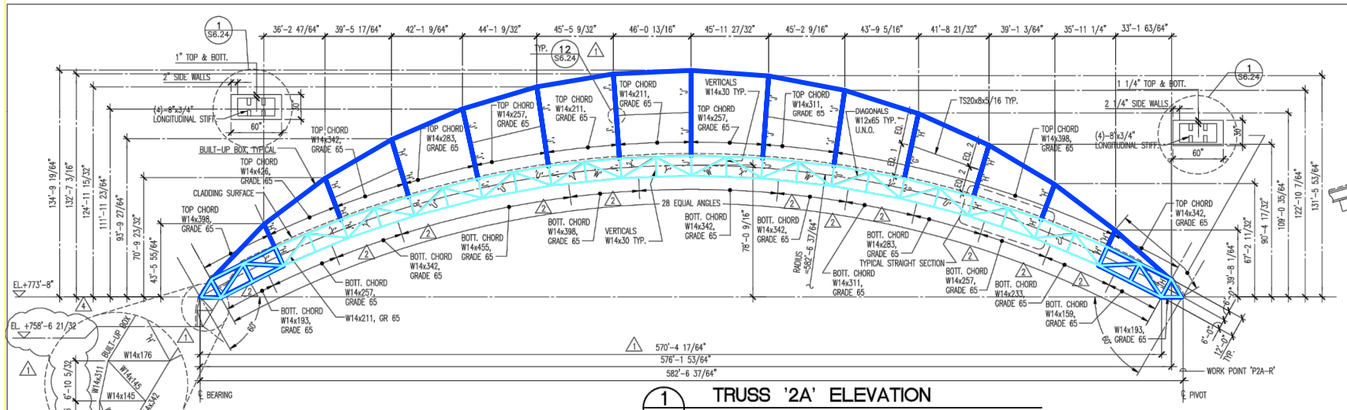
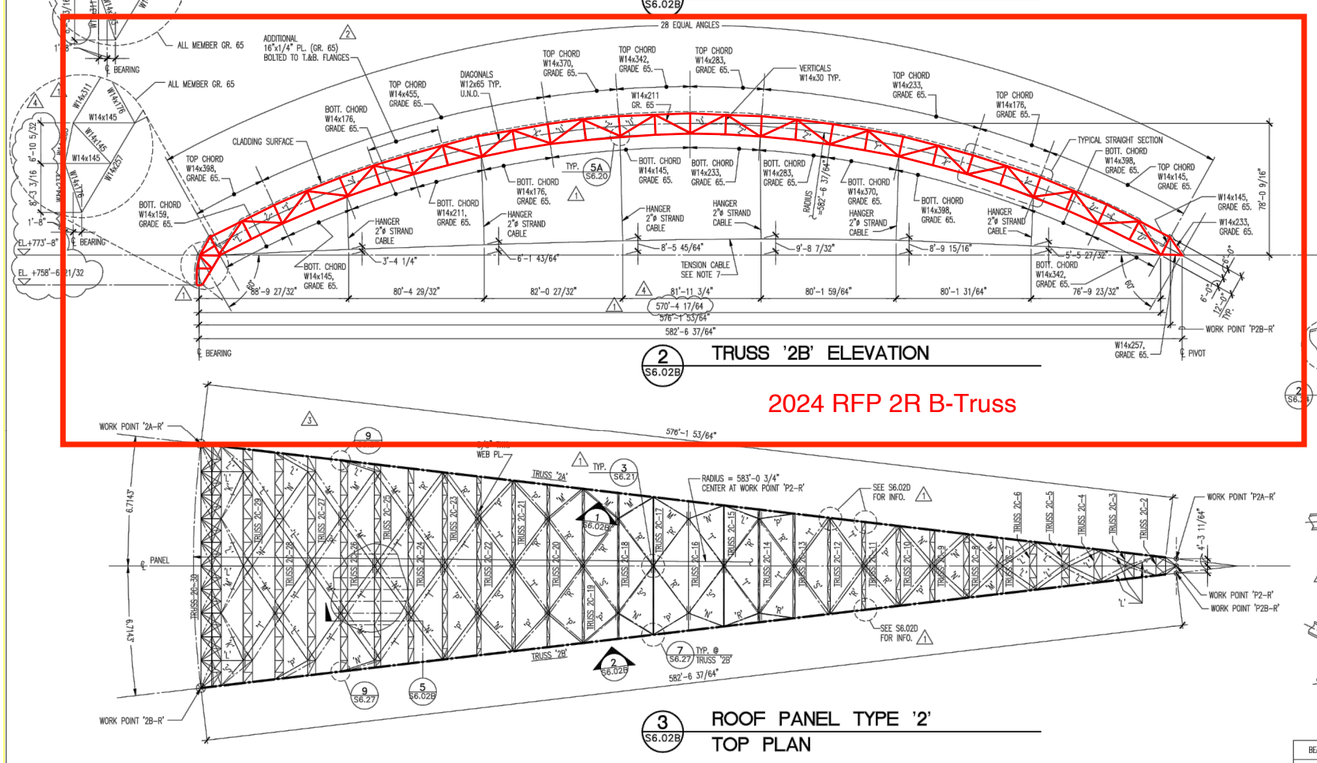
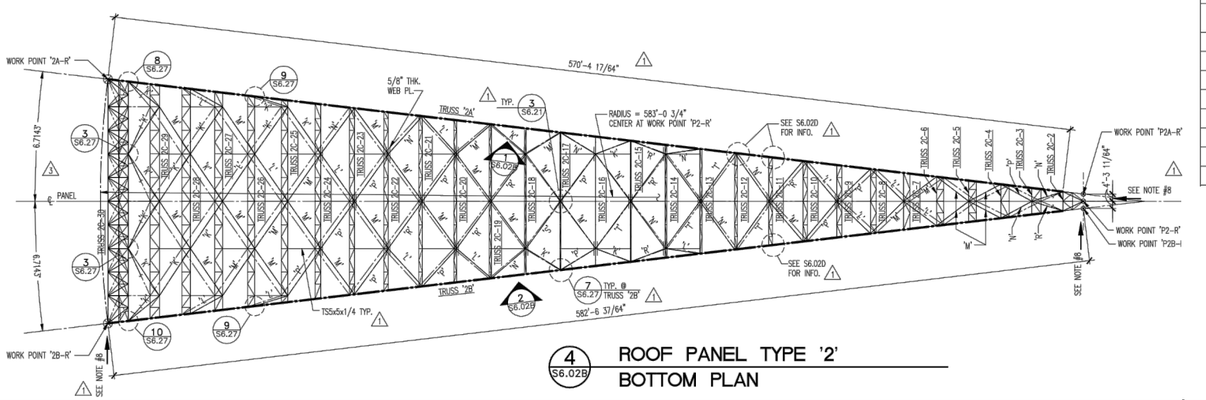
APPENDIX A

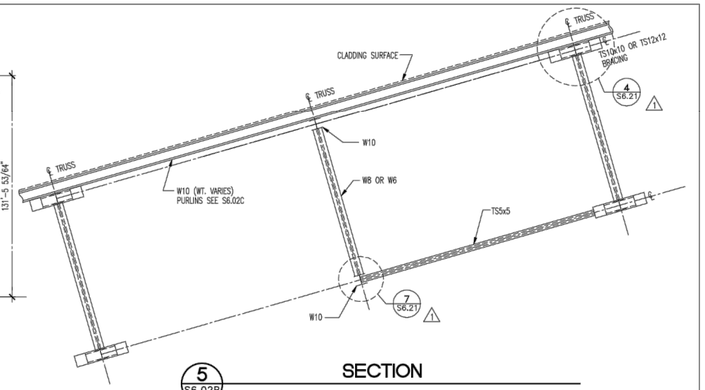
2R-B Truss, 3L spot, and 4L spot Painting Drawings
and Specifications

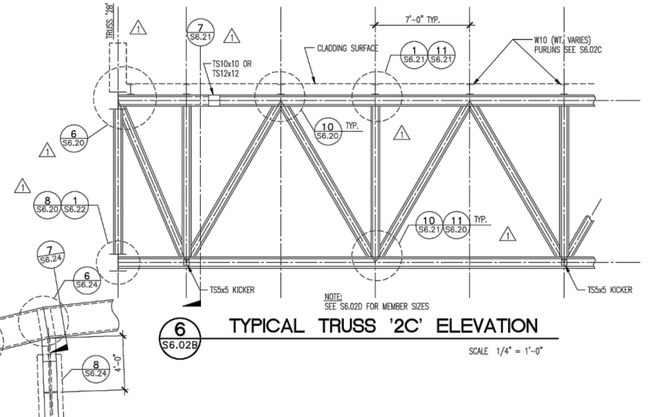


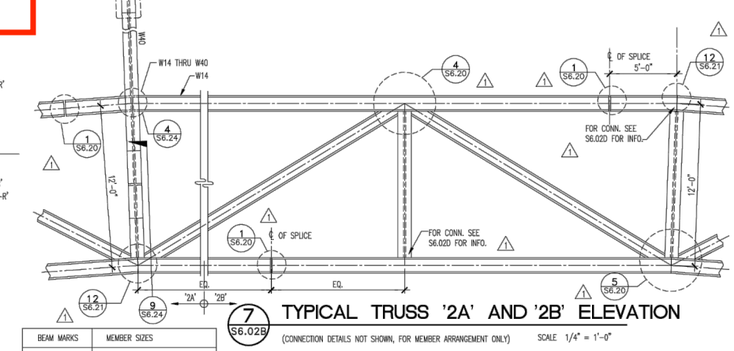


2024 RFP 2R B-Truss

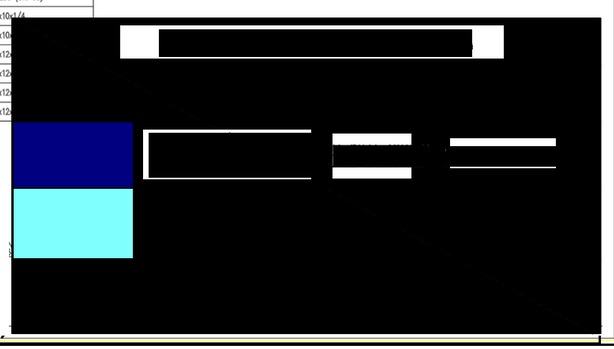








BEAM MARKS	MEMBER SIZES
"G"	W40x235 (GR. 65. W/ 1/2" WEB PL. @ EA. SIDE GR. 50)
"H"	W40x235 (GR. 65)
"J"	W44x290 (GR. 65)
"K"	TS10x10x1/4
"L"	TS10x10
"M"	TS12x12
"N"	TS12x12
"P"	TS12x12
"R"	TS12x12



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Milwaukee Brewers Baseball Club
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414.933.4144

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Flad Structural Engineers
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608.238.2661

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414.679.1881

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Milwaukee, WI 53225
414.527.2773

Graphics Designer:
Sussman Prejza
Culver City, CA 90232
310.836.3939

KEY MAP

PER RECORD SET

Job No: 5128

Revision:

	B.P. "L" ADDENDUM #8 10-23-97
1	B.P. "L" ADDENDUM #10 11-6-97
2	B.P. "L" ADDENDUM #11 11-11-97
3	B.P. "L" ADDENDUM #25 3-18-98
4	B.P. "L" ADDENDUM #27 4-17-98

Date: OCT. 23, 1997
Scale: 1/32" = 1'-0"

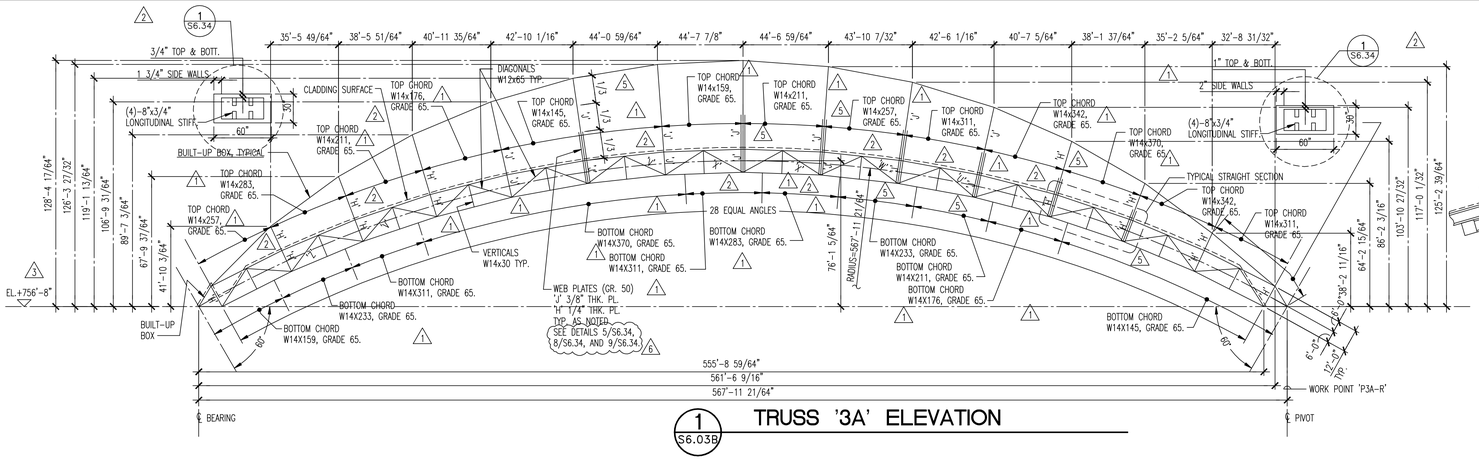
Sheet Title:
STRUCTURAL
ROOF PANEL DETAILS
PANEL TYPE '2' (RF)

Sheet No:
S6.02B ©1998 HKS Inc.

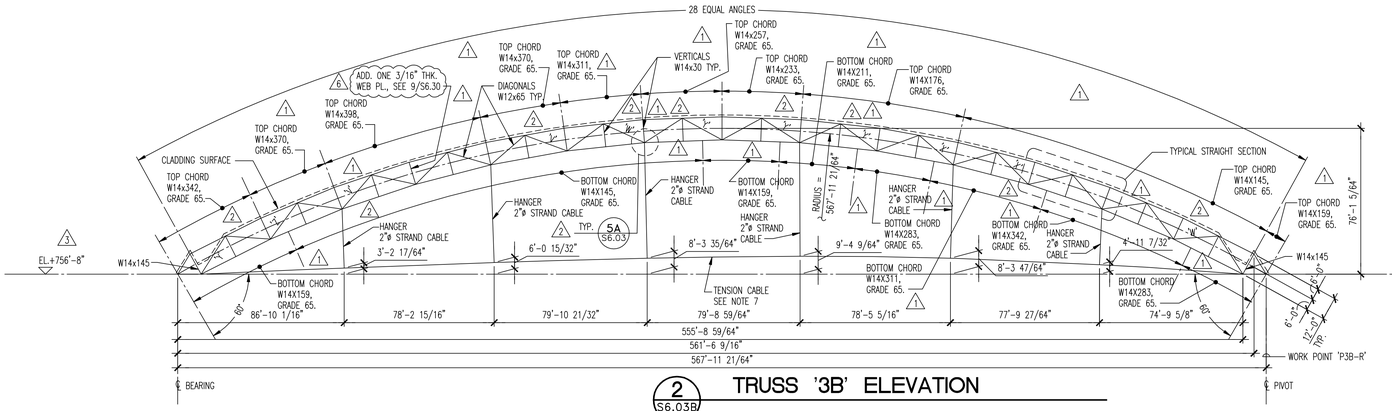
ROOF PANEL PAINTING PROJECTS

PANEL REF NO.:
2R

File: I:\Miller Park\00000 Roof Painting Schedule\060 CAD\C - Civil\500 Production - General\010 Roof Panels_Painting Schedule\13725-C050-2R.dwg

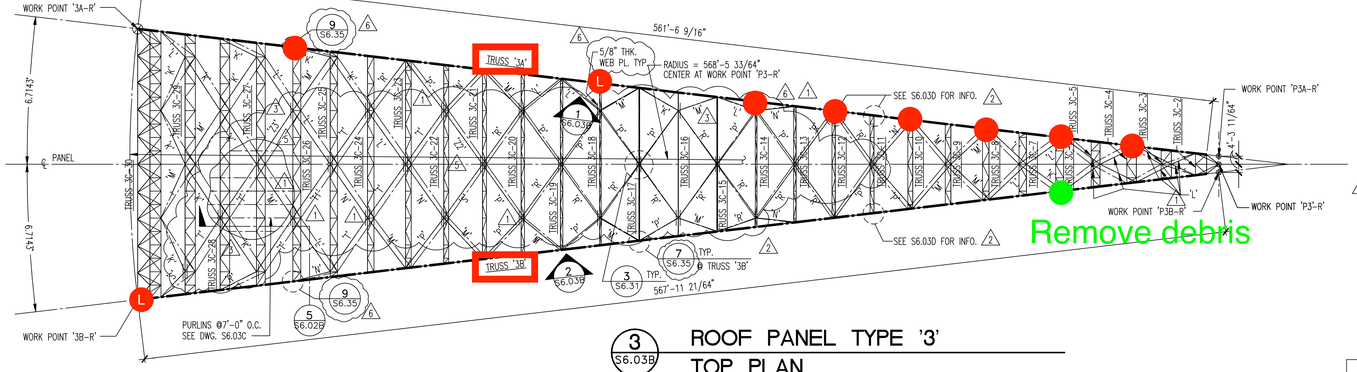


1 S6.03B TRUSS '3A' ELEVATION



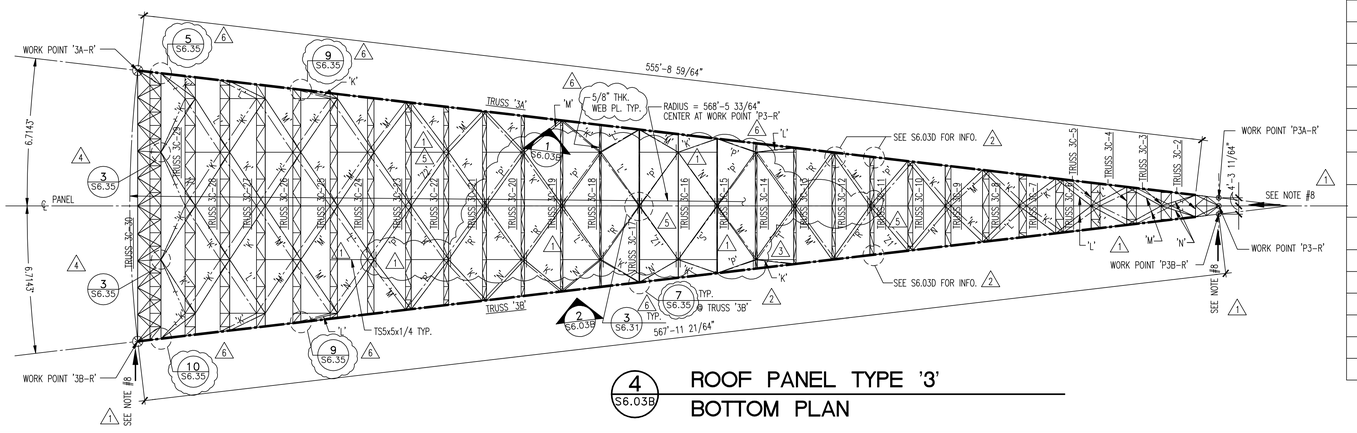
2 S6.03B TRUSS '3B' ELEVATION

3L Spot Painting



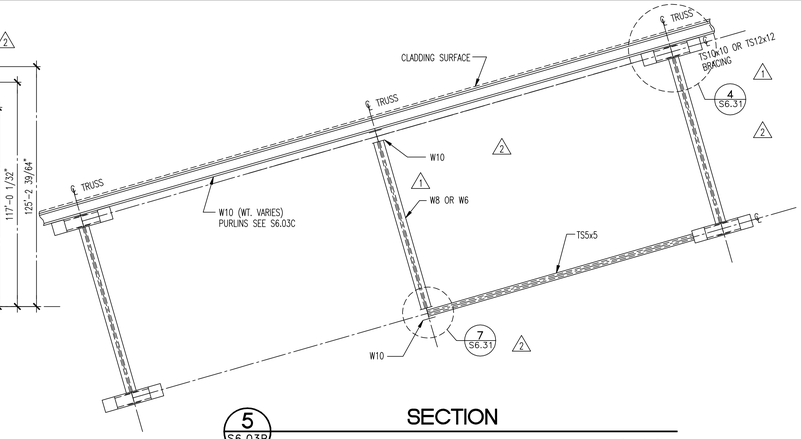
Remove debris

3 S6.03B ROOF PANEL TYPE '3' TOP PLAN



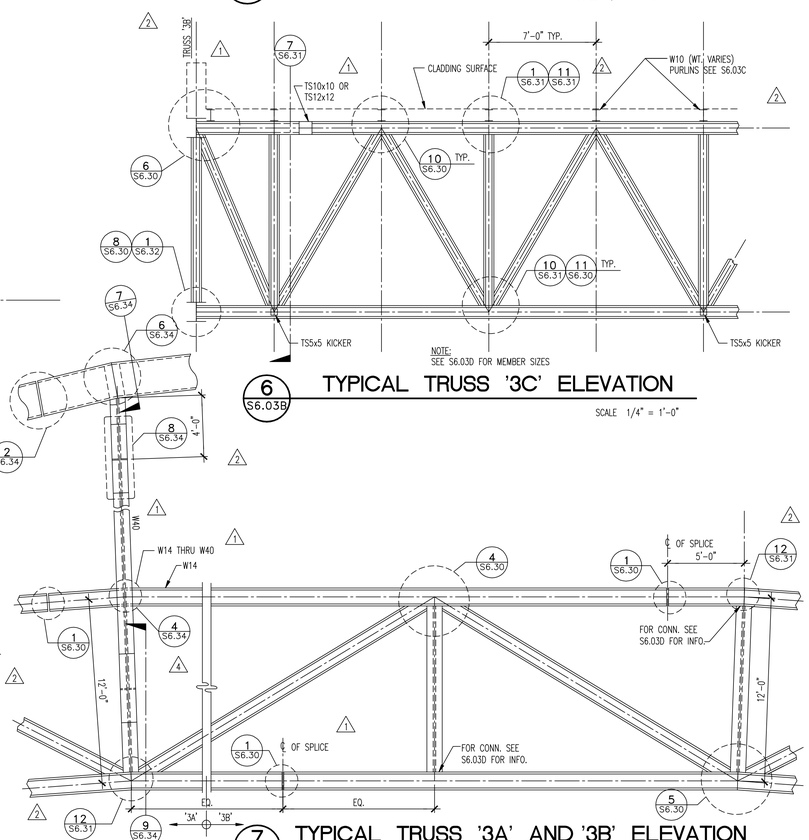
4 S6.03B ROOF PANEL TYPE '3' BOTTOM PLAN

BEAM MARKS	MEMBER SIZES
'H'	W40x235 1
'J'	W40x249
'K'	TS10x10x1/4
'L'	TS10x10x5/16
'M'	TS12x12x5/16
'N'	TS12x12x3/8
'P'	TS12x12x1/2
'R'	TS12x12x5/8
'S'	TS10x10x5/8 WITH (2)-16"x3/8" THK. PL.
'T'	TS10x10x5/8 WITH (2)-16"x3/4" THK. PL.
'T1'	TS10x10x5/8 WITH (2)-17"x1" THK. PL.
'U'	W12x79
'V'	W12x87 1
'W'	W12x96
'X'	W12x106
'Y'	W12x120
'Z'	W12x136



5 S6.03B SECTION

SCALE 1/4" = 1'-0"



6 S6.03B TYPICAL TRUSS '3C' ELEVATION

SCALE 1/4" = 1'-0"

7 S6.03B TYPICAL TRUSS '3A' AND '3B' ELEVATION

(CONNECTION DETAILS NOT SHOWN, FOR MEMBER ARRANGEMENT ONLY) SCALE 1/4" = 1'-0"

BEAM MARKS	MEMBER SIZES
'Z1'	TS10x10x5/16 WITH (2)-8 1/2"x1/4" THK. PL.
'Z2'	TS12x12x3/8 WITH (2)-10 1/2"x1/4" THK. PL.
'Z3'	TS12x12x1/2 WITH (2)-10"x1/4" THK. PL.

NOTES:
1. PANEL TYPE 3(RF) AS SHOWN, PANEL TYPE 3(LF) SIMILAR HANDED.
2. SEE SHEET S2.07 AND ARCHITECTURAL DRAWINGS FOR OVERALL SETTING OUT.
3. SEE SHEETS S6.03A – 3D VIEWS
   S6.03C – PURLIN LAYOUT
   S6.03D – SECONDARY TRUSSES
   S6.03E – MEMBER SIZE SCHEDULE (TRUSS 3C)
4. ALL STEEL ASTM A572 GRADE 50 UNLESS NOTED OTHERWISE.
5. STEEL TUBES ASTM A500 GRADE B.
6. TRUSS CHORD ASTM A913 GRADE 65 WHERE SHOWN.
7. TENSION CABLE:
   MIN. BREAKING LOAD: = 6,400 K
   MIN. STIFFNESS: ExA = 770,000 (K/in^2 xin^2)
8. ◄— INDICATES DIRECTION OF LATERAL RESTRAINT.

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Graphics Designer:
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KEY MAP

PER RECORD SET

Job No: 5128

Revision:

	B.P. 'L' ADDENDUM #2	8-20-97
1	B.P. 'L' ADDENDUM #3	9-17-97
2	B.P. 'L' ADDENDUM #8	10-23-97
3	B.P. 'L' ADDENDUM #11	11-10-97
4	B.P. 'L' ADDENDUM #13	11-17-97
5	B.P. 'L' ADDENDUM #17	12-19-97
6	B.P. 'L' ADDENDUM #22	2-24-98

Date: AUGUST 20, 1997
Scale: 1/32" = 1'-0"

Sheet Title:
STRUCTURAL ROOF PANEL DETAILS PANEL TYPE '3' (RF)

Sheet No:
S6.03B

XRefs: TBLK
File Date:
File: S603.DWG
Plot date:

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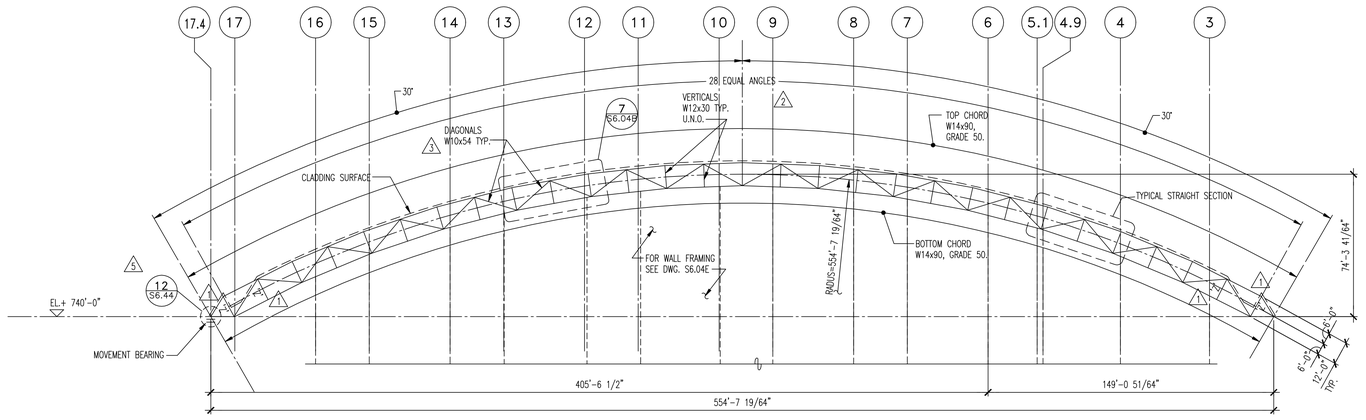
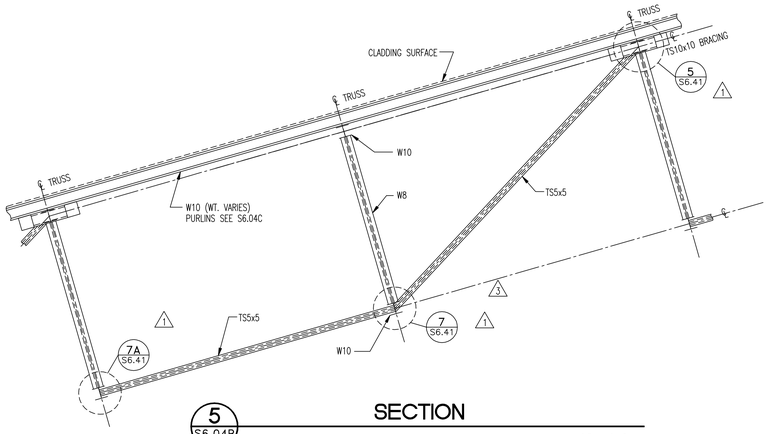


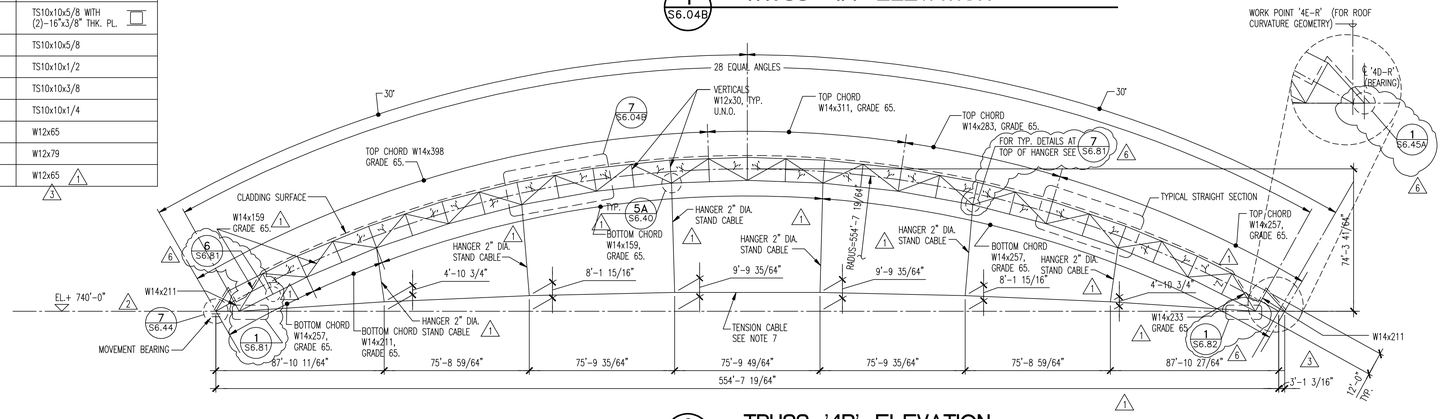
1 S6.04B TRUSS '4A' ELEVATION

MEMBER MARKS	MEMBER SIZES
'A'	TS10x10x5/8 WITH (2)-16"x3/8" THK. PL.
'B'	TS10x10x5/8
'C'	TS10x10x1/2
'D'	TS10x10x3/8
'E'	TS10x10x1/4
'X'	W12x65
'Y'	W12x79
'Z'	W12x65



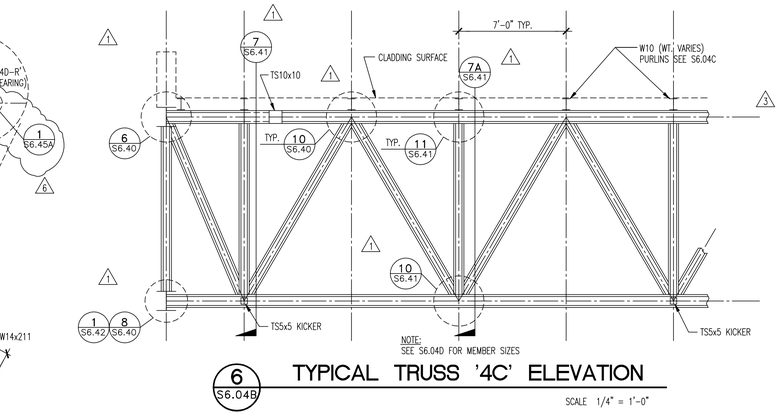
5 S6.04B SECTION

SCALE 1/4" = 1'-0"



Spot Paint at C to A Truss Connection

2 S6.04B TRUSS '4B' ELEVATION



6 S6.04B TYPICAL TRUSS '4C' ELEVATION

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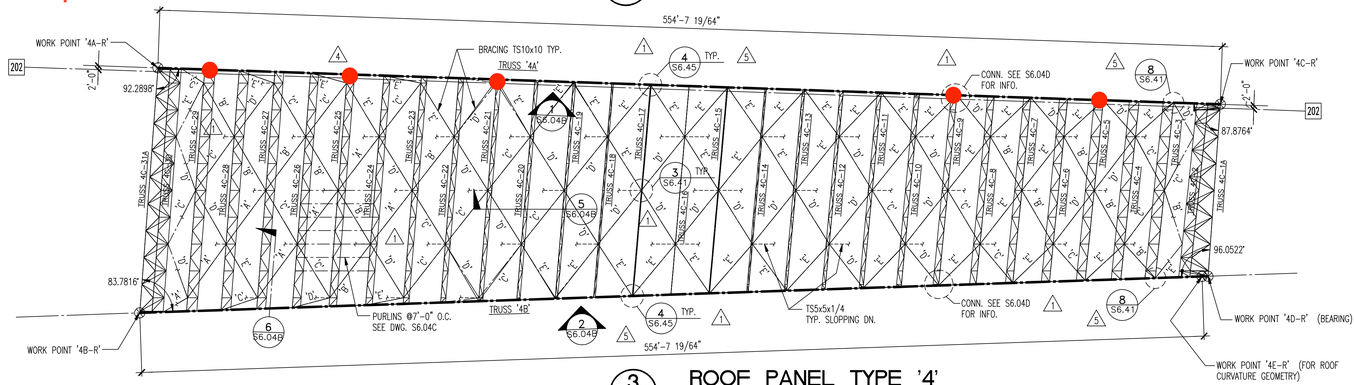
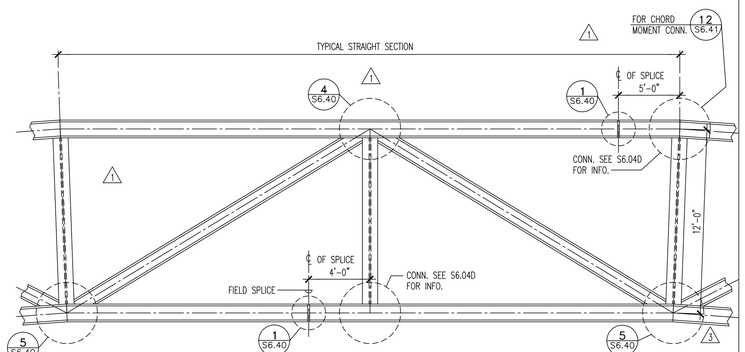
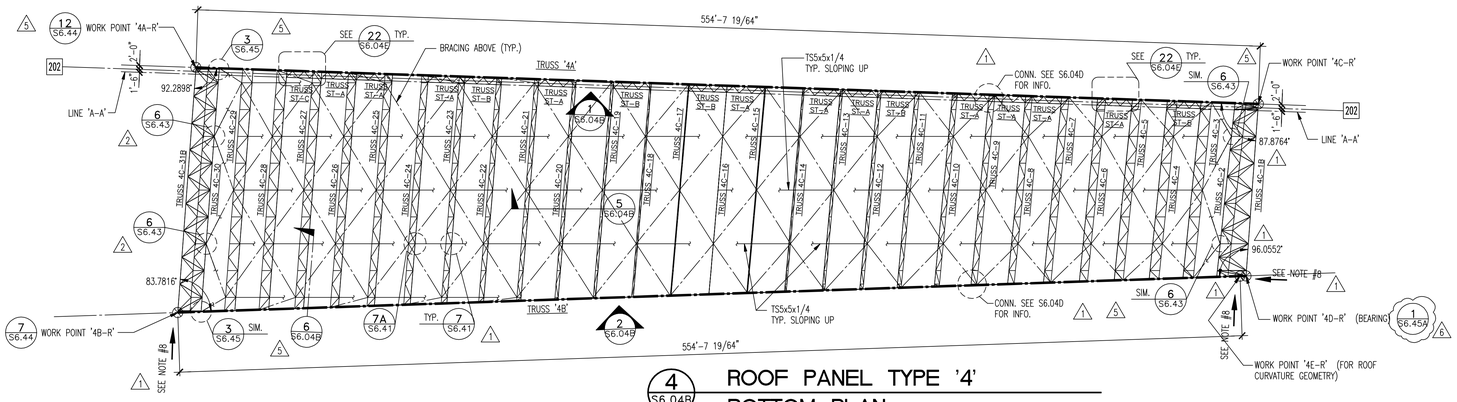


3 S6.04B ROOF PANEL TYPE '4' TOP PLAN



7 S6.04B TYPICAL TRUSS '4A' AND '4B' ELEVATION

(CONNECTION DETAILS NOT SHOWN) SCALE 1/4" = 1'-0"



4 S6.04B ROOF PANEL TYPE '4' BOTTOM PLAN

NOTES:
1. PANEL TYPE 4(RF) AS SHOWN, PANEL TYPE 4(LF) SIMILAR HANDED.
2. SEE SHEET S2.07 AND ARCHITECTURAL DRAWINGS FOR OVERALL SETTING OUT.
3. SEE SHEETS S6.04A – 3D VIEWS
   S6.04C – PURLIN LAYOUT
   S6.04D – SECONDARY TRUSSES
   S6.04E – WALL FRAMING
4. ALL STEEL ASTM A572 GRADE 50 UNLESS NOTED OTHERWISE.
5. STEEL TUBES ASTM A500 GRADE B.
6. TRUSS CHORD ASTM A913 GRADE 65 WHERE SHOWN.
7. TENSION CABLE:
   MIN. BREAKING LOAD: = 7,000 K
   MIN. STIFFNESS: ExA = 770,000 (K/in² xin²)
8. ◄— INDICATES DIRECTION OF LATERAL RESTRAINT.

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Graphics Designer:
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KEY MAP

PER RECORD SET

Job No: 5128

Revision:

	B.P. 'L' ADDENDUM #1	7-15-97
1	B.P. 'L' ADDENDUM #4	10-1-97
2	B.P. 'L' ADDENDUM #13	11-17-97
3	B.P. 'L' ADDENDUM #14	12-5-97
4	B.P. 'L' ADDENDUM #17	12-19-97
5	B.P. 'L' ADDENDUM #18	1-9-98
6	B.P. 'L' ADDENDUM #19	1-16-98

Date: JULY 15, 1997
Scale: 1/32" = 1'-0"

Sheet Title:
STRUCTURAL
ROOF PANEL DETAILS
PANEL TYPE '4' (RF)

Sheet No:
S6.04B

XRefs: TBLK
File Date:
File: S604.DWG
Plot date:

NAME: H:\30665\S\S604.DWG DATE: APR 01, 1997 TIME: 11:08 AM

Protective & Marine Coatings

COROTHANE® I HS
ALIPHATIC FINISH COAT

B65W50	Ultra White	B65W51	Extra White Base
B65T54	Ultradeep Base	B65B50	Black
B65R50	Safety Red	B65Y50	Safety Yellow

Revised June 25, 2015

Product Information

5.12

Product Description

COROTHANE I HS is a single component, moisture curing urethane designed for low temperature or high humidity applications while providing UV resistance and chemical resistance equivalent to two part urethane coatings.

- Low temperature application - down to 20°F (-7°C)
- Superior resistance to yellowing, chalking, or degradation by sunlight
- Superior adhesion to most prepared surfaces
- Superior abrasion resistance
- Outstanding chemical resistance
- Outstanding application properties

Product Characteristics

Finish:	Gloss
Color:	Wide range of colors available
Volume Solids:	61% ± 1%, may vary by color
Weight Solids:	77% ± 2%
VOC (EPA Method 24):	Unreduced: <310 g/L; 2.60 lb/gal Reduced 5%: <340 g/L; 2.80 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**3.5** (88)	**5.0** (125)
Dry mils (microns)	**2.0** (50)	**3.0** (75)
~Coverage sq ft/gal (m^2/L)	**326** (8.0)	**489** (12.0)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**976** (23.9)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2 hours	45 minutes
To recoat:			
minimum:	24 hours	12 hours	6 hours
maximum:	14 days	14 days	14 days
To cure:	7 days	3 days	3 days

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C). (Tinted colors must be used within 7 days after tinting)
Flash Point:	101°F (39°C), Seta Flash
Reducer/Clean Up:	Reducer #15, R7K15, R7K100, or R7K111 (VOC exempt)

Recommended Uses

- Color coat where maximum color and gloss retention are required
- Suitable for use in the following industries:
  - Marine
  - Industrial
  - Bridge and Highway
  - Water and Waste Water
  - Petro-Chemical
  - Pulp and Paper
  - Rail
- Suitable for use in USDA inspected facilities.
- Acceptable for use in Canadian Food Processing facilities categories: D1, D2, D3 (Confirm acceptance of specific part numbers/rexes with your SW Sales Representative)
- Conforms to AWWA D102-03 OCS #2
- Meets requirements of SSPC Paint 38, Level II

Performance Characteristics

Substrate*: Steel

Surface Preparation*: SSPC-SP6

System Tested*:

1 ct. Corothane I MIO-Aluminum @ 3.0 mils (75 microns) dft
1 ct. Corothane I HS @ 3.0 mils (75 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	80 mg loss
Adhesion	ASTM D4541	1296 psi
Corrosion Weathering	ASTM D5984, 12 cycles, 4032 hours	Rating 10 per ASTM D610 Rusting; Rating 10 per ASTM D714 Blistering
Direct Impact, topcoat only	ASTM D2794	70 in lb
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Flexibility, topcoat only	ASTM D522, 180° bend, 1/8" mandrel	Passes
Humidity	ASTM-D4585, 1000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Pencil Hardness	ASTM D3363	HB
Salt Fog Resistance	ASTM B117, 1000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Thermal Cycling	ASTM D2246, 15 cycles	Passes, no cracking, checking, or blistering; no loss of adhesion, 100% gloss retention

Meets requirements of SSPC Paint 38, Level II.

continued on back

Protective & Marine Coatings

COROTHANE® I HS
ALIPHATIC FINISH COAT

B65W50	Ultra White	B65W51	Extra White Base
B65T54	Ultradeep Base	B65B50	Black
B65R50	Safety Red	B65Y50	Safety Yellow

Revised June 25, 2015

PRODUCT INFORMATION

5.12

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel:			
1 ct.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
1 ct.	Corothane I Ironox B	3.0-5.0	(75-125)
1 ct.	Corothane I HS	2.0-3.0	(50-75)
Steel:			
1 ct.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
1-2 cts.	Corothane I HS	2.0-3.0	(50-75)
Steel:			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
1 ct.	Corothane I Ironox B	3.0-5.0	(75-125)
1 ct.	Corothane I HS	2.0-3.0	(50-75)
Steel:			
1 ct.	Corothane I PrePrime	1.0-1.5	(25-40)
1 ct.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
1 ct.	Corothane I Ironox B	3.0-5.0	(75-125)
1 ct.	Corothane I HS	2.0-3.0	(50-75)
Steel (Epoxy Primer):			
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)
1-2 cts.	Corothane I HS Coat	2.0-3.0	(50-75)
Concrete, smooth:			
1 ct.	Corothane I PrePrime	1.0-1.5	(25-40)
1 ct.	Corothane I HS	2.0-3.0	(50-75)
Concrete, rough:			
On deeply profiled or damaged concrete floor:			
1 ct.	Kem Cati-Coat HS Epoxy Filler/Sealer as required to fill voids and provide a continuous substrate.	10.0-20.0	(250-500)
1 ct.	Corothane I HS	2.0-3.0	(50-75)
Previously Painted Surfaces:			
Spot prime bare steel with 1 coat of Corothane I GalvaPac Zinc Primer			
1 ct.	Corothane I HS	2.0-3.0	(50-75)
or			
1 ct.	Corothane I Ironox B	3.0-5.0	(75-125)
1 ct.	Corothane I HS	2.0-3.0	(50-75)
(Check compatibility)			

The systems listed above are representative of the product's use, other systems may be appropriate.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

*Iron & Steel:	SSPC-SP6/NACE 3
*Concrete & Masonry:	SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3
*Previously Painted	SSPC-SP2 or SP3

*Primer required

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

TINTING

Tint B65W51 and B65T54 only with Maxitoner colorants, 100% tint strength. Must be used within 7 days after tinting.

APPLICATION CONDITIONS

Temperature:	
air and surface:	20°F (-7°C) minimum, 100°F (38°C) maximum
material:	45°F (7°C) minimum Do not apply over surface ice
Relative humidity:	30% minimum, 99% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	1 gallon (3.78L) and 5 gallon (18.9L) containers
Weight:	11.79 ± 0.2 lb/gal ; 1.4 Kg/L may vary by color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Protective & Marine Coatings

COROTHANE® I HS
ALIPHATIC FINISH COAT

B65W50	Ultra White	B65W51	Extra White Base
B65T54	Ultradeep Base	B65B50	Black
B65R50	Safety Red	B65Y50	Safety Yellow

Revised June 25, 2015

Application Bulletin

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Surface Preparations

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/ NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

Follow the standard methods listed below when applicable:
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI No. 310.2R Concrete Surface Preparation.

Previously Painted Surfaces
If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

Application Conditions

Temperature:	
air and surface:	20°F (-7°C) minimum, 100°F (38°C) maximum
material:	45°F (7°C) minimum Do not apply over surface ice
Relative humidity:	30% minimum, 99% maximum

Application Equipment

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up
Brush/Roll .....Reducer #15, R7K15
Spray.....Aromatic 100 Reducer, R2K5
VOC exempt R7K111

Airless Spray
Pump.....30:1
Pressure.....1800 - 2000 psi
Hose.....1/4" ID
Tip .....011" - .015"
Filter.....60 mesh
Reduction.....As needed up to 5% by volume

Conventional Spray

Unit	Graco	Binks
Gun	900	95
Fluid Nozzle	070	66/65
Air Nozzle	947	66PR
Atomization Pressure	60-70 psi	60-70 psi
Fluid Pressure	15-20 psi	15-20 psi

Reduction.....As needed up to 5% by volume

Brush
Brush.....Natural bristle
Reduction.....As needed up to 5% by volume

Roller
Cover .....1/4" natural or synthetic with solvent resistant core
Reduction.....As needed up to 5% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.

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Protective & Marine Coatings

COROTHANE® I HS
ALIPHATIC FINISH COAT

B65W50	Ultra White	B65W51	Extra White Base
B65T54	Ultradeep Base	B65B50	Black
B65R50	Safety Red	B65Y50	Safety Yellow

Revised June 25, 2015

Application Bulletin

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Application Procedures

Surface preparation must be completed as indicated.

Mix paint thoroughly prior to use with a low speed power agitator. Filter slowly through a 55 mesh screen.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**3.5** (88)	**5.0** (125)
Dry mils (microns)	**2.0** (50)	**3.0** (75)
~Coverage sq ft/gal (m^2/L)	**326** (8.0)	**489** (12.0)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**976** (23.9)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2 hours	45 minutes
To recoat:			
minimum:	24 hours	12 hours	6 hours
maximum:	14 days	14 days	14 days
To cure:	7 days	3 days	3 days

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

Clean Up Instructions

Clean spills and spatters immediately with Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. Follow manufacturer's safety recommendations when using any solvent.

Disclaimer

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Performance Tips

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or gelling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Do not exceed recommended dry film thickness.

When applying Corothane I - HS over dark colors, Corothane I Zinc Primers, or porous surfaces, an intermediate coat or a minimum of 2 finish coats is required for adequate hide and uniformity of appearance.

Tinted colors must be used within 7 days after tinting.

E-Z Roll Urethane Defoamer is acceptable for use. See data page 5.99 for details.

Corothane KA Accelerator is acceptable for use. See data page 5.98 for details.

It is recommend that partially used cans not be sealed/closed for use at a later date.

Do not shake beyond two minutes.

Refer to Product Information sheet for additional performance characteristics and properties.

Safety Precautions

Refer to the MSDS sheet before use.

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Warranty

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Protective & Marine Coatings

DURA-PLATE® 235
MULTI-PURPOSE EPOXY

PART A	B67-235	SERIES COLORS
PART B	B67V235	HARDENER

Revised: September 23, 2013

PRODUCT INFORMATION

4.67

PRODUCT DESCRIPTION

Dura-Plate 235 Multi-Purpose Epoxy is a modified epoxy phenalkamine, formulated specifically for immersion and atmospheric service in marine and industrial environments. Dura-Plate 235 provides exceptional performance in corrosive environment, and can be applied at temperatures as low as 0°F (-18°C).

- Self-priming
- Low temperature application, 0°F (-18°C)
- Surface tolerant - damp surfaces
- Provides salt water and fresh water immersion resistance
- Approved as a primer per MIL-PRF-23236, Type V, Class 7, Grade C
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Semi-Gloss
Color:	Wide range of colors available
Volume Solids:	68% ± 2%, mixed
Weight Solids:	79% ± 2%, mixed
VOC (EPA Method 24):	Unreduced: <280 g/L; 2.33 lb/gal Reduced 10%: <327 g/L; 2.72 lb/gal
Mix Ratio:	4:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**6.0** (150)	**12.0** (300)
Dry mils (microns)	**4.0*** (100)	**8.0*** (200)
~Coverage sq ft/gal (m^2/L)	**136** (3.3)	**272** (6.6)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1088** (26.6)	

*See Performance Tips section

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 6.0 mils wet (150 microns):

	@ 0°F/-18°C	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	18 hours	3.5 hours	2 hours	20 minutes
To handle:	36 hours	12 hours	3.5 hours	40 minutes
To recoat:				
minimum:	36 hours	12 hours	3.5 hours	40 minutes
maximum:	6 months	6 months	6 months	6 months
Cure to service:	30 days	14 days	7 days	3 days

If maximum recoat time is exceeded, abrade surface before recoating.

Drying time is temperature, humidity, and film thickness dependent.

Pot Life:	16 hours	8 hours	4 hours	1 hour
Sweat-in-time:	1 hour	30 minutes	15 minutes	5 minutes

Shelf Life:	Part A: 36 months, unopened Part B: 24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	116°F (47°C) PMCC, mixed
Reducer/Clean Up:	Reducer R7K104

RECOMMENDED USES

For use over prepared steel and masonry surfaces.
- Salt water and fresh water immersion resistance
- Ballast tanks, offshore and marine structures
- Bilges and wet void areas
- Above- and below- water hull areas
- Decks and superstructures
- Water and waste water tanks
- Acceptable for use with cathodic protection systems.
- Dura-Plate 235 Black meets or exceeds the performance criteria of C-200; SSPC Paint 16; and Mil-P-23236B(SH) Type I or IV Class 2
- Suitable for use in USDA inspected facilities
- Conforms to MPI # 101

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

2 cts. Dura-Plate 235 @ 5.0 mils (125 microns) dft/ct

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060 CS17 wheel, 1000 cycles, 1 kg load	65 mg loss
Adhesion	ASTM D4541	850 psi
Direct Impact Resistance	ASTM D2794	10 in lb
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 2000 hours	Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering
Pencil Hardness	ASTM D3363	H

IMMERSION
(Ambient temperature)
- Salt Water..... Recommended
- Fresh Water..... Recommended
- Ballast Tank Mix ..... Recommended

Epoxy coatings may darken or yellow following application and curing.

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Protective & Marine Coatings

DURA-PLATE® 235
MULTI-PURPOSE EPOXY

PART A	B67-235	SERIES COLORS
PART B	B67V235	HARDENER

PRODUCT INFORMATION

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel, immersion or atmospheric service:			
2 cts.	Dura-Plate 235	4.0-8.0	(100-200)
Steel, immersion service:			
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)
1-2 cts.	TarGuard Coal Tar Epoxy	8.0-16.0	(200-400)
Steel, immersion service:			
2 cts.	Dura-Plate 235	4.0-8.0	(100-200)
2 cts.	SeaGuard Anti-Foulant (refer to respective data pages for coverage)		
Steel, atmospheric service:			
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)
1-2 cts.	Macropoxy 646	5.0-10.0	(125-250)
Steel, atmospheric service:			
1 ct.	Zinc-Clad II Plus	3.0-5.0	(75-125)
1-2 cts.	Dura-Plate 235	4.0-8.0	(100-200)
Steel, atmospheric service:			
1 ct.	Zinc-Clad IV	3.0-5.0	(75-125)
1-2 cts.	Dura-Plate 235	4.0-8.0	(100-200)
Steel, atmospheric service:			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
1-2 cts.	Dura-Plate 235	4.0-8.0	(100-200)
Steel, atmospheric service:			
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)
1-2 cts.	Acrolon 218 HS	3.0-6.0	(75-150)
or	Hi-Solids Polyurethane	3.0-5.0	(75-125)
Concrete/Masonry, immersion service:			
1 ct.	Kem Cati-Coat HS Epoxy Filler/Sealer as required to fill voids and provide a continuous substrate	10.0-20.0	(250-500)
2 cts.	Dura-Plate 235	4.0-8.0	(100-200)
Galvanized, atmospheric service:			
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)

Steel-Seam FT910 - as required for filling pits, and transitioning sharp edges, weld seams, etc...

The systems listed above are representative of the product's use, other systems may be appropriate.

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SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:
Iron & Steel:
Atmospheric: SSPC-SP2 or SSPC-SP12/NACE 5 , WJ-4
Immersion: SSPC-SP10, 2 mil (50 micron) profile or SSPC-SP-12/NACE 5, WJ-2
Concrete & Masonry:
Atmospheric: SSPC-SP13/NACE 6, or ICRI No. 310.2, CSP 1-3
Immersion: SSPC-SP13/NACE 6-4.3.1 or 4.3.2, or ICRI No. 310.2, CSP1-3
Galvanized, atmospheric: SSPC-SP1

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

TINTING

Tint Part A with Maxitoners only. Mill White tints at 150%. Ultradeep Base tints at 100%. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature: 0°F (-18°C) minimum, 120°F (49°C) maximum (air and surface)
At least 5°F (2.8°C) above dew point
Material should be at least 40°F (4.5°C) for optimal performance.
Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:
Part A: 1 gallon (3.78L) and 4 gallons (15.1L) in a 5 gallon (18.9L) container
Part B: 1 quart (0.94L) and 1 gallon (3.78L)
Weight: 11.3 ± 0.2 lb/gal ; 1.35 Kg/L, mixed may vary with color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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WARRANTY

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Protective & Marine Coatings

DURA-PLATE® 235
MULTI-PURPOSE EPOXY

PART A	B67-235	SERIES COLORS
PART B	B67V235	HARDENER

Revised: September 23, 2013

APPLICATION BULLETIN

4.67

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel, Immersion Service:
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2 or SSPC-SP12/NACE 5. For SSPC-SP10/NACE 2, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). For SSPC-SP12/NACE No. 5, all surfaces to be coated shall be cleaned in accordance with WJ-2. Pre-existing profile should be approximately 2 mils (50 microns). Light rust bloom is allowed. Remove all weld spatter and round all sharp edges by grinding. Prime any bare steel the same day as it is cleaned.

Iron & Steel, Atmospheric Service:
Minimum surface preparation is Hand Tool Clean per SSPC-SP2 or SSPC-SP12/NACE 5. For surfaces prepared by SSPC-SP2, first remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). For surfaces prepared by SSPC-SP12/NACE No. 5, all surfaces shall be cleaned in accordance with WJ-4. Pre-existing profile should be approximately 2 mils (50 microns). Prime any bare steel the same day as it is cleaned.

Galvanized Steel
Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910.

Concrete, Immersion Service:
For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2, CSP 1-3.

Follow the standard methods listed below when applicable:
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI No. 310.2 Concrete Surface Preparation.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

APPLICATION CONDITIONS

Temperature: 0°F (-18°C) minimum, 120°F (49°C) maximum (air and surface)
At least 5°F (2.8°C) above dew point

Material should be at least 40°F (4.5°C) for optimal performance.

Relative humidity: 85% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up ..... Reducer R7K104

Airless Spray
Unit.....30:1 Pump
Pressure.....2400 - 2800 psi
Hose.....1/4" - 3/8" ID
Tip .....015" - .019"
Filter.....60 mesh
Reduction.....As needed, up to 10% by volume

Conventional Spray
Gun .....DeVilbiss MBC-510
Fluid Tip .....E
Air Nozzle.....704
Atomization Pressure.....60-65 psi
Fluid Pressure.....5-15 psi
Reduction.....As needed, up to 10% by volume

Brush
Brush.....Natural Bristle
Reduction.....Not recommended

Roller
Cover .....3/8" woven with solvent resistant core
Reduction.....Not recommended

If specific application equipment is not listed above, equivalent equipment may be substituted.

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Protective & Marine Coatings

DURA-PLATE® 235
MULTI-PURPOSE EPOXY

PART A	B67-235	SERIES COLORS
PART B	B67V235	HARDENER

APPLICATION BULLETIN

4.67

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly using low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine 4 parts by volume of Part A with 1 part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated prior to application. Re-stir before using.

If reducer solvent is used, add only after both components have been thoroughly mixed, after sweat-in.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**6.0** (150)	**12.0** (300)
Dry mils (microns)	**4.0*** (100)	**8.0*** (200)
~Coverage sq ft/gal (m^2/L)	**136** (3.3)	**272** (6.6)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1088** (26.6)	

*See Performance Tips section

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 6.0 mils wet (150 microns):

	@ 0°F/-18°C	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	18 hours	3.5 hours	2 hours	20 minutes
To handle:	36 hours	12 hours	3.5 hours	40 minutes
To recoat:				
minimum:	36 hours	12 hours	3.5 hours	40 minutes
maximum:	6 months	6 months	6 months	6 months
Cure to service:	30 days	14 days	7 days	3 days
Pot Life:	16 hours	8 hours	4 hours	1 hour
Sweat-in-time:	1 hour	30 minutes	15 minutes	5 minutes

If maximum recoat time is exceeded, abrade surface before recoating.

Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer R7K104. Clean tools immediately after use with Reducer R7K104. Follow manufacturer's safety recommendations when using any solvent.

DISCLAIMER

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PERFORMANCE TIPS

Stripe coat crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

Insufficient ventilation, incomplete mixing, miscatalyzation, and external heaters may cause premature yellowing.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

For Immersion Service: (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer R7K104.

Please contact your Sherwin-Williams Representative for recommendations for immersion service of tinted material.

When coating over aluminum and galvanizing, recommended dft is 2-4 mils (50-100 microns).

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

Revised 2/10

PRODUCT INFORMATION

5.10

PRODUCT DESCRIPTION

COROTHANE I MIO-ALUMINUM is a single component, low VOC, moisture curing, aluminum and Micaceous Iron Oxide (MIO) filled, urethane primer, intermediate coating, or finish. It has excellent surface wetting properties and provides extended recoatability.

- Excellent adhesion to most substrates
- Low temperature application - down to 20°F (-7°C)
- Excellent exterior durability
- Outstanding abrasion resistance
- Excellent corrosion and chemical resistance
- Recoat up to 30 days
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Matte
Color:	Aluminum
Volume Solids:	65% ± 2%
Weight Solids:	77% ± 2%
VOC (EPA Method 24):	Unreduced: <310 g/L; 2.60 lb/gal Reduced 7%: <340 g/L; 2.80 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**3.0** 75	**4.5** 112
Dry mils (microns)	**2.0** 50	**3.0** 75
~Coverage sq ft/gal (m^2/L)	**348** 8.5	**521** 12.8
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1040** 25.5	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 3.5 mils wet (88 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2 hours	1 hour
To recoat:			
minimum:	16 hours	7 hours	3 hours
maximum:	30 days	30 days	30 days
To cure:	5 days	3 days	1 day

Abrade surface if maximum recoat time is exceeded.
Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	103°F (39°C), PMCC
Reducer/Clean Up:	
Spray:	Reducer #15, R7K15
Brush and Roll:	Reducer #100, R7K100
VOC Exempt:	Reducer R7K111

RECOMMENDED USES

For use over prepared surfaces in industrial environments:

- Heavy duty interior and exterior structural coating
- High performance, one coat or multiple coat, coating for steel, aluminum, concrete, and most plastics in industrial and marine environments
- Universal primer for poorly prepared surfaces, old paint, tightly adherent rust, weathered galvanized steel, and concrete
- Excellent intermediate coat providing superior adhesion of subsequent coats
- Enhanced film strength and edge protection with aluminum and micaceous iron oxide addition

PERFORMANCE CHARACTERISTICS

Substrate*: Steel
Surface Preparation*: SSPC-SP6/NACE 3
System Tested*:
1 ct: Corothane I MIO-Aluminum @ 3.0 mils (75 microns) dft
1 ct: Corothane I IronOx B @ 4.0 mils (100 microns) dft
1 ct: Corothane I Aliphatic @ 3.0 mils (75 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Adhesion	ASTM D4541	1000 psi
Corrosion Weathering	ASTM D5894, 1700 hours, 5 cycles	Rating 9 per ASTM D610 for rusting; Rating 9 per ASTM D714 for blistering
Direct Impact Resistance	ASTM D2794	140 in lb
Dry Heat Resistance	ASTM D2485	300°F (149°C)
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 300 hours	Passes
Pencil Hardness	ASTM D3363	2B
Salt Fog Resistance	ASTM B117, 2300 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering

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Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel:			
1 ct.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
1 ct.	Corothane I IronOx B	3.0-5.0	(75-125)
1 ct.	Corothane I Aliphatic Finish Coat	2.0-3.0	(50-75)
or	Corothane I HS	2.0-3.0	(50-75)
or	Corothane I Ironox A HS	2.5-3.5	(63-88)
Steel: (Zinc Primer)			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Concrete: (Smooth)			
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Concrete: (Rough)			
1 ct.	Kem Cati-Coat HS Epoxy Filler/Sealer as required to fill voids and provide a continuous substrate.	10.0-30.0	(250-750)
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Galvanized:			
1-2 cts. (Check Compatibility)	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Aluminum:			
1-2 cts. (Check Compatibility)	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Previously Painted Surfaces:			
1-2 cts. (Check Compatibility)	Corothane I MIO-Aluminum	2.0-3.0	(50-75)

The systems listed above are representative of the product's use, other systems may be appropriate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

Iron & Steel:	SSPC-SP2/3
Concrete:	SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3
Galvanized:	SSPC-SP1
Aluminum:	SSPC-SP1
Previously Painted	SSPC-SP2 or SP3

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	
air and surface:	20°F (-7°C) minimum, 100°F (38°C) maximum
material:	45°F (7°C) minimum Do not apply over surface ice
Relative humidity:	30% minimum, 99% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	1 gallon (3.78L) and 5 gallon (18.9L) containers
Weight:	10.5 ± 0.2 lb/gal ; 1.26 Kg/L

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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WARRANTY

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SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Hand/ Power Tool per SSPC-
SP2/3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/ NACE 2. Coat any bare steel the same day as it is cleaned or before flash rusting occurs.

Aluminum
Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1.

Galvanized Steel
Allow to weather a minimum of six months prior to coating. Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910.

Always follow the standard methods listed below:
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI 03732 Concrete Surface Preparation.

Previously Painted Surfaces
If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

APPLICATION CONDITIONS

Temperature:	
air and surface:	20°F (-7°C) minimum, 100°F (38°C) maximum
material:	45°F (7°C) minimum Do not apply over surface ice
Relative humidity:	30% minimum, 99% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up
Spray .....Reducer #15, R7K15
Brush and Roll .....Reducer #100, R7K100
VOC Exempt.....Reducer R7K111

Airless Spray
Pump 30:1
Pressure.....1800 - 2000 psi
Hose.....1/4" ID
Tip .....015" - .019"
Filter ..... 60 mesh
Reduction.....As needed up to 10% by volume

Conventional Spray

Unit	Graco	Binks
Gun	900	95
Fluid Nozzle	070	66/65
Air Nozzle	947	66PR
Atomization Press	60-70 psi	60-70 psi
Fluid Pressure	15-20 psi	15-20 psi
Reduction	As needed up to 10% by volume	

Brush
Brush .....Natural bristle
Reduction .....As needed up to 10% by volume

Roller
Cover .....1/4" natural or synthetic with solvent resistant core
Reduction.....As needed up to 10% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.

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Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

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APPLICATION BULLETIN

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix material thoroughly prior to use with a low speed power agitator. Filter slowly through a 55 mesh screen.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**3.0** 75	**4.5** 112
Dry mils (microns)	**2.0** 50	**3.0** 75
~Coverage sq ft/gal (m^2/L)	**348** 8.5	**521** 12.8
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1040** 25.5	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 3.5 mils wet (88 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2 hours	1 hour
To recoat:			
minimum:	16 hours	7 hours	3 hours
maximum:	30 days	30 days	30 days
To cure:	5 days	3 days	1 day

Abrade surface if maximum recoat time is exceeded.
Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

CLEAN UP INSTRUCTIONS

Clean spills and splatters immediately with Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. Follow manufacturer's safety recommendations when using any solvent.

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PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or gelling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Corothane KA Accelerator is acceptable for use. See data page 5.98 for details.

It is recommended that partially used cans not be sealed/closed for use at a later date.

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

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