MAP VIEW





CODE SUMMARY

BUILDING	ELECTRICAL	STATE	FIRE
2018 IBC	2017 NEC	NORTH CAROLINA	NFPA 2015 EDITION 1



TABLE OF CONTENT

C-1: COVER PAGE E-1: ELECTRICAL AND CALCULATIONS S-1: STRUCTURAL DIAGRAM S-2: STRUCTURAL CALCULATIONS

PROJECT/PERMITTING NOTES

PROJECT: INSTALLATION OF GRID-TIED PHOTOVOLTAIC SYSTEM





SCALE: NTS DRAWN BY: B.G. DATE: 09/16/2020 PAGE:

C-1

Road 33487

933 Clint Boca Rat (800) 530 CVC5696

SYSTEM DESCRIPTION:

- GRID-TIED PHOTOVOLTAIC SYSTEM • (29) ENPHASE IQ 7A MICRO-INVERTER
- (29) JINKO 400W MODULE (JKM400M-72HL)

SYSTEM:

- (29) PHOTOVOLTAIC MODULES ARE CONNECTED INTO (29) MICRO-INVERTER
- (29) INVERTER CONNECT INTO (2) CIRCUIT OF (10 & 9) MODULES WHICH FEED (3) 2P-240V 20A CIRCUIT
- BREAKERS • TOTAL PHOTOVOLTAIC SYSTEM STC RATED DC ENERGY POWER PRODUCTION OF 11,600 WATTS
- INVERTER HAS MAXIMUM POWER POINT TRACKING (MPPT)
- INVERTER MEETS REQUIREMENTS OF 3-P POWER
- INVERTER MEET IEEE 1547
- INVERTER MEETS U11741 ALL ELECTRICAL EQUIPTMENT INSTALLED ARE UL LISTED

SYSTEM AUTOMATIC OPERATION:

- GRID POWER IS PRESENT, PHOTOVOLTAIC SYSTEM FEEDS THE LOAD AT DAY TIME.
- GRID POWER IS LOST, PHOTOVOLTAIC SYSTEM AUTOMATICALLY DISCONNECTS FROM THE GRID. • PHOTOVOLTAIC SYSTEM WILL AUTOMATICALLY RESUME FEEDING POWER TO THE GRID. WHEN THE PROPER GRID VOLTAGE AND FREQUENCY IS RESTORED (IEEE STANDARDS) AND THERE IS ENOUGH SUNLIGHT.

ITEM	MANUFACTER	MODEL	LISTING/COMPLIANCE
PV/MODULES	JINKO	400W	UL
INVERTER	ENPHASE	IQ 7A	UL
ALL DISCONNECTS	ENPHASE	DC & AC	UL IEEE 1547
ALL OVERCURRENT PROTECTION	ENPHASE	DC & AC	UL
FSEC CERTICICATION #	JINKO ENPHASE	400W IQ 7A	RV-16-0106A



The NEC gives you the choice of four methods for ensuring electrical continuity at service equipment, service raceways, and service conductor enclosures [250.92(B):

- 1. Bonding jumpers. Bond metal parts to the service neutral conductor. This requires a main bonding jumper [250.24(B) and 250.28]. because the service neutral conductor provides the effective ground- fault current path to the power supply [250.24(C)], you don't have to install an equipment grounding conductor within PVC conduit containing service-entrance conductors [250.142(A)(1) and 352.60 Ex 2].
- 2. Threaded fittings. Terminate metal raceways to metal enclosures by threaded hubs on enclosures (if made wrench tight). 3. Threadless fittings. Terminate metal raceways to metal enclosures by threadless fittings (if made tight)
- 4. Other listed devices. These include bonding-type locknuts, bushings, wedges, or bushings with bonding jumpers.

11.6 kWp	WARNING WARNING WARNING
29	TURN OFF PHOTOVOLTAIC ELECTRICAL SHOCK HAZARD ELECTRICAL SHOCK HAZARD
29	WORKING INSIDE PANEL LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION
400 W	MAXMUM VOLTAGE MAXMUM VOLTAGE MAXMUM CIRCUIT CURRENT
7,656 W	MAX RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-TO-DC CONVERTER
240 V	POWER SOURCE OUTPUT CONNECTION POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCUMRENT DEVICE. MAX RATED AC OPERATING VOLTAGE
98%	PROTOVOLITATO
	PHOTOVOLTAIC DISCONNECT CAUTION: SOLAR CIRCU
INPUT A/ PV-ARRAY 1	AC DISCONNECT RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM PHOTOVOLTAIC SYSTE
29	PHOTOVOLTAIC AC DISCONNECT EQUIPPED WITH RAPID SHUTDOWN
29	RATED AC OUTPUT CURRENT: NOMINAL OPERATING AC VOLTAGE
400 Wp	SAFETY LABELS
41.7 V	PHOTOVOLTAIC POWER SOURCE AC OPERATING VOLTAGE 240 VOLTS 2. COMBINER PANEL
49.8 V	AC OPERATING CURRENT AMPS MICROINVERTERS LOCATED UNDERNEATH MODULES FOR SERVICE CALL (VY COMPANY 9) LINEL FOR SOL IN LC COMPARY 9)
22.0 V	LABEL FOR EACH J-BOX LABEL SIZE: 4" x 2" XOTE: INCEL IE MUST BULL IN AC ORDER TING CURRENT ON LABEL
55.136568 V	
349 V	3. LOCATED UNDERNEATH PV MODULE ON ROOFTOP ARRAY 4. A CAUTION A SOLAR POINT OF CONNECTION
	FOR SERVICE PLEASE CALL (PV COMPANY #) LABEL FOR MAIN DISTRIBUTION PANEL
	11.6 kWp 29 29 400 W 7,656 W 240 V 98% 1NPUT A/ PV-ARRAY 1 29 400 Wp 41.7 V 49.8 V 22.0 V 55.136568 V 349 V

AMBIENT TEMPERATURE	
RECORD LOW TEMPERATURE	8.6 DEG F
AVERAGE HIGH TEMPERATURE	93.2 DEG F
RECORD HIGH TEMPERATURE	96.8 DEG F
SYSTEM OVERVIEW PART PROJECT 1	GRID VOLTAGE: 1 ~ 240 V
29 x JINKO 400 W	PV ARRAY 1
29 x -240 VAC (INVERTER EFFICIENCY 95%)	INVERTERS
MOUNTING TYPE	ROOF



• PV array and type of inverter are compatible. The nominal power ratio (max. DC power of the inverter divided by the peak power) is within the recommended range (80-120%)

Design temperature 96.8 deg F, adder 60 deg F (310.15(B)(2)(A) Total 151 deg F. Multiplier at 151 deg F is 0.58(310.16 correction factors). #10 THWN-2 rated 40 amps, times 0.58 = 23.2 amps. 6 conductors in single conduit. Adjustment factor is 80%. (23.2) * (.8) = 18.56 amps

NOTES: (29) MICRO-INVERTER TOTAL AMPS: 42.0A TOTAL 2-P 240V 20A BREAKERS: 3 ELECTRICAL BREAKER RATING: 150A ELECTRICAL PANEL RATING: 200A MAX. CURRRENT OUTPUT (125%) : 52.56A BUSBAR AMPACITY (120%): 240A

	107-60-2-115		107PL 115-72
monly used module pairings1	225 W - 250 W		225 W- 4401
lule compatibility	60-cell PV mor		60-cell and 7
imum input DC voltage	49 V	lules only	60 V
k power tracking voltage	40 V		27 V - 45 V
rating range	16 V - 48 V		16 V - 60 V
/Max start voltage	22 V / 49 V		22 V / 60 V
DC short circuit current (module lsc)	15 A		15 A
rvoltage class DC port	IJA		IJA
avert backfood ourropt	0.4		0.4
	U A	ad array: No additio	U A nal DC aida prot
aray coniguration	AC side protect	tion requires max 20	A per branch ci
PUT DATA (AC)	IQ 7 Microinv	erter	IQ 7+ Micro
k output power	250 VA		295 VA
imum continuous output power	240 VA		290 VA
ninal (L-L) voltage/range ²	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V
imum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V
ninal frequency	60 Hz		60 Hz
ended frequency range	47 - 68 Hz		47 - 68 Hz
short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms
imum units per 20 A (L-L) branch circuit ³	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)
rvoltage class AC port	III		III
port backfeed current	18 mA		18 mA
rer factor setting	1.0		1.0
rer factor (adjustable)	0.85 leading	0.85 lagging	0.85 leading .
ICIENCY	@240 V	@208 V	@240 V
ak efficiency	97.6 %	97.6 %	97.5 %
C weighted efficiency	97.0 %	97.0 %	97.0 %
CHANICAL DATA			
pient temperature range	-40°C to +65°C		
tive humidity range	4% to 100% (co	ndensing)	
nector type	MC4 (or Amphe	enol H4 UTX with ad	ditional Q-DCC-
ensions (HxWxD)	212 mm x 175 n	nm x 30.2 mm (with	out bracket)
ght	1.08 kg (2.38 lb	s)	
ling	Natural convect	ion - No fans	
roved for wet locations	Yes		
ution degree	PD3		
osure	Class II double-	insulated, corrosior	resistant polym
ronmental category / UV exposure rating	NEMA Туре 6 /	outdoor	
TURES			
nmunication	Power Line Con	nmunication (PLC)	
itoring	Enlighten Mana Both options re	ger and MyEnlighte quire installation of	n monitoring op an Enphase IQ E
connecting means	The AC and DC disconnect requ	connectors have be uired by NEC 690.	en evaluated an
pliance	CA Rule 21 (UL UL 62109-1, UL CAN/CSA-C22. This product is NEC-2017 secti and DC conduc	1741-SA) 1741/IEEE1547, FCC 2 NO. 107.1-01 UL Listed as PV Rap on 690.12 and C22.1 tors, when installed	Part 15 Class B, id Shut Down E -2015 Rule 64-2 according man

 No enforced DC/AC ratio. See the compatibility calculator at https://enphase.com/en-us/support/module-compatibility.
 Nominal voltage range can be extended beyond nominal if required by the utility.
 Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area. To learn more about Enphase offerings, visit **enphase.com**

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1" PVC SCH 80 CONDUIT 6 #10 THWN-2

1 #8 THWN-2 GROUND

AC W	DISCONNECT PRIOR TO ORKING INSIDE PANEL	TERMINALS LOAD SIDES IN THE (S ON THE LIN MAY BE ENE OPEN POSITI	e and Rgized On	LOAD SIDES MAY BE ENERGIZ IN THE OPEN POSITION
MAX THE OF D P D PHO	INUM VOLTAGE INUM CORCUIT CURRENT INATED OUTPUT CURRENT OF CHARGE CONTROLLER STALLED HOTOVOLTAIC C DISCONNECT HOTOVOLTAIC C DISCONNECT DTOVOLTAIC AC DISCONNECT	MARNING I SECOND SOURCE	ARNING SUTPUT CONNULT SUTPUT CONNULT SUTPUT CONNUCT SUTPUT SUTP	R SOURCE AIC SYSTEM	DC VOLTAGE IS ALWAYS PRESERT MEE SOLAR MOULES ARE EXPOSED TO SUNLIGHT RATED AC OPERATING CURRENT MAX RATED AC OPERATING VOLTAGE MAX RATED AC OPERATING VOLTAGE NAX RATED AC OPERATING VOLTAGE RATED SHORT CIRCUIT CURRENT MAXIMUM SYSTEM VOLTAGE CAUTION: SOLAR CIRC PHOTOVOLTAIC SYST EQUIPPED WITH PAPEND SHILTDOWNN
RATE	ED AC OUTPUT CURRENT: INAL OPERATING AC VOLTAGE				KAPID SHUTDOWN
1.	PHOTOVOLTAIC POWER S AC OPERATING VOLTAGE AC OPERATING CURRENT MICROINVERTERS LOCATED UNDERN FOR SERVICE CALL (PV COMPANY #) LABEL JOE, 4* x 2° NOTE: INSTALLER MUST FILL IN AC OP	SAFET	Y LAB	ELS PHC COM DO I LABEL FC LABEL SI	DTOVOLTAIC SYSTEM MBINER PANEL NOT ADD LOADS DR SOLAR AC COMBINER BOX ZE: 4" x 2"
3.	PHOTOVOLTAIC MICROIN LOCATED UNDERNEATH PV MODULE ON ROOFTOI FOR SERVICE PLEASE CALL (PV COMP LABEL JOER SOLAR AC COMBINER BOX LABEL SIZE: 5.5° 2.2°	VERTERS PARRAY ANY #)	4.	SOLAI LABEL FOR LABEL SIZE	A CAUTION A R POINT OF CONNECTION MAIN DISTRIBUTION PANEL 4"x 1"
5.	PV SOLAR BREAKER DO NOT RELOCATE THIS OVERCURRENT DEV LABEL FOR CIRCUIT BREAKER INSTALL	ICE LED IN MDP	6.	DI SOU SOL	WARNING A UAL POWER SUPPLY RCES: UTILITY AND PV AR ELECTRIC SYSTEM
7.	PHOTOVOLTAIC SYSTEM AC DISCONNECT AC OPERATING VOLTAGE AC OPERATING CURRENT	VOLTS	8.	PHOTO'	*4" x 2" VOLTAIC SYSTEM EQUIPPED ITH RAPIP SHUTDOWN NEC 690.12

BACKGROUND. SHARPIE EXTREME OR EQUIVALENT UV RESISTANT MARKERS SHALLS BE USED FOR WRITING ON LABELS REQUIRING INSTALLER-WRITTEN VALUES.

LABEL FOR SOLAR DISCONNECT LABEL FOR SOLAR DISCONNECT LABEL SIZE: 4" x 2" LABEL SIZE: 4" x 2" LABEL SIZE: 4" x 2" <u>NOTE FOR ALL LABELS:</u> LABELS SHALL BE UV RESISTANT AND SHALL HAVE WHITE LETTERS ON A RED







mptions: Risk Category II, Roof Slope 2:12-12:12, Max Building Height 30', Module Size 19.5 Square Fee

CODE COMPLIANCE NOTES

180

-82

SYSTEM LEVEL FIRE CLASSIFICATION

SM SOLAR MOUNT

The system fire class rating requires installation in the manner specified in the SOLARMOUNT Installation Guide. SOLARMOUNT has been classified to the system level fire portion of UL 1703. This UL 1703 classification has been incorporated into our UL 2703 product certification. SOLARMOUNT has achieved system level performance for steep sloped roofs. System level fire performance is inherent in the SOLARMOUNT design, and no additional mitigation measures are required. The fire classification rating is only valid on roof pitches greater than 2:12 (slopes > 2 inches per foot, or 9.5 degrees). The system is to be mounted over fire resistant roof covering rated for the application. There is no required minimum or maximum height limitation above the roof deck to maintain the system fire rating for SOLARMOUNT. Module Types & System Level Fire Ratings are listed below:

Rail Type	Module Type	System Level Fire Rating	Rail Direction	Module Orientation	Mitigation Required
Standard Rail	Type 1, Type 2, Type 3 & Type 10	Class A, Class B & Class C	East-West	Landscape OR Portrait	None Required
			North-South	Landscape OR Portrait	None Required
Light Rail	Type 1 & Type 2	Class A, Class B & Class C	East-West	Landscape OR Portrait	None Required
			North-South	Landscape OR Portrait	None Required

This racking system may be used to ground and/or mount a PV module complying with UL1703 only when the specific module has been evaluated for grounding and/or mounting in compliance with the included instructions.

UL2703 CERTIFICATION MARKING LABEL

Unirac SOLARMOUNT is listed to UL 2703. Certification marking is embossed on all mid clamps as shown. Labels with additional information will be provided . After the racking system is fully assembled, a single label should be applied to the SOLARMOUNT rail at the edge of the array. Note: The sticker label should be placed such that it is visible, but not outward facing.





JINKO 400W 79.06"	BONDING MIDCLAMP ASSEMBLY
39.45" ALLOWABLE LOAD: (5,400Pa) 113 psf	Stainless steel Midclamp points, 2 per module, pierce module frame anodization to bond module to module through clamp.
NOTE: Install mid clamps between modules and end clamps at the end of each row of modules.	2 Serrated flange nut bonds stainless steel clamp to stainless steel T-bolt
SOLAR MODULE NOTE: ALUMINUM RAILS SHOULD ALWAYS BE SUPPORTED BY MORE THAN ONE FOOTING ON BOTH SIDES OF THE SPLICE.	Serrated T-bolt head penetrates rail anodization to bond T-bolt, nut, clamp, and modules to grounded SM rail.



ROOF AREA

EXISTING SHINGLE ROOF TOTAL ROOF AREA: 3,574 sq.-ft TOTAL PHOTOVOLTAIC AREA: 774 sq.-ft **PERIMETER WIDTH: 4.3'** PRESSURE ZONE: 1 & 2 **MEAN ROOF HEIGHT: 14' ROOF SLOPE: 12:12** TRUSS SIZE: 2 x 4 **TOTAL MODULES: 29** MIN. ROOF MOUNTS: 66 **TOTAL POINT OF CONNECTIONS PER MODULE: 4 ALUMINUM RAILS: 2**





DESIGN WIND PRESSURE CALCULATIONS FOR SOLAR MODULES INSTALLED ON ROOFS

IBC EDITION	2018	RISK CATEGORY	II
MEAN ROOF HEIGHT (ft.)	14	EXPOSURE CATEGORY	С
LENGTH (ft.)	57	ROOF SLOPE (SHINGLE)	12:12
WIDTH (ft.)	49	ROOF SLOPE (DEGREE)	45.0°
EFFECTIVE WIND AREA (ft^2)	18.0	ROOF TYPE	GABLE
PARAPET HEIGHT (ft.)	0	ULTIMATE WIND SPEED	175 mph
MODULE LENGTH (in)	65	NOMINAL WIND SPEED	136 mph
MODULE WIDTH (in)	39.38	KD	0.85
		KZT	1.0
		KZ	0.85

DESIGN CALCULATIONS:

VELOCITY PRESSURE $(q) = 0.00256(KZ)(KZT)(KD)(V^2)$ VELOCITY PRESSURE (qh) = 33.9 psf EQUATION 26.8-1 **INTERNAL PRESSURE COEFFICIENT (+/-) = 0.18**

DESIGN PRESSURE EQUATION 30.9-1	DIRECTION – UP PSF	DIRECTION – DOWN PSF
ZONE 1	-39.2	35.8
ZONE 2	-60.0	35.8
ZONE 3	-81.0	35.8
GCp: FIGURE 30.4-2 B	DIRECTION – UP	DIRECTION - DOWN
ZONE 1	-1.0	0.9
ZONE 2	-1.6	0.9
ZONE 3	-2.2	0.9

ASCE 7-16 VELOCITY PRESSURE

qz10 = 0.00256 KZ KD V2

qz10 = ASCE 7-16 velocity pressure evaluated at mean roof height (psf) Kz = velocity pressure exposure coefficient

KZT = topographic factor

KD = wind directionality factor

V = basic wind speed (mph) from ASCE 7-16 maps referred to as ultimate wind speed maps in 2018 IBC.

As an example, for an array having an array of 158.04 sq.-ft., the total uplifting (resultant) force acting on the array would be -39.1 psf x 158.04 sq.-ft. = -6.179.364 lb. Knowing this resultant force, the design engineer can now determine the number of attached points and the size of the mounting hardware necessary to safely carry this load.

LIVE LOADS: Live loads associated with photovoltaic systems are usually assumed to be distributed uniformly and are small, on the order of 4 psf or less.

NOTES:

These calculations are based on the C&C Wind Loads for Enclosed Buildings. Design wind pressures are calculated using ASCE 7-10 equation in 30.6-1. All notes in Figures 30.4-1, and 30.4-2 (A, B, AND C) have been incorporated. Mean roof height must be less than 60 feet.

Lag	Screw	Installation	Guidelines

1. Determine location for the L-Bracket on roof by

drilling through the center of truss from bottom with 5/32" drill bit.

2. Mark mounting holes for L-Bracket on underlayment. Mounting holes should be centered on

the trusses.

3. Drill 15/64" pilot hole. 4. Apply sealant to bottom of L-Bracket.

5. Place L-Bracket over roof underlayment with holes

- in roof 6. apply sealant to bottom of L-Bracket, apply sealant
- to lag screws, and fasten L-Bracket securely to trusses. 7. Apply additional sealant to top assembly to be sure all penetrations are sealed.

	STAINLES	SS STEEL Lag scre	w speci?cations
	Speci?c gravity	⁵¼₀? shaft,* per inch thread d	epth
Douglas Fir, Larch	0.50	266	
Douglas Fir, South	0.46	235	- 11
Engelmann Spruce, Lodgepole Pine (MSR 1650 f & higher)	0.46	235	
Hem, Fir, Redwood (close grain)	0.43	212	<u>_</u> _
Hem, Fir (North)	0.46	235	
Southern Pine	0.55	307	Thread depth
Spruce, Pine, Fir	0.42	205	
Spruce, Pine, Fir (E of 2 million psi and higher			
grades of MSR and MEL)	0.50	266	
Sources: American Wood Council, NDS	2005, Table 1	11.2A, 11.3.2A.	
Notes: (1) Thread must be embedded in the side gra	ain of a Trusses	or other structural mem	ber integral with th
(2) Lag bolts must be located in the middle third of t	he structural mer	nber	
(3) These values are not valid for wet service.			

(4) This table does not include shear capacities. If necessary, contact a local engineer to specify lag bolt size

Withdrawal design values for lag screw connections shall be multiplied by applicable adjustment factors if

5) Install lag bolts with head and washer flush to surface (no gap). Do not over-torque.

with regard to shear forces.

necessary. See Table 10.3.1 in the American Wood Council NDS for Wood Construction -TOP-FACING SLOT IRONRIDG -UNDERMOUNTING SLOT - (E) ROOF -TOP-FACING SLOT (E) ROOF -TOP-FACING SLOT -INTERNAL SPLICE -INTERNAL SPLICE SIDE-FACING SLOT -INTERNAL SPLICE -SIDE-FACING SLOT FLASHFOO FLASHFOO' -SIDE-FACING SLOT (E) BUILDIN E) BUILDING N DETAIL, SPLICE, XR100 1'-0"=1'-0" H FLASHFOOT DETAIL Scale: 3"=1'-0" FLASHFOOT DETAIL
 Scale: 3"=1'-0 O DETAIL, SPLICE, XR10 1'-0"=1'-0" M DETAIL, SPLICE, XR1000 1'-0"=1'-0" -SELF-DRILLING SCREW elta ONRIDGE RAI 0 0 0 0 -IRONRIDGE INTERNAL SPLICE (K) DETAIL, SPLICE CONNECTION, XR1000 P IRONRIDGE FLASHFOOT SIDE VIEW GROUNDING STRAP, INSTALLED AS NEEDED -SELF-DRILLING SCREW Q IRONRIDGE FLASHFOOT ____[©]. RONRIDGE RAI IRONRIDGE INTERNAL SPLICE - 1" MIN. DETAIL, EXPANSION JOINT CONNECTION, XR1000 F)

R IRONRIDGE FLASHFOOT, FRONT VIEW



IRONRIDGE FLASHFOOT, PLAN VIEW



Array Wind Load Calculations		Lag Bolt Pull Out Calculations	
Solar Panel	11	Spruce, Pine	Per Inch Th
Total Area (sq.ft.)	198.55	SS Lag Bolt 5/16" x 4"	Min. Thread
Wind Load (psf.)	-60.0	Wood Strength x Thread Depth = Pull Out Strength	
Total Wind Loads (lbs.)	-11,913.0	266 lbs. x 3" = 789 lbs.	
Total Roof Mounts (#)	22	Allowable Pull Out Strength Required per Lag Bolt	798 lbs.
Tension Force per Mount (lbs.)	-531.5725	Max. Pull Out Strength Required per Lag Bolt	-531.6 lbs.
Tension force per LAG-BOLT (lbs.)	-531.6	Lag Bolt Pull Out Strength Safety Factor	1.5



CHEM LINK **Construction & Maintenance** Telephone: 800-826-1681 Fax: 269-679-4448

Schoolcraft, MI 49087 www.chemlink.com

Product Description

sealant designed for use in cementitious siding, metal architecture, curtain wall construction and joints subject to movement. DuraLink 50's adhesion to difficult surfaces permits its use on anodized metal and coatings such as Kynar 500[®] PVDF. DuraLink 50 will not stain absorbent stone substrates like limestone or marble. DuraLink 50's unique polyether chemistry eliminates out-gassing on green concrete and protects against "sun tanning" or discoloration when exposed to ultraviolet light.

Applicable Performance Standards ASTM C920, Type S, Grade NS, Class 50,

- Uses NT, T2, M, G, A & O
- Canadian Standards Board CAN 19, 13-M82 SWR Institute Validated (Sealant Waterproofing and Restoration)

- listed in California Proposition 65

Green Standards:

- NAHB Model Green Home Building Guidelines: 5 Global Impact Points
- VOC Content: less than 22 grams / liter ASTM D2369 EPA Method 24 (tested at 240°F / 115°C)









IWISt-On Cap				
FlashFoot2's unique the lag bolt and loc twist. The Cap help superior structural the rail and lag bolt load path.	e Cap design ks into place v s FlashFoot2 strength, by al t in a concentr	encapsulated with a simple deliver ligning ic		
			b	
				8
				1
			1	Iltra
	1	. /	K	11th
Single Socket	Size	_	K	1 although