



# PRODUCT SPECIFICATION

## INSULKRIMP RINGS AND SPADES

### 1.0 SCOPE

- A. THIS PRODUCT SPECIFICATION COVERS THE INSULKRIMP RINGS AND SPADES WITH PVC INSULATION AND TIN PLATING FOR 22 AWG TO 3/0 AWG WIRE.

### 2.0 PRODUCT DESCRIPTION

#### 2.1 INSULATED RINGS AND SPADES

- A. 19054 INSULKRIMP LONG BARREL RINGS 22 – 14 AWG
- B. 19055 INSULKRIMP BRAZED LONG BARREL RINGS 22 – 14 AWG
- C. 19070 INSULKRIMP RINGS 22 – 10 AWG
- D. 19071 INSULKRIMP BRAZED RINGS 8 – 3/0 AWG
- E. 19075 INSULKRIMP STAR RINGS 22 – 14 AWG
- F. 19080 INSULKRIMP MULTI STUD RINGS 22 – 10 AWG
- G. 19089 INSULKRIMP LONG BARREL RECTANGULAR TONGUE 22 – 14 AWG
- H. 19090 INSULKRIMP RECTANGULAR TONGUE 22 – 10 AWG
- I. 19099 INSULKRIMP SNAP SPADES 22 – 10 AWG
- J. 19119 INSULKRIMP LONG BARREL FLANGED SPADES 22 – 14 AWG
- K. 19120 INSULKRIMP BRAZED LONG BARREL FLANGED SPADES 22 – 14 AWG
- L. 19121 INSULKRIMP FLANGED SPADES 22 – 10 AWG
- M. 19122 INSULKRIMP BRAZED FLANGED SPADES 22 – 10 AWG
- N. 19130 INSULKRIMP LONG BARREL BLOCK SPADES 22 – 14 AWG
- O. 19131 INSULKRIMP BLOCK SPADES 22 – 10 AWG
- P. 19142 INSULKRIMP LONG BARREL SPADES 22 – 14 AWG
- Q. 19143 INSULKRIMP BRAZED LONG BARREL SPADES 22 – 14 AWG
- R. 19144 INSULKRIMP SPADES 22 – 10 AWG
- S. 19145 INSULKRIMP BRAZED SPADES 22 – 10 AWG
- T. 19171 INSULKRIMP LONG BARREL HOOKS 22 – 14 AWG
- U. 19179 INSULKRIMP HOOKS 22 – 10 AWG
- V. 19204 INSULKRIMP 3 & 4 WAY RINGS 22 – 10 AWG

#### 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

- A. THE DIMENSIONAL CHARACTERISTICS ARE IDENTIFIED ON THE SALES DRAWINGS.
- B. MATERIALS:
  - I. BASE MATERIAL IS C11000 COPPER IN VARIOUS THICKNESSES.
  - II. PLATING IS MATTE TIN .000100(0.00254) MINIMUM THICKNESS.
  - III. INSULATION MATERIAL IS PVC IN VARIOUS COLORS.

#### 2.3 SAFETY AGENCY APPROVALS

- A. 22 AWG THROUGH 1/0 AWG PARTS ARE UL LISTED E32244 CATEGORY ZMVV
- B. 22 AWG THROUGH 2 AWG PARTS ARE CSA CERTIFIED LR18689 CLASS 6223-02
- C. ALL PARTS ARE ROHS COMPLIANT

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DOCUMENT NUMBER: <b>PS-19902-009</b>	CREATED / REVISED BY: <b>E. THRODAHL</b>	CHECKED BY: <b>J. MACNEIL</b>	APPROVED BY: <b>J. MACNEIL</b>



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## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

- A. 22 THROUGH 1/0 AWG UL LISTED TO STANDARD 486A & B
- B. 22 THROUGH 2 AWG CSA CERTIFIED TO STANDARD C22.2 NO 65

## 4.0 RATINGS

### 4.1 VOLTAGE

- A. ALL UL/CSA LISTED PARTS UNDER THIS SPEC ARE RATED AT 600VAC.

### 4.2 CURRENT

- A. THE AMPERAGE RATING IS BASED ON THE WIRE AWG APPLIED TO THE TERMINALS PER UL 486 A & B SHOWN BELOW.

WIRE AWG	MAX AMPERE RATING
22	-
20	-
18	-
16	-
14	15
12	20
10	30
8	50
6	65
4	85
2	115
1	130
1/0	150

### 4.3 TEMPERATURE

- A. OPERATING - 105°C (221°F)

### 4.4 FLAMMABILITY

- A. ALL PARTS UNDER THIS SPECIFICATION HAVE PVC INSULATION WITH UL FLAMMABILITY RATING OF 94V-0.

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## 5.0 PERFORMANCE

### 5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Temperature Rise as a result of Current Cycling*	The Test Specimens shall complete 500 cycles of equal current on and off (1 hr ea.) at the current levels noted in Table 7 for 75C*.	Temperature Rise must not exceed 125C over Ambient
2	Static Heating Sequence - Static Heating*	The Test Samples must carry continuous current as noted in Table 7* until stabilization.	Temperature Rise must not exceed 50C over Ambient
3	Static Heating Sequence - Secureness*	The Test Samples, with correct conductor length, are fastened thru a bushing, at the height indicated and with a mass suspended from the free end per Table 26*.	The Test Samples must be intact at the transition area after 30 minutes.
4	Static Heating Sequence – Pullout*	The Test Samples from Secureness Test are subjected to a Direct Axial Pull with a Force Applied per Table 27*	The Test Samples must withstand Table 27* Force applied for 1 minute

### 5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5	Wire Pullout Force* (Axial)	Test Samples Crimped to Min/Max wire awg are subjected to an axial pullout force on the wire at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	The Test Samples must withstand Table 27* Force applied for 1 minute

\* See UL Standard 486A & B for Test Descriptions and Table information

## 6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

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