK"	Water-hanced and Malaker "SAGS"	

SN00007 After Test



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Page PROJECT NO. PR062771 PO NO. CC 133758 25 of 43 **Pages** SN00009

SN00007 (and Comparison SN00009) After Test



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PROJECT NO. PR062771 PO NO. CC 133758 Page 26 of 43 Pages



Samples After Test



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Page PROJECT NO. PR062771 PO NO. CC 133758 27 of 43 **Pages**

SN00006 After Test - Alkyd Paint Red (Detergent)



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PROJECT NO. PR062771 PO NO. CC 133758 Page 28 of 43 **Pages** Solvent Based

SN00006 After Test - Representative Acrylic Spray Paint Red



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Pages PROJECT NO. PR062771 PO NO. CC 133758 Page 29 of 43

SN00006 After Test - Representative Alkyd Spray Paint Red



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Page Pages PROJECT NO. PR062771 PO NO. CC 133758 30 of 43

SN00006 After Test - Representative Ballpoint Ink



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PROJECT NO. PR062771 PO NO. CC 133758 Page 31 of 43 **Pages** Solvent Based Permanent Ink

SN00006 After Test - Representative Solvent Based Ink Marker



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Page PROJECT NO. PR062771 PO NO. CC 133758 32 of 43 **Pages**

SN00006 After Test - Representative Water Based Ink Black



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Page **Pages** PROJECT NO. PR062771 PO NO. CC 133758 33 of 43

SN00006 After Test - Representative Wax Crayon Blue



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PROJECT NO. PR062771 PO NO. CC 133758 Page 34 of 43 **Pages** Detergent #9

SN00006 After Test - Solvent Based Ink Blue (Detergent)



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Page **Pages** PROJECT NO. PR062771 PO NO. CC 133758 35 of 43

SN00007 After Test - Alkyd Spray Paint Red (Detergent)



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PROJECT NO. PR062771 PO NO. CC 133758 Page 36 of 43 **Pages**

SN00007 After Test - Representative Acrylic Spray Paint Red



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Page PROJECT NO. PR062771 PO NO. CC 133758 37 of 43 **Pages**

SN00007 After Test - Representative Alkyd Spray Paint Red



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Page **Pages** PROJECT NO. PR062771 PO NO. CC 133758 38 of 43

SN00007 After Test - Representative Ballpoint Ink



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Page PROJECT NO. PR062771 PO NO. CC 133758 39 of 43 **Pages**

SN00007 After Test - Representative Solvent Based Ink Blue



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PROJECT NO. PR062771 PO NO. CC 133758 Page 40 of 43 **Pages** Water-based

SN00007 After Test - Representative Water Based Ink Marker Black



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Pages PROJECT NO. PR062771 PO NO. CC 133758 Page 41 of 43

SN00007 After Test - Representative Wax Crayon Blue



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PROJECT NO. PR062771 PO NO. CC 133758 Page 42 of 43 **Pages** Solvent Based

SN00007 After Test - Solvent Based Ink Marker Blue (Detergent)



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PROJECT NO. PR062771 PO NO. CC 133758 Page 43 of 43 Pages

REVISIONS

Revision #	Reason for Revision	Date
R0 R1	Initial Release Markers and solvents photograph sequence was arranged to match the test plan	05/10/17 05/16/17