



National Standard Parts Associates, Inc.

# Opti-Seal

## Ring Terminals

4/1/2019



**NOTES:**

**BARE PART**

1. MATERIAL: COPPER
2. FINISH: ELECTRO-TIN PLATE

**TUBING**

1. CROSS-LINKED IONIC POLYMER
2. MELTABLE, INTEGRAL INNER WALL
3. 194° F (90° C) SHRINK TEMPERATURE
4. -67° F (-55° C) TO 257° F (125° C) CONTINUOUS OPERATING TEMP.
5. TENSILE STRENGTH: 4000 PSI
6. ULTIMATE ELONGATION: 450%
7. SPECIFIC GRAVITY: .95
8. LONGITUDINAL CHANGE: +1, -10%
9. DIELECTRIC STRENGTH: 750 V/MIL
10. NON-CORROSIVE
11. WATER ABSORPTION: 1% MAX



Part #	AWG	Stud Size	Tubing Color	Stripe Color	Barrel Seam	Tubing ID	Length		Pad Width W (+/- .05)
							Minimum	Maximum	
OS116-06	22-18	#6	Clear	Red	Brazed	.186	1.289	1.674	0.35
OS116-08	22-18	#8	Clear	Red	Brazed	.186	1.289	1.674	0.35
OS116-10	22-18	#10	Clear	Red	Brazed	.186	1.289	1.674	0.35
OS116-14	22-18	1/4"	Clear	Red	Brazed	.186	1.415	1.885	0.56
OS116-516	22-18	5/16"	Clear	Red	Brazed	.186	1.415	1.885	0.56
OS116-38	22-18	3/8"	Clear	Red	Brazed	.186	1.415	1.885	0.56
OS114-06	16-14	#6	Clear	Blue	Brazed	.216	1.289	1.674	0.35
OS114-08	16-14	#8	Clear	Blue	Brazed	.216	1.289	1.674	0.35
OS114-10	16-14	#10	Clear	Blue	Brazed	.216	1.289	1.674	0.35
OS114-14	16-14	1/4"	Clear	Blue	Brazed	.216	1.478	1.883	0.56
OS114-516	16-14	5/16"	Clear	Blue	Brazed	.216	1.478	1.883	0.56
OS114-38	16-14	3/8"	Clear	Blue	Brazed	.216	1.478	1.883	0.56
OS110-06	12-10	#6	Clear	Yellow	Brazed	.279	1.282	1.665	0.35
OS110-08	12-10	#8	Clear	Yellow	Brazed	.279	1.282	1.665	0.35
OS110-10	12-10	#10	Clear	Yellow	Brazed	.279	1.282	1.665	0.35
OS110-14	12-10	1/4"	Clear	Yellow	Brazed	.279	1.478	1.883	0.56
OS110-516	12-10	5/16"	Clear	Yellow	Brazed	.279	1.478	1.883	0.56
OS110-38	12-10	3/8"	Clear	Yellow	Brazed	.279	1.478	1.883	0.56
OS110-38W	12-10	3/8"	Clear	Yellow	Brazed	.279	1.495	1.973	0.69
OS110-12	12-10	1/2"	Clear	Yellow	Brazed	.279	1.495	1.973	0.69

All dimensions are measured in inches except where noted.

Reviewed & Approved By:

Brad Price  
VP, Operations



National Standard Parts Associates, Inc.

# Opti-Seal

## Spade Terminals

4/1/2019



**NOTES:**

**BARE PART**

1. MATERIAL: COPPER
2. FINISH: ELECTRO-TIN PLATE

**TUBING**

1. CROSS-LINKED IONIC POLYMER
2. MELTABLE, INTEGRAL INNER WALL
3. 194° F (90° C) SHRINK TEMPERATURE
4. -67° F (-55° C) TO 257° F (125° C) CONTINUOUS OPERATING TEMP.
5. TENSILE STRENGTH: 4000 PSI
6. ULTIMATE ELONGATION: 450%
7. SPECIFIC GRAVITY: .95
8. LONGITUDINAL CHANGE: +1, -10%
9. DIELECTRIC STRENGTH: 750 V/MIL
10. NON-CORROSIVE
11. WATER ABSORPTION: 1% MAX



Part #	AWG	Stud Size	Tubing Color	Stripe Color	Barrel Seam	Tubing ID	Length		Pad Width W (+/- .05)
							Minimum	Maximum	
OS216-06	22-18	#6	Clear	Red	Brazed	.186	1.240	1.625	0.35
OS216-10	22-18	#8 - #10	Clear	Red	Brazed	.186	1.220	1.610	0.35
OS214-06	16-14	#6	Clear	Blue	Brazed	.216	1.240	1.625	0.35
OS214-10	16-14	#8 - #10	Clear	Blue	Brazed	.216	1.220	1.610	0.35
OS210-10	12-10	#8 - #10	Clear	Yellow	Brazed	.279	1.220	1.600	0.35
OS210-14	12-10	1/4"	Clear	Yellow	Brazed	.279	1.410	1.820	0.56

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VP, Operations



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# Opti-Seal

## Butt Connectors

4/1/2019



**NOTES:**

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2. MELTABLE, INTEGRAL INNER WALL
3. 194° F (90° C) SHRINK TEMPERATURE
4. -67° F (-55° C) TO 257° F (125° C) CONTINUOUS OPERATING TEMP.
5. TENSILE STRENGTH: 4000 PSI
6. ULTIMATE ELONGATION: 450%
7. SPECIFIC GRAVITY: .95
8. LONGITUDINAL CHANGE: +1, -10%
9. DIELECTRIC STRENGTH: 750 V/MIL
10. NON-CORROSIVE
11. WATER ABSORPTION: 1% MAX



Part #	AWG	Tubing Color	Stripe Color	Tubing ID	Barrel Seam	Length	
						Minimum	Maximum
OS55-16	22-18	Clear	Red	.186	Seamless	1.327	1.607
OS55-14	16-14	Clear	Blue	.216	Seamless	1.327	1.607
OS55-10	12-10	Clear	Yellow	.279	Seamless	1.439	1.738

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VP, Operations



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# Opti-Seal

## Step-Down Butts

4/1/2019



**BARE PART**

1. MATERIAL: COPPER
2. FINISH: ELECTRO-TIN PLATE

**TUBING**

1. CROSS-LINKED IONIC POLYMER
2. MELTABLE, INTEGRAL INNER WALL
3. 194° F (90° C) SHRINK TEMPERATURE
4. -67° F (-55° C) TO 257° F (125° C) CONTINUOUS OPERATING TEMP.
5. TENSILE STRENGTH: 4000 PSI
6. ULTIMATE ELONGATION: 450%
7. SPECIFIC GRAVITY: .95
8. LONGITUDINAL CHANGE: +1, -10%
9. DIELECTRIC STRENGTH: 750 V/MIL
10. NON-CORROSIVE
11. WATER ABSORPTION: 1% MAX



Part #	AWG	Tubing Color	Barrel Band Colors	Barrel Seam	Tubing ID	Overall Length	
						Minimum	Maximum
OS56-20	24-22 to 22-18	Clear	White (small end) & Red (large end)	Seamless	.186	1.327	1.607
OS56-16	22-18 to 16-14	Clear	Red (small end) & Blue (large end)	Seamless	.216	1.327	1.607
OS56-14	16-14 to 12-10	Clear	Blue (small end) & Yellow (large end)	Seamless	.279	1.439	1.738
OS56-10	12-10 to 8	Clear	Yellow (small end) & Red (large end)	Seamless	.279	1.439	1.738

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VP, Operations



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# Opti-Seal

## Quick Disconnects

4/1/2019



**NOTES:**

**NYLON TERMINAL COMPONENT**

1. MATERIAL: BRASS CONNECTOR WITH REINFORCEMENT SLEEVE & NYLON INSULATION
2. FINISH: ELECTRO-TIN PLATE
3. TEMP RATING: 105°C (221°F)
4. VOLTAGE RATING: 300V



**SHRINK TUBING**

1. CROSS-LINKED IONIC POLYMER
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5. TENSILE STRENGTH: 4000 PSI
6. ULTIMATE ELONGATION: 450%
7. SPECIFIC GRAVITY: .95
8. LONGITUDINAL CHANGE: +1, -10%
9. DIELECTRIC STRENGTH: 750 V/MIL
10. NON-CORROSIVE
11. WATER ABSORPTION: 1% MAX



Part #	AWG	Type	Stripe Color	Tubing Color	Tubing ID	Barrel Seam	Length	
							Minimum	Maximum
OS69-18-250F	22-18	Female	Red	Clear	.260	Butted, With Sleeve	1.53	1.79
OS69-18-250M	22-18	Male	Red	Clear	.260	Butted, With Sleeve	1.58	1.86
OS69-14-250F	16-14	Female	Blue	Clear	.260	Butted, With Sleeve	1.53	1.79
OS69-14-250M	16-14	Male	Blue	Clear	.260	Butted, With Sleeve	1.58	1.86
OS69-10-250F	12-10	Female	Yellow	Clear	.375	Butted, With Sleeve	1.65	1.83
OS69-10-250M	12-10	Male	Yellow	Clear	.375	Butted, With Sleeve	1.58	1.91

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# Opti-Seal

## Heat Shrink Tubing

4/1/2019



### NOTES:

#### TUBING

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CONTINUOUS OPERATING TEMP.
5. TENSILE STRENGTH: 4000 PSI
6. ULTIMATE ELONGATION: 450%
7. SPECIFIC GRAVITY: .95
8. LONGITUDINAL CHANGE: +1, -10%
9. DIELECTRIC STRENGTH: 750 V/MIL
10. NON-CORROSIVE
11. WATER ABSORPTION: 1% MAX

### 6" Shrink Tubing:



Part #	AWG	Tubing Color	Minimum Expanded ID	Maximum Recovered ID	Length	
					Minimum	Maximum
HST394C-6	22-18	Clear	.186	.045	5.75	6.25
HST395C-6	16-14	Clear	.260	.080	5.75	6.25
HST396C-6	12-10	Clear	.375	.100	5.75	6.25

All dimensions are measured in inches except where noted.

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Brad Price  
VP, Operations