








**ELECTRICAL & MRO
PRODUCT CATALOG**



TIMELINE OF SIGNIFICANT EVENTS

1980	1982	1989	1990	1991
<p>Master distributor of bins, trays and packaged fasteners for distributors calling on maintenance and repair facilities</p> 	<p>Began assembly of Sealed Crimp Connectors</p> 	<p>Patent issued for Sealed Solder Butt Connectors</p> 	<p>Introduced Sealed Solder System for Battery Terminals</p> 	<p>Patent issued for Sealed Solder Terminals - Rings, Spades, Slip-Ons</p> 

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1999	2001	2005	2005
<p>Patent issued for Sealed Crimp & Solder Butt Connectors</p> 	<p>Patent issued for Sealed Crimp & Solder Terminals - Rings, Spades, Spring Spades, Slip-Ons</p> 	<p>Introduced innovative Step Down Butt Connectors</p> 	<p>Introduced (patent pending) Sealed Connectors for Multiple Wires</p> 

THE SEALED ELECTRICAL SYSTEM It's a Question of Integrity®

WHY USE HEAT SHRINK TERMINALS?

Corrosion



Problem: Corrosion damage is estimated at over \$23.4 billion in the transportation sector. Wiring & lighting is the most frequent corrosion problem in maintaining fleets.

Why: When using a standard crimp terminal, the wire is exposed to moisture and other contaminants. Over time, the wire starts to corrode which reduces the current carrying capacity of the electrical system.

Solution: NSPA's heat shrink connectors maintained their electrical conductivity after being subjected to many corrosive chemicals used to melt snow and ice, unlike standard crimp connectors. All of the connectors were exposed to these chemicals for an equivalent of 10 years "road-life"

Pull-Out



Problem: In most cases, electrical connectors must operate in adverse conditions: heat, cold, vibration, strain, etc. These conditions can cause the wire or wires to pull-out of the connector.

Solution: NSPA's heat shrink terminals are significantly stronger than standard crimp connectors. In fact, our Sealed Crimp Connectors are 50% stronger than PVC connectors. Our Sealed Solder Connectors & Sealed Crimp & Solder Connectors are 80% stronger than PVC Connectors.

Technology



Advanced technology and computerization have resulted in OEMs designing sealed and molded components in all types of equipment. Most OEMs now require sealed connections for repair and warranty work. The integrity of the electrical system is breached when repairs are made with inferior, unsealed electrical connections.

Downtime



Lighting and electrical problems are the most frequent causes of downtime when maintaining a fleet. Usually these problems stem from faulty electrical connections. Equipment downtime often results in hundreds to thousands of dollars in violations, repair costs & lost opportunities.

WHO USES HEAT SHRINK TERMINALS?

HEAVY DUTY TRUCKING • MARINE • AUTOMOTIVE AFTERMARKET • OEM • HEAVY DUTY EQUIPMENT
MUNICIPALITIES • MILITARY BASES • PLANT MAINTENANCE DEPARTMENTS • MINING
RV • OIL FIELDS • AND MANY OTHERS.

Sealed Multiple Wire Connectors

HYDRALINK

UNIQUE HEAT SHRINK TUBING

Active adhesive flows and seals between multiple wires • Clear tubing allows for visual inspection • Color dash wire size indicator • Color stripe die indicator

SEE PAGE 4 FOR MORE INFORMATION

IN-LINE BUTT CONNECTORS

One Wire to Two Wires



CLOSED-END CONNECTORS

Up to Four Wires



Sealed Crimp & Solder Connectors

MULTILINK

CRIMPED

Mechanical reliability • Holds wires in place

SOLDERED

Ultimate tensile strength • Superior conductivity

SEALED

Durable insulation • Watertight connection

SEE PAGE 6 FOR MORE INFORMATION



Sealed Solder Connectors

ELEKTRALINK

SOLDERED

Ultimate tensile strength • Superior conductivity

SEALED

Durable insulation • Watertight connection • Transparent tubing for visual inspection

SEE PAGE 10 FOR MORE INFORMATION



Step Down Butt Connectors

INNOVATIVE DESIGN!

Our Step Down Connector is tapered which ensures uniform wall thickness and provides a strong mechanical termination.

EASY TO USE

Has two stripes - one on each end - to indicate which wire size to insert. • Stripes also indicates which crimp die to use for installation.

SEE PAGE 13 FOR MORE INFORMATION

UNINSULATED



VINYL



SEALED CRIMP



SEALED CRIMP & SOLDER



Sealed Crimp Connectors

CRIMPED

Mechanically sound • Seamless butt connectors • Brazed seam-rings and spades

SEALED

Durable insulation • Watertight connection • Color-coded with wire gauge imprint

SEE PAGE 14 FOR MORE INFORMATION

KRIMPA-SEAL - Insulated with tinted, adhesive-lined, polyolefin heat shrink tubing

NYLA-SEAL - Insulated with nylon tinted, adhesive-lined, heat shrink tubing

"OLD SCHOOL" SEALED CRIMP CONNECTOR - Nylon insulated connectors with clear, adhesive-lined, polyolefin heat shrink tubing



KRIMPA-SEAL



NYLA-SEAL



"OLD SCHOOL" SEALED CRIMP CONNECTOR



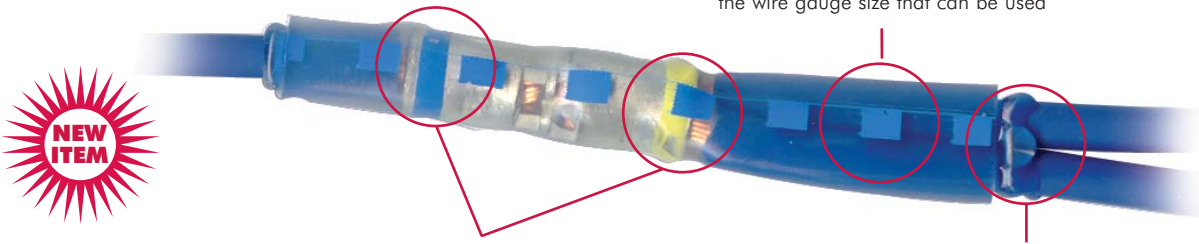
SEALED MULTIPLE WIRE CONNECTORS

HYDRALINK™ PRODUCT LINE

Patent Pending US 11/360, 784

IN-LINE BUTT CONNECTORS JOIN TWO WIRES TO ONE WIRE ...

Color dash on tubing indicates the wire gauge size that can be used



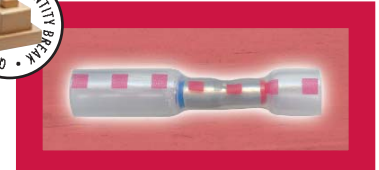
Color stripes on the connector indicate which crimp die to use

Tubing has an active adhesive that seals between multiple wires

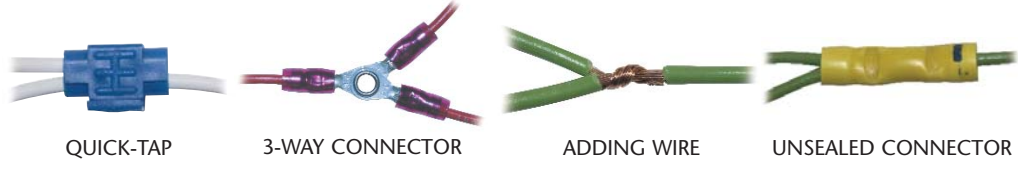
IN-LINE BUTT CONNECTORS

One Wire to Two Wires

Part #	Wire Gauge	Tubing Color	Color Stripe On Connector	Wire Combos	Crimp Die (Insulated)	Pkg Qty
HL57-20	24-22 AWG	Clear/White Dash	Side 1: White	One 24-22 AWG	White (24-22 AWG)	50
			Side 2: Red	Two 24-22 AWG	Red (20-18 AWG)	50
HL57-16	20-18 AWG	Clear/ Red Dash	Side 1: Red	One 20-18 AWG	Red (20-18 AWG)	50
			Side 2: Blue	Two 20-18 AWG	Blue (16-14 AWG)	50
HL57-14	16-14 AWG	Clear/Blue Dash	Side 1: Blue	One 16-14 AWG	Blue (16-14 AWG)	50
			Side 2: Yellow	Two 16-14 AWG	Yellow (12-10 AWG)	50
HL57-10	12-10 AWG	Clear/Yellow Dash	Side 1: Yellow	One 12-10 AWG	Yellow (12-10 AWG)	50
			Side 2: Red	Two 12-10 AWG	Red (8 AWG)	50



THE IN-LINE BUTT CONNECTOR IS THE SOLUTION FOR PROBLEMS THAT MAY RESULT FROM THE USE OF THESE TERMINALS:



CLOSED-END CONNECTORS JOIN TWO TO FOUR WIRES ...

Closed-end connectors are crimped here.

In environments where corrosion and/or vibration are a problem, the closed-end connector can be used to replace wire nuts and other similar connectors.

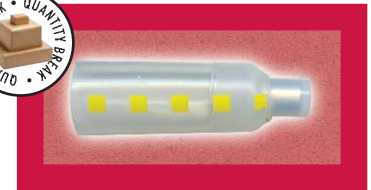


Tubing has an active adhesive that seals multiple wires and eliminates wire pull-out

CLOSED-END CONNECTORS

Up to Four Wires

Part #	Connector Wire Range	Tubing Color	Pkg Qty
HL8-22-14	22-14 AWG	Clear / Blue Dashes	50
HL8-18-10	18-10 AWG	Clear / Yellow Dashes	50



THE CLOSED-END CONNECTOR IS THE SOLUTION FOR PROBLEMS THAT MAY RESULT FROM THE USE OF THESE TERMINALS:



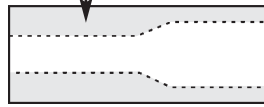
THE IN-LINE BUTT CONNECTOR COMPONENTS

THE MULTIPLE WIRE CONNECTOR

OTHER'S STEP DOWN CONNECTOR



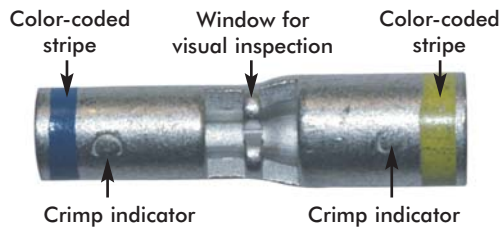
Thick copper wall - Difficult to crimp



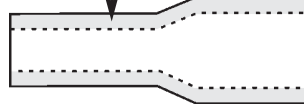
The outside diameter of the butt connector is the same on both ends and only the inside diameter is varied for the different wire gauge. This means that the side for the smaller wire has a much thicker wall than normal and is extremely difficult to crimp.

ALMOST IMPOSSIBLE TO CRIMP PROPERLY & WIRE CAN EASILY PULL OUT!!

OUR VERSION



Uniform copper wall - EASY to crimp



The inside AND the outside diameter of the connector is varied which means that both sides will make a sound mechanical crimp.

The barrel has two stripes - one on each end - to indicate which wire size to insert. Plus, the stripe matches the crimp die that needs to be used. For example, the blue stripe indicates the side where a 14 or 16 AWG wire is to be inserted, and it will be crimped in the blue crimp die.

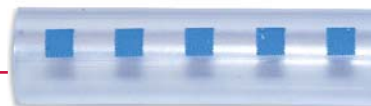
EASY TO CRIMP & PROVIDES STRONG CRIMP TERMINATION!

ADDITIONAL FEATURES OF THE CRIMP CONNECTOR

- Seamless butt connectors provide superior crimp performance
- Window in butt connectors allows for visual inspection to ensure all wires are fully inserted
- Butt connectors have crimp indicators where the installation tool should be positioned to crimp connector
- Wire-stop in butt connector prevents over-insertion of the wires

THE HEAT SHRINK TUBING

- High adhesive-flow polyolefin tubing to seal multiple wires
- Color-coded dash on tubing to indicate the wire gauge for the connector
- Clear tubing to allow for visual inspection



TOOLS & ASSORTMENTS

PART #	DESCRIPTION		
ASSORTMENTS & KITS			
NSPA-9216	6 Items	28 Pieces Mini Plastic Kit	In-Line & Closed-End Connectors
NSPA-5216	6 Items	55 Pieces Starter Assortment	In-Line & Closed-End Connectors



SEALED CRIMP & SOLDER CONNECTORS

MULTILINK™ PRODUCT LINE

MultiLink is crimped for mechanical reliability, soldered for strength and conductivity, and sealed for superior durability. When there is no margin for error, choose **MULTILINK...THE ULTIMATE CONNECTOR.**

FEATURES & BENEFITS

- High quality, crimp connectors provide a secure mechanical connection.
- Pre-fluxed, low temperature solder delivers superior current flow and tensile strength.
- Translucent, adhesive-lined heat shrink tubing allows for visual inspection and provides a seal against corrosion.
- Crimped, soldered, and sealed connection meets or exceeds the most stringent OEM standards.

THE COMPONENTS

THE CRIMP CONNECTOR

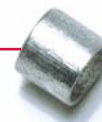
- Seamless butt connectors for superior crimp performance
- Window in butt connectors allows for visual inspection & solder to flow into
- Butt connectors have indicators for crimp & window location
- Wire-stop in butt connector prevents over-insertion of wire
- Where possible, terminals have brazed seams to deliver a superior mechanical termination



Dots indicate where to crimp and on which side of the barrel the window is located.

THE SOLDER

- Flux coating to clean metal surfaces
- Pre-measured solder to provide the right amount of solder to ensure a solid termination
- Low-temp solder alloy for ease of installation



THE HEAT SHRINK TUBING

- Adhesive-lined polyolefin to seal the connection
- Color-coded with wire gauge imprint for easy size identification
- Translucent tubing to allow for visual inspection



THE ULTIMATE ELECTRICAL CONNECTION!

CUT-AWAY VIEW

CRIMP

SOLDER

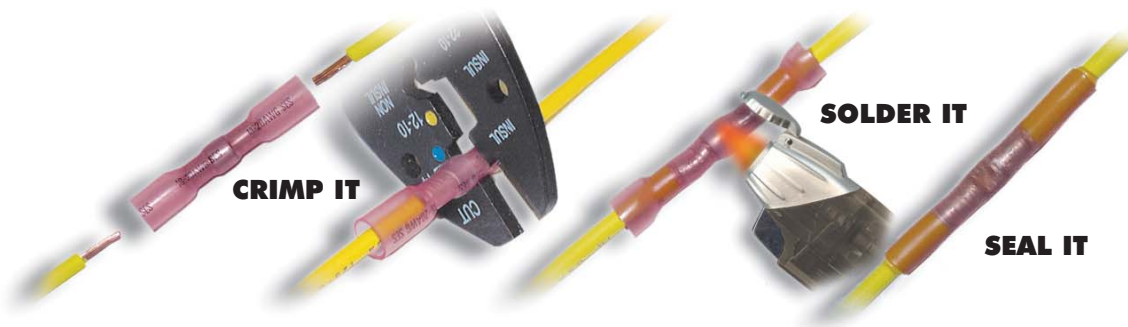
SEAL



CRIMP IT

SOLDER IT

SEAL IT





PRODUCT CHARACTERISTICS

HEAT SHRINK TUBING

Material: Multiple wall polyolefin tubing with meltable, integral inner wall
 Applicable Specifications: MIL-I-23053/4, Class 1; AMS 3534; UL File E-157227.
 Typical Properties:

Physical:	Temperature Rating:	-55°C to 110°C
	Tensile Strength:	2200 PSI
	Longitudinal Change:	+1, -10%
	Recovery Temperature:	135°C
Electrical:	Dielectric Strength:	900 Volts/Mil
	Voltage Rating:	600 Volts
Chemical:	Corrosion Resistance:	Non-Corrosive
	Fungus Resistance:	Non-Nutrient
	Water Absorption:	<0.1%





SOLDER

Melt Temperature	149°C (300°F)
Applicable Specifications:	J-STD-006
Solder contains any or all of the following:	Antimony, Cadmium, Copper, Indium, Silver, Iron, Aluminum, Nickel, Arsenic, Zinc, Bismuth, Gold, Tin, Lead

FLUX	1% - 3% RMA
Applicable Specifications:	J-STD-004

PATENT NUMBERS	Butt Connectors: US 6,838,621 B2 US 6,677,529 B1
	Terminals: US 6,666,732 B1

TOOLS & ASSORTMENTS

PART #		DESCRIPTION			
ASSORTMENTS & KITS					
NSPA-9117	3 Items	60 Pieces	Mini Kit	Butt Connectors	
NSPA-5117	4 Items	61 Pieces	Starter Assortment	Butt Connectors & Torch	
NSPA-5117-T	5 Items	62 Pieces	Starter Assortment	Butt Connectors, Torch & Crimp Tool	
NSPA-5203	20 Items	120 Pieces	Starter Assortment	Butt Connectors & Terminals	
NSPA-5204	14 Items	90 Pieces	Starter Assortment	Butt Connectors, Terminals & Torch	
NSPA-5204-T	15 Items	91 Pieces	Starter Assortment	Butt Connectors, Terminals, Torch & Crimp Tool	
NSPA-1203	24 Items	285 Pieces	Maintenance Assortment	Butt Connectors & Terminals	
NSPA-1204	28 Items	284 Pieces	Maintenance Assortment	Butt Connectors, Terminals, Tubing & Torch	
NSPA-1204-T	29 Items	285 Pieces	Maintenance Assortment	Butt Connectors, Terminals, Tubing, Torch & Crimp Tool	
NSPA-1206	25 Items	113 Pieces	Wire Rack Display	Connectors, Kits & Tools	
TOOLS					
T-R-15	Multi Purpose Crimp Tool		T-R-50	Ratchet Tool	
				T-MT-4E	Self Igniting Butane Refillable Micro Torch
					
				T-MTC-51	Self-Igniting Butane Refillable Canister Torch
					

BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML5-20	50	MLC5-20	4	5 clams	22-24 AWG clear
ML5-16	50	MLC5-16	4	5 clams	18-20 AWG red
ML5-14	50	MLC5-14	4	5 clams	14-16 AWG blue
ML5-10	50	MLC5-10	3	5 clams	10-12 AWG yellow



STEP-DOWN BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML56-20	50	MLC56-20	5	5 clams	22-24 AWG to 18-20 AWG red
ML56-16	50	MLC56-16	5	5 clams	18-20 AWG to 14-16 AWG blue
ML56-14	50	MLC56-14	5	5 clams	14-16 AWG to 10-12 AWG yellow
ML56-10	50	MLC56-10	5	5 clams	10-12 AWG to 8 AWG pink



RING TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML116-06	50	MLC116-06	5	5 clams	18-20 AWG red #6 stud
ML116-08	50	MLC116-08	5	5 clams	18-20 AWG red #8 stud
ML116-10	50	MLC116-10	5	5 clams	18-20 AWG red #10 stud
ML116-14	50	MLC116-14	5	5 clams	18-20 AWG red 1/4" stud
ML116-516	50	MLC116-516	5	5 clams	18-20 AWG red 5/16" stud
ML116-38	50	MLC116-38	5	5 clams	18-20 AWG red 3/8" stud
ML114-06	50	MLC114-06	5	5 clams	14-16 AWG blue #6 stud
ML114-08	50	MLC114-08	5	5 clams	14-16 AWG blue #8 stud
ML114-10	50	MLC114-10	5	5 clams	14-16 AWG blue #10 stud
ML114-14	50	MLC114-14	5	5 clams	14-16 AWG blue 1/4" stud
ML114-516	50	MLC114-516	5	5 clams	14-16 AWG blue 5/16" stud
ML114-38	50	MLC114-38	5	5 clams	14-16 AWG blue 3/8" stud
ML110-06	50	MLC110-06	5	5 clams	10-12 AWG yellow #6 stud
ML110-08	50	MLC110-08	5	5 clams	10-12 AWG yellow #8 stud
ML110-10	50	MLC110-10	5	5 clams	10-12 AWG yellow #10 stud
ML110-14	50	MLC110-14	5	5 clams	10-12 AWG yellow 1/4" stud
ML110-516	50	MLC110-516	5	5 clams	10-12 AWG yellow 5/16" stud
ML110-38	50	MLC110-38	5	5 clams	10-12 AWG yellow 3/8" stud
ML110-12	50	MLC110-12	5	5 clams	10-12 AWG yellow 1/2" stud



CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.

SPADE TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML216-06	50	MLC216-06	5	5 clams	18-20 AWG red #6 stud
ML216-08	50	MLC216-08	5	5 clams	18-20 AWG red #8 stud
ML216-10	50	MLC216-10	5	5 clams	18-20 AWG red #10 stud
ML214-06	50	MLC214-06	5	5 clams	14-16 AWG blue #6 stud
ML214-08	50	MLC214-08	5	5 clams	14-16 AWG blue #8 stud
ML214-10	50	MLC214-10	5	5 clams	14-16 AWG blue #10 stud
ML210-06	50	MLC210-06	5	5 clams	10-12 AWG yellow #6 stud
ML210-08	50	MLC210-08	5	5 clams	10-12 AWG yellow #8 stud
ML210-10	50	MLC210-10	5	5 clams	10-12 AWG yellow #10 stud



SPRING SPADE TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML316S-06	50	MLC316S-06	5	5 clams	18-20 AWG red #6 stud
ML316S-08	50	MLC316S-08	5	5 clams	18-20 AWG red #8 stud
ML316S-10	50	MLC316S-10	5	5 clams	18-20 AWG red #10 stud
ML314S-06	50	MLC314S-06	5	5 clams	14-16 AWG blue #6 stud
ML314S-08	50	MLC314S-08	5	5 clams	14-16 AWG blue #8 stud
ML314S-10	50	MLC314S-10	5	5 clams	14-16 AWG blue #10 stud
ML310S-06	50	MLC310S-06	5	5 clams	10-12 AWG yellow #6 stud
ML310S-08	50	MLC310S-08	5	5 clams	10-12 AWG yellow #8 stud
ML310S-10	50	MLC310S-10	5	5 clams	10-12 AWG yellow #10 stud



FEMALE SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML6-18-250F	50	MLC6-18-250F	5	5 clams	18-20 AWG red Female .250" tab
ML6-14-250F	50	MLC6-14-250F	5	5 clams	14-16 AWG blue Female .250" tab
ML6-10-250F	50	MLC6-10-250F	5	5 clams	10-12 AWG yellow Female .250" tab



MALE SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML6-18-250M	50	MLC6-18-250M	5	5 clams	18-20 AWG red Male .250" tab
ML6-14-250M	50	MLC6-14-250M	5	5 clams	14-16 AWG blue Male .250" tab
ML6-10-250M	50	MLC6-10-250M	5	5 clams	10-12 AWG yellow Male .250" tab



FULLY INSULATED SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ML6-18-250FF	50	MLC6-18-250FF	5	5 clams	18-20 AWG red Fully Ins. Female .250" tab
ML6-14-250FF	50	MLC6-14-250FF	4	5 clams	14-16 AWG blue Fully Ins. Female .250" tab
ML6-10-250FF	50	MLC6-10-250FF	4	5 clams	10-12 AWG yellow Fully Ins. Female .250" tab



CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.



SEALED SOLDER CONNECTORS

ELEKTRALINK™ PRODUCT LINE

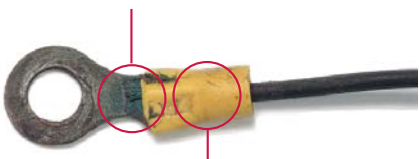
Elektralink is the clear choice of professionals who demand a superior electrical connection. Elektralink provides a high quality, sealed solder connection that takes the guesswork out of soldering.

DON'T SETTLE FOR THE AVERAGE CONNECTOR...GET ELEKTRALINK, THE BEST SOLDER CONNECTOR AVAILABLE!

REDUCE RECURRING ELECTRICAL PROBLEMS

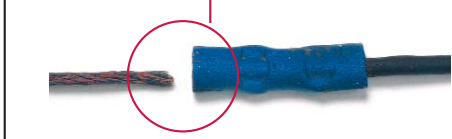
PROBLEMS:

Corrosion on wire causes voltage drop.



Cannot see if terminal is properly installed.

Wire pulled loose due to strain or vibration.



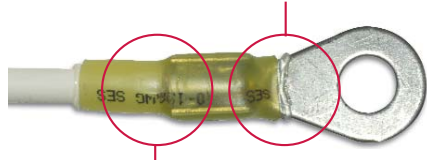
Standard terminal bare part



.032" thickness

SOLUTIONS:

Adhesive-lined tubing prevents corrosion on the wire.



Translucent tubing allows visual inspection of installation.

Solder termination provides maximum tensile strength & conductivity



Greater material thickness of terminal bare part - 1/3 more copper



.040" thickness

THE CLEAR CHOICE OF PROFESSIONALS THAT DEMAND

A SUPERIOR ELECTRICAL CONNECTION!

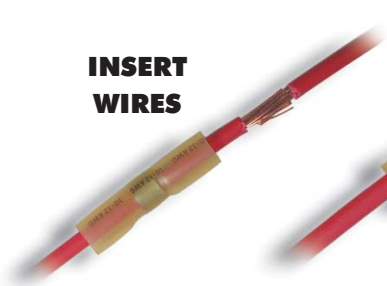


CUT-AWAY VIEW

FEATURES AND BENEFITS

- Translucent, adhesive-lined polyolefin tubing allows visual inspection, prevents wire corrosion, and provides a waterproof seal.
- Easy installation with pre-measured solder takes the guesswork out of the soldering process.
- A soldered electrical connection provides superior current flow and tensile strength.
- Color-coded tubing with wire gauge imprint provides easy identification of the correct part for the job.

INSERT WIRES



SOLDER IT



SEAL IT



PRODUCT CHARACTERISTICS

HEAT SHRINK TUBING

Material: Multiple wall polyolefin tubing with meltable, integral inner wall
 Applicable Specifications: MIL-I-23053/4, Class 1; AMS 3534; UL File E-157227
 Typical Properties:

Physical:	Temperature Rating:	-55°C to 110°C
	Tensile Strength:	2200 PSI
	Longitudinal Change:	+1, -10%
	Recovery Temperature:	135°C
Electrical:	Dielectric Strength:	900 Volts/Mil
	Voltage Rating:	600 Volts
Chemical:	Corrosion Resistance:	Non-Corrosive
	Fungus Resistance:	Non-Nutrient
	Water Absorption:	<0.1%

SOLDER

Melt Temperature	149°C (300°F)
Applicable Specifications:	J-STD-006
Solder contains any or all of the following:	Antimony, Cadmium, Copper, Indium, Silver, Iron, Aluminum, Nickel, Arsenic, Zinc, Bismuth, Gold, Tin, Lead

FLUX

Applicable Specifications:	1% - 3% RMA J-STD-004
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PATENT NUMBERS

Butt Connectors:	4,883,925
Rings and Spades:	5,137,478



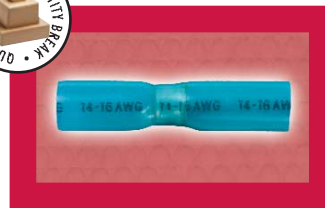
Ask us for a complete list of applicable part numbers.

TOOLS & ASSORTMENTS

PART #	DESCRIPTION			
ASSORTMENTS				
NSPA-9112	4 Items	65 Pieces	Mini Kit	Butt Connectors
NSPA-9113	8 Items	48 Pieces	Mini Kit	22-24 AWG Butt Connectors & Terminals
NSPA-5112	25 Items	135 Pieces	Starter Assortment	Butt Connectors & Terminals
NSPA-5114	13 Items	121 Pieces	Starter Assortment	Butt Connectors, Terminals & Torch
NSPA-1112-S	30 Items	259 Pieces	Maintenance Assortment	Butt Connectors & Terminals
NSPA-1112-L	30 Items	379 Pieces	Maintenance Assortment	Butt Connectors & Terminals
NSPA-1112-ST	31 Items	260 Pieces	Maintenance Assortment	Butt Connectors, Terminals & Torch
NSPA-1112-LT	31 Items	380 Pieces	Maintenance Assortment	Butt Connectors, Terminals & Torch
NSPA-1207	24 Items	110 Pieces	Wire Rack Display	Connectors, Kits & Tools
TOOLS				
	T-MT-4E Self Igniting Butane Refillable Micro Torch			
				T-MTC-51 Self-Igniting Butane Refillable Canister Torch

BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ELA5-20	50	ELAC5-20	5	5 clams	22-24 AWG clear
ELA5-16	50	ELAC5-16	5	5 clams	18-20 AWG red
ELA5-14	50	ELAC5-14	5	5 clams	14-16 AWG blue
ELA5-10	50	ELAC5-10	5	5 clams	10-12 AWG yellow
ELA5-08	50	N/A	N/A	N/A	8 AWG pink



RING TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ELA120-02X	50	ELAC120-02X	5	5 clams	22-24 AWG clear #2 stud
ELA120-04X	50	ELAC120-04X	5	5 clams	22-24 AWG clear #4 stud
ELA120-06X	50	ELAC120-06X	5	5 clams	22-24 AWG clear #6 stud
ELA116-06X	50	ELAC116-06X	5	5 clams	18-20 AWG red #6 stud
ELA116-08X	50	ELAC116-08X	5	5 clams	18-20 AWG red #8 stud
ELA116-10X	50	ELAC116-10X	5	5 clams	18-20 AWG red #10 stud
ELA116-14X	50	ELAC116-14X	5	5 clams	18-20 AWG red 1/4" stud
ELA116-516X	50	ELAC116-516X	5	5 clams	18-20 AWG red 5/16" stud
ELA116-38X	50	ELAC116-38X	4	5 clams	18-20 AWG red 3/8" stud
ELA114-06X	50	ELAC114-06X	5	5 clams	14-16 AWG blue #6 stud
ELA114-08X	50	ELAC114-08X	5	5 clams	14-16 AWG blue #8 stud
ELA114-10X	50	ELAC114-10X	5	5 clams	14-16 AWG blue #10 stud
ELA114-14X	50	ELAC114-14X	5	5 clams	14-16 AWG blue 1/4" stud
ELA114-516X	50	ELAC114-516X	5	5 clams	14-16 AWG blue 5/16" stud
ELA114-38X	50	ELAC114-38X	5	5 clams	14-16 AWG blue 3/8" stud
ELA110-10X	50	ELAC110-10X	4	5 clams	10-12 AWG yellow #10 stud
ELA110-14X	50	ELAC110-14X	4	5 clams	10-12 AWG yellow 1/4" stud
ELA110-516X	50	ELAC110-516X	4	5 clams	10-12 AWG yellow 5/16" stud
ELA110-38X	50	ELAC110-38X	4	5 clams	10-12 AWG yellow 3/8" stud
ELA110-12X	50	ELAC110-12X	4	5 clams	10-12 AWG yellow 1/2" stud



SPADE TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ELA220-02X	50	ELAC220-02X	5	5 clams	22-24 AWG clear #2 stud
ELA220-04X	50	ELAC220-04X	5	5 clams	22-24 AWG clear #4 stud
ELA220-06X	50	ELAC220-06X	5	5 clams	22-24 AWG clear #6 stud
ELA216-10X	50	ELAC216-10X	5	5 clams	18-20 AWG red #10 stud
ELA214-10X	50	ELAC214-10X	5	5 clams	14-16 AWG blue #10 stud
ELA210-10X	50	ELAC210-10X	5	5 clams	10-12 AWG yellow #10 stud



FEMALE SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ELA6-18F	50	ELAC6-18F	5	5 clams	18-20 AWG red female .250" tab
ELA6-14F	50	ELAC6-14F	5	5 clams	14-16 AWG blue female .250" tab
ELA6-10F	50	ELAC6-10F	5	5 clams	10-12 AWG yellow female .250" tab



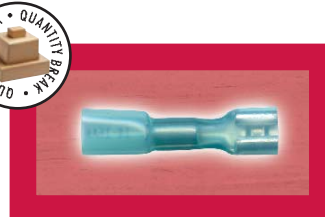
MALE SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ELA6-18M	50	ELAC6-18M	5	5 clams	18-20 AWG red male .250" tab
ELA6-14M	50	ELAC6-14M	5	5 clams	14-16 AWG blue male .250" tab
ELA6-10M	50	ELAC6-10M	5	5 clams	10-12 AWG yellow male .250" tab



FULLY INSULATED SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
ELA6-18FF	50	ELAC6-18F	4	5 clams	18-20 AWG red female .250" tab
ELA6-14FF	50	ELAC6-14F	4	5 clams	14-16 AWG blue female .250" tab
ELA6-10FF	50	ELAC6-10F	4	5 clams	10-12 AWG yellow female .250" tab



CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.



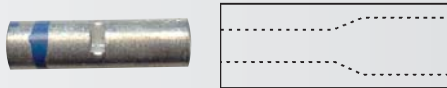
STEP DOWN BUTT CONNECTORS



Has two stripes - one on each end - to indicate which wire size to insert and which crimp die to use

WHY IS OURS SO MUCH BETTER?

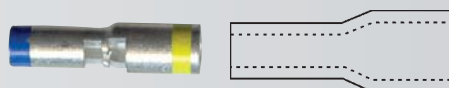
THEIRS:



The outside diameter of the butt connector is the same on both ends and only the inside diameter is adjusted for the different wire gauge. This means that the side for the smaller wire has a much thicker wall than normal and is extremely difficult to crimp.

POTENTIAL FOR WIRE PULL-OUT!

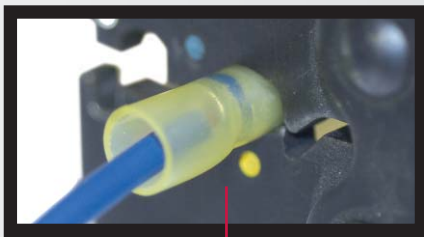
OURS!



We vary the inside AND the outside diameter of the connector which means that both sides will make a positive crimp. Also, has a window which allows for visual inspection

STRONG MECHANICAL TERMINATION!

THEIRS:



Has a color stripe to indicate where the smaller size of wire is inserted. However, it must be crimped in the larger crimp die. For example, on their connector for 14-16 to 10-12 AWG, the BLUE stripe indicates the side where a 14-16 AWG wire is to be inserted. However, it must be crimped in the YELLOW crimp die.

CONFUSING!

OURS!



Has two stripes - one on each end - to indicate which wire size to insert. Plus, the stripe matches the crimp die that needs to be used. For example, the blue stripe indicates the side where a 14 or 16 AWG wire is to be inserted, and it will be crimped in the blue crimp die.

MAKES SENSE!



SEALED CRIMP CONNECTORS

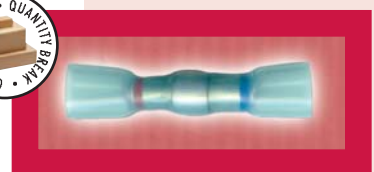
Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS56-20	50	N/A	N/A	N/A	22-24 to 18-20 AWG red
KS56-16	50	KSC56-16	1	5 clams	18-20 to 14-16 AWG blue
KS56-14	50	KSC56-14	1	5 clams	14-16 to 10-12 AWG yellow
KS56-10	50	KSC56-10	1	5 clams	10-12 to 8 AWG pink

CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.



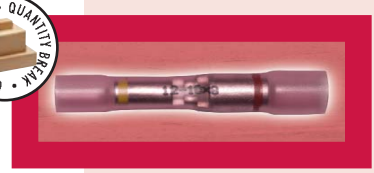
SEALED CRIMP & SOLDER CONNECTORS

Polybag Part#	Pkg Qty	Description	Color
ML56-20	50	22-24 AWG to 18-20 AWG	red
ML56-16	50	18-20 AWG to 14-16 AWG	blue
ML56-14	50	14-16 AWG to 10-12 AWG	yellow
ML56-10	50	10-12 AWG to 8 AWG	pink



VINYL CONNECTORS

Polybag Part#	Pkg Qty	Description	Color
WTV-56-20	50	24-26 AWG to 18-22 AWG	red
WTV-56-16	50	18-22 AWG to 14-16 AWG	blue
WTV-56-14	50	14-16 AWG to 10-12 AWG	yellow
WTV-56-10	50	10-12 AWG to 8 AWG	pink



NON-INSULATED CONNECTORS

Polybag Part#	Pkg Qty	Description
ML56-20-BP	50	22-24 AWG to 18-20 AWG
ML56-16-BP	50	18-20 AWG to 14-16 AWG
ML56-14-BP	50	14-16 AWG to 10-12 AWG
ML56-10-BP	50	10-12 AWG to 8 AWG





SEALED CRIMP CONNECTORS

KRIMPA-SEAL™ PRODUCT LINE

Our enhanced Krimpa-Seal product line is the finest line of “crimp-and-seal” connectors on the market today. New design features, the use of only the finest components, and an expanded product selection place Krimpa-Seal squarely at the top of the class.
IN SHORT...THE BEST JUST GOT BETTER!

DIFFERENCES BETWEEN BUTTED, BRAZED & SEAMLESS CONNECTORS

BUTTED SEAM CONNECTORS

Formed when metal is stamped, rolled, and butted to create the connector barrel. Should only be used with stranded wire and must be crimped in the proper place to avoid opening the seam.



BUTTED SEAM

BRAZED SEAM CONNECTORS

Formed much like a butted seam, except the seam is brazed together with a silver alloy. May be used with solid wire and can be crimped on any side of the barrel without opening the seam.



BRAZED SEAM

SEAMLESS CONNECTORS

Generally only available for a butt connector or splice. The barrel is created from one seamless piece of copper. This eliminates the problem of the barrel opening. May be used with solid wire.

BRAZED SEAM & SEAMLESS CONNECTOR ADVANTAGES

- Better wire contact
- Less voltage drop
- Decreases repair costs
- Prevents wiring failures
- Superior tensile strength
- Increases current flow

COMPARISONS



NSPA'S UNIFORM ADHESIVE FLOW
Adhesive will not impede contact of terminal

VS.



RUNNY ADHESIVE FLOW
Adhesive can impede contact of terminal



NSPA'S TUBING DOES NOT SHRINK IN LENGTH
Additional insulation support
Additional strain relief

VS.



TUBING SHRINKS IN LENGTH
Less insulation support
Less strain relief



NSPA'S WIRE GAUGE IMPRINT
Easy identification

VS.



NO WIRE GAUGE IMPRINT
Harder to Identify

FEATURES & BENEFITS

- Translucent, adhesive-lined polyolefin tubing allows visual inspection, prevents wire corrosion, and provides a waterproof seal.
- Conforms to automotive manufacturers' specifications for wiring repairs, necessary for maintaining electrical warranties.
- Seamless butt connectors & brazed seam rings and spades prevent opening of connector barrel.
- Color-coded tubing with wire gauge imprint provides easy identification of the correct part for the job.
- A selection of over 100 sizes of connectors ensures the right part for every application.



CRIMP IT

HEAT IT

SEAL IT

PRODUCT CHARACTERISTICS

HEAT SHRINK TUBING

Material: Multiple wall polyolefin tubing with meltable, integral inner wall
 Applicable Specifications: MIL-I-23053/4, Class 1; AMS 3634; UL File E-157227
 Typical Properties:

Physical:	Temperature Rating:	-55°C to 110°C
	Tensile Strength:	2200 PSI
	Longitudinal Change:	+1, - 10%
	Recovery Temp	135°C
Electrical:	Dielectric Strength:	900 Volts/Mil
	UL Voltage Rating:	600 Volts
Chemical:	Corrosion Resistance:	Non-Corrosive
	Fungus Resistance:	Non-Nutrient
	Water Absorption:	<0.1%

Rating: 105° C • 600V maximum building wire • 1000V maximum in signs and fixtures
 To Be Sold Only With Installation Instructions • Not for Multiple Wire Connections



Ask us for a complete list of applicable part numbers.



ASSORTMENTS, TUBING, TOOLS & TORCHES

PART #	DESCRIPTION			
ASSORTMENTS & KITS				
NSPA-9002	3 Items	60 Pieces	Mini Kit	Butt Connectors
NSPA-5002	20 Items	115 Pieces	Starter Assortment	Butt Connectors & Terminals
NSPA-5003	13 Items	121 Pieces	Starter Assortment	Butt Connectors, Terminals & Torch
NSPA-5003-T	14 Items	122 Pieces	Starter Assortment	Butt Connectors, Terminals, Torch & Standard Crimp Tool
NSPA-5003-UL	14 Items	122 Pieces	Starter Assortment	Butt Connectors, Terminals, Torch & Ratcheting Crimp Tool
NSPA-1002	31 Items	320 Pieces	Maintenance Assortment	Butt Connectors & Terminals
NSPA-1003	29 Items	286 Pieces	Maintenance Assortment	Butt Connectors, Terminals & Torch
NSPA-1003-T	30 Items	287 Pieces	Maintenance Assortment	Butt Connectors, Terminals, Torch & Standard Crimp Tool
NSPA-1003-UL	30 Items	287 Pieces	Maintenance Assortment	Butt Connectors, Terminals, Torch & Ratcheting Crimp Tool
NSPA-1130	17 Items	306 Pieces	Wire Harness Repair Kit	Connectors, Heat Shrink, Cable Ties & Tool
NSPA-1184	37 Items	418 Pieces	Golf Cart Repair Kit	Krimpa-Seal, CableLink, Heat Shrink, Cable Ties & Tools
NSPA-1185	70 Items	656 Pieces	Fork Lift Repair Kit	Krimpa-Seal, CableLink, Cable Ties & Tools - Two Metal Trays
NSPA-1208	25Items	113 Pieces	Wire Rack Display	Connectors, Kits & Tools
NSPA-1202	58 Items	852 Pieces	Truck Fleet Repair Kit	Lighting & Wiring Supplies
TOOLS				
T-R-15	Multi Purpose Crimp Tool			
T-R-45	Ratcheting Crimp Tool			
	** Recommended for Krimpa-Seal **			
T-MT-4E	Self Igniting Butane Refillable Micro Torch			
T-MTC-51	Self-Igniting Butane Refillable Canister Torch			

BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS5-20	50	KSC5-20	4	5 clams	22-24 AWG clear
KS5-16	50	KSC5-16	4	5 clams	18-20 AWG red
KS5-14	50	KSC5-14	4	5 clams	14-16 AWG blue
KS5-10	50	KSC5-10	4	5 clams	10-12 AWG yellow
KS5-08	50	KSC5-08	1	5 clams	8 AWG pink



"OLD SCHOOL" BUTT CONNECTORS

NYLON INSULATED BUTT CONNECTORS WITH CLEAR ADHESIVE-LINED POLYOLEFIN HEAT SHRINK TUBING

Polybag Part#	Pkg Qty	Description
KS5-16-CLN	50	18-22 AWG Nylon Red
KS5-14-CLN	50	14-16 AWG Nylon Blue
KS5-10-CLN	50	10-12 AWG Nylon Yellow



WINDOW BUTT CONNECTORS

Polybag Part#	Pkg Qty	Description
KS55-16	50	18-20 AWG Window Red
KS55-14	50	14-16 AWG Window Blue
KS55-10	50	10-12 AWG Window Yellow



STEP-DOWN BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS56-20	50	KSC56-20	1	5 clams	22-24 to 18-20 AWG red
KS56-16	50	KSC56-16	1	5 clams	18-20 to 14-16 AWG blue
KS56-14	50	KSC56-14	1	5 clams	14-16 to 10-12 AWG yellow
KS56-10	50	KSC56-10	1	5 clams	10-12 to 8 AWG pink



RING TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS120-04	50	KSC120-04	5	5 clams	22-24 AWG clear #4 stud
KS120-06	50	KSC120-06	5	5 clams	22-24 AWG clear #6 stud
KS116-06	50	KSC116-06	5	5 clams	18-20 AWG red #6 stud
KS116-08	50	KSC116-08	5	5 clams	18-20 AWG red #8 stud
KS116-10	50	KSC116-10	5	5 clams	18-20 AWG red #10 stud
KS116-14	50	KSC116-14	5	5 clams	18-20 AWG red 1/4" stud
KS116-516	50	KSC116-516	5	5 clams	18-20 AWG red 5/16" stud
KS116-38	50	KSC116-38	5	5 clams	18-20 AWG red 3/8" stud
KS114-06	50	KSC114-06	5	5 clams	14-16 AWG blue #6 stud
KS114-08	50	KSC114-08	5	5 clams	14-16 AWG blue #8 stud
KS114-10	50	KSC114-10	5	5 clams	14-16 AWG blue #10 stud
KS114-14	50	KSC114-14	5	5 clams	14-16 AWG blue 1/4" stud
KS114-516	50	KSC114-516	5	5 clams	14-16 AWG blue 5/16" stud
KS114-38	50	KSC114-38	5	5 clams	14-16 AWG blue 3/8" stud
KS110-06	50	KSC110-06	4	5 clams	10-12 AWG yellow #6 stud
KS110-08	50	KSC110-08	4	5 clams	10-12 AWG yellow #8 stud
KS110-10	50	KSC110-10	4	5 clams	10-12 AWG yellow #10 stud
KS110-14	50	KSC110-14	4	5 clams	10-12 AWG yellow 1/4" stud
KS110-516	50	KSC110-516	4	5 clams	10-12 AWG yellow 5/16" stud
KS110-38	50	KSC110-38	4	5 clams	10-12 AWG yellow 3/8" stud
KS110-12	50	KSC110-12	3	5 clams	10-12 AWG yellow 1/2" stud
KS108-10	50	KSC108-10	2	5 clams	8 AWG pink #10 stud
KS108-14	50	KSC108-14	2	5 clams	8 AWG pink 1/4" stud
KS108-516	50	KSC108-516	2	5 clams	8 AWG pink 5/16" stud
KS108-38	50	KSC108-38	2	5 clams	8 AWG pink 3/8" stud
KS108-12	50	KSC108-12	1	5 clams	8 AWG pink 1/2" stud
KS108L-10	50	KSC108L-10	1	5 clams	8 AWG pink #10 LUG STYLE
KS108L-14	50	KSC108L-14	1	5 clams	8 AWG pink 1/4" LUG STYLE
KS108L-516	50	KSC108L-516	1	5 clams	8 AWG pink 5/16" LUG STYLE
KS108L-38	50	KSC108L-38	1	5 clams	8 AWG pink 3/8" LUG STYLE
KS108L-12	50	KSC108L-12	1	5 clams	8 AWG pink 1/2" LUG STYLE



LUG STYLE

CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.

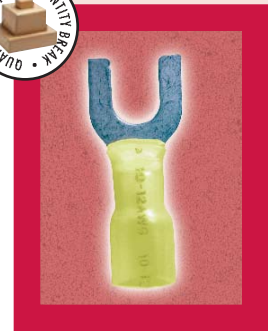
MULTI-STUD TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS116-MS	50	KSC116-MS	4	5 clams	18-20 AWG red #6, 8, & 10 stud
KS114-MS	50	KSC114-MS	4	5 clams	14-16 AWG blue #6, 8, & 10 stud



SPADE TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS220-04	50	KSC220-04	5	5 clams	22-24 AWG clear #4 stud
KS220-06	50	KSC220-06	5	5 clams	22-24 AWG clear #6 stud
KS216-06	50	KSC216-06	5	5 clams	18-20 AWG red #6 stud
KS216-08	50	KSC216-08	5	5 clams	18-20 AWG red #8 stud
KS216-10	50	KSC216-10	5	5 clams	18-20 AWG red #10 stud
KS214-06	50	KSC214-06	5	5 clams	14-16 AWG blue #6 stud
KS214-08	50	KSC214-08	5	5 clams	14-16 AWG blue #8 stud
KS214-10	50	KSC214-10	5	5 clams	14-16 AWG blue #10 stud
KS210-06	50	KSC210-06	4	5 clams	10-12 AWG yellow #6 stud
KS210-08	50	KSC210-08	4	5 clams	10-12 AWG yellow #8 stud
KS210-10	50	KSC210-10	4	5 clams	10-12 AWG yellow #10 stud
KS210-14	50	KSC210-14	4	5 clams	10-12 AWG yellow 1/4" stud



FLANGED SPADE TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS316-06	50	KSC316-06	4	5 clams	18-20 AWG red #6 stud
KS316-08	50	KSC316-08	4	5 clams	18-20 AWG red #8 stud
KS316-10	50	KSC316-10	4	5 clams	18-20 AWG red #10 stud
KS314-06	50	KSC314-06	4	5 clams	14-16 AWG blue #6 stud
KS314-08	50	KSC314-08	4	5 clams	14-16 AWG blue #8 stud
KS314-10	50	KSC314-10	4	5 clams	14-16 AWG blue #10 stud
KS310-06	50	KSC310-06	4	5 clams	10-12 AWG yellow #6 stud
KS310-08	50	KSC310-08	4	5 clams	10-12 AWG yellow #8 stud
KS310-10	50	KSC310-10	4	5 clams	10-12 AWG yellow #10 stud



SPRING SPADE TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS316S-06	50	KSC316S-06	5	5 clams	18-20 AWG red #6 stud
KS316S-08	50	KSC316S-08	5	5 clams	18-20 AWG red #8 stud
KS316S-10	50	KSC316S-10	5	5 clams	18-20 AWG red #10 stud
KS314S-06	50	KSC314S-06	5	5 clams	14-16 AWG blue #6 stud
KS314S-08	50	KSC314S-08	5	5 clams	14-16 AWG blue #8 stud
KS314S-10	50	KSC314S-10	5	5 clams	14-16 AWG blue #10 stud
KS310S-06	50	KSC310S-06	4	5 clams	10-12 AWG yellow #6 stud
KS310S-08	50	KSC310S-08	4	5 clams	10-12 AWG yellow #8 stud
KS310S-10	50	KSC310S-10	4	5 clams	10-12 AWG yellow #10 stud



HOOK TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS414-10	50	KSC414-10	4	5 clams	14-16 AWG blue #10 stud



CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.

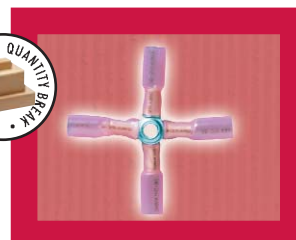
THREE-WAY BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS53-16	50	KSC53-16	1	5 clams	18-20 AWG red
KS53-14	50	KSC53-14	1	5 clams	14-16 AWG blue
KS53-10	50	KSC53-10	1	5 clams	10-12 AWG yellow



FOUR-WAY BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS54-16	50	KSC54-16	1	5 clams	18-20 AWG red
KS54-14	50	KSC54-14	1	5 clams	14-16 AWG blue
KS54-10	50	KSC54-10	1	5 clams	10-12 AWG yellow



SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS6-18-110F	50	KSC6-18-110F	5	5 clams	18-20 AWG red female .110" tab
KS6-18-110M	50	KSC6-18-110M	5	5 clams	18-20 AWG red male .110" tab
KS6-18-187F	50	KSC6-18-187F	5	5 clams	18-20 AWG red female .187" tab
KS6-18-187M	50	KSC6-18-187M	5	5 clams	18-20 AWG red male .187" tab
KS6-18-250F	50	KSC6-18-250F	5	5 clams	18-20 AWG red female .250" tab
KS6-18-250M	50	KSC6-18-250M	5	5 clams	18-20 AWG red male .250" tab
KS6-14-110F	50	KSC6-14-110F	5	5 clams	14-16 AWG blue female .110" tab
KS6-14-110M	50	KSC6-14-110M	5	5 clams	14-16 AWG blue male .110" tab
KS6-14-187F	50	KSC6-14-187F	5	5 clams	14-16 AWG blue female .187" tab
KS6-14-187M	50	KSC6-14-187M	5	5 clams	14-16 AWG blue male .187" tab
KS6-14-250F	50	KSC6-14-250F	5	5 clams	14-16 AWG blue female .250" tab
KS6-14-250M	50	KSC6-14-250M	5	5 clams	14-16 AWG blue male .250" tab
KS6-10-250F	50	KSC6-10-250F	4	5 clams	10-12 AWG yellow female .250" tab
KS6-10-250M	50	KSC6-10-250M	4	5 clams	10-12 AWG yellow male .250" tab



FULLY-INSULATED SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS66-18-110F	50	KSC66-18-110F	3	5 clams	18-20 AWG red female .110" tab
KS66-18-187F	50	KSC66-18-187F	4	5 clams	18-20 AWG red female .187" tab
KS66-18-187M	50	KSC66-18-187M	4	5 clams	18-20 AWG red male .187" tab
KS66-18-250F	50	KSC66-18-250F	4	5 clams	18-20 AWG red female .250" tab
KS66-18-250M	50	KSC66-18-250M	4	5 clams	18-20 AWG red male .250" tab
KS66-14-110F	50	KSC66-14-110F	4	5 clams	14-16 AWG blue female .110" tab
KS66-14-187F	50	KSC66-14-187F	4	5 clams	14-16 AWG blue female .187" tab
KS66-14-187M	50	KSC66-14-187M	4	5 clams	14-16 AWG blue male .187" tab
KS66-14-250F	50	KSC66-14-250F	4	5 clams	14-16 AWG blue female .250" tab
KS66-14-250M	50	KSC66-14-250M	4	5 clams	14-16 AWG blue male .250" tab
KS66-10-250F	50	KSC66-10-250F	3	5 clams	10-12 AWG yellow female .250" tab
KS66-10-250M	50	KSC66-10-250M	3	5 clams	10-12 AWG yellow male .250" tab



CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.

3M STYLE FULLY INSULATED SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS67-18-250F	50	KSC67-18-250F	4	5 clams	18-20 AWG red female .250" tab
KS67-18-250M	50	KSC67-18-250M	4	5 clams	18-20 AWG red male .250" tab
KS67-14-250F	50	KSC67-14-250F	4	5 clams	14-16 AWG blue female .250" tab
KS67-14-250M	50	KSC67-14-250M	4	5 clams	14-16 AWG blue male .250" tab
KS67-10-250F	50	KSC67-10-250F	3	5 clams	10-12 AWG yellow female .250" tab
KS67-10-250M	50	KSC67-10-250M	3	5 clams	10-12 AWG yellow male .250" tab



MOLEX-ETC STYLE FULLY INSULATED SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS60-18-250F	50	KSC60-18-250F	4	5 clams	18-20 AWG red female .250" tab
KS60-18-250M	50	KSC60-18-250M	4	5 clams	18-20 AWG red male .250" tab
KS60-14-250F	50	KSC60-14-250F	4	5 clams	14-16 AWG blue female .250" tab
KS60-14-250M	50	KSC60-14-250M	4	5 clams	14-16 AWG blue male .250" tab
KS60-10-250F	50	KSC60-10-250F	3	5 clams	10-12 AWG yellow female .250" tab
KS60-10-250M	50	KSC60-10-250M	3	5 clams	10-12 AWG yellow male .250" tab



SURE CRIMP STYLE FULLY INSULATED SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS61-18-250F	50	KSC61-18-250F	4	5 clams	18-20 AWG red female .250" tab
KS61-18-250M	50	KSC61-18-250M	4	5 clams	18-20 AWG red male .250" tab
KS61-14-250F	50	KSC61-14-250F	4	5 clams	14-16 AWG blue female .250" tab
KS61-14-250M	50	KSC61-14-250M	4	5 clams	14-16 AWG blue male .250" tab
KS61-10-250F	50	KSC61-10-250F	3	5 clams	10-12 AWG yellow female .250" tab
KS61-10-250M	50	KSC61-10-250M	3	5 clams	10-12 AWG yellow male .250" tab



BULLET PLUGS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS7-18-15M	50	KSC7-18-15M	5	5 clams	18-20 AWG red .157" plug
KS7-18-17M	50	KSC7-18-17M	5	5 clams	18-20 AWG red .176" plug
KS7-18-18M	50	KSC7-18-18M	5	5 clams	18-20 AWG red .180" plug
KS7-14-15M	50	KSC7-14-15M	5	5 clams	14-16 AWG blue .157" plug
KS7-14-17M	50	KSC7-14-17M	5	5 clams	14-16 AWG blue .176" plug
KS7-14-18M	50	KSC7-14-18M	5	5 clams	14-16 AWG blue .180" plug



BULLET RECEPTACLES

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
KS7-18-15F	50	KSC7-18-15F	4	5 clams	18-20 AWG red .157" receptacle
KS7-18-17F	50	KSC7-18-17F	4	5 clams	18-20 AWG red .176" receptacle
KS7-18-18F	50	KSC7-18-18F	4	5 clams	18-20 AWG red .180" receptacle
KS7-14-15F	50	KSC7-14-15F	4	5 clams	14-16 AWG blue .157" receptacle
KS7-14-17F	50	KSC7-14-17F	4	5 clams	14-16 AWG blue .176" receptacle
KS7-14-18F	50	KSC7-14-18F	4	5 clams	14-16 AWG blue .180" receptacle



CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.



SEALED CRIMP NYLON CONNECTORS

NYLA-SEAL™ PRODUCT LINE



FEATURES & BENEFITS

- Seamless Butt Connectors - Prevent opening of connector barrel
- Fractional Stud Sizes & American Wire Gauge (AWG) wire sizes - Easy match to standard U.S. parts
- Ultra Abrasion Resistant Tubing - Assures durable protection in the toughest environments
- Conforms to Automotive Manufacturers' Specifications for Wiring Repairs
Necessary for maintaining electrical warranties

BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS5-16	50	NSC5-16	5	5 clams	18-22 AWG Red
NS5-14	50	NSC5-14	5	5 clams	14-16 AWG Blue
NS5-10	50	NSC5-10	5	5 clams	10-12 AWG Yellow
NS5-08	50	NSC5-08	5	5 clams	8 AWG Yellow



THREE WAY BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS53-16	50	NSC53-16	5	5 clams	18-20 AWG Red, 3-way
NS53-14	50	NSC53-14	5	5 clams	14-16 AWG Blue, 3-way
NS53-10	50	NSC53-10	5	5 clams	10-12 AWG Yellow, 3-way

STEP-DOWN BUTT CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS56-16	50	NSC56-16	5	5 clams	18-22 to 14-16 AWG Blue
NS56-14	50	NSC56-14	5	5 clams	14-16 to 10-12 AWG Yellow



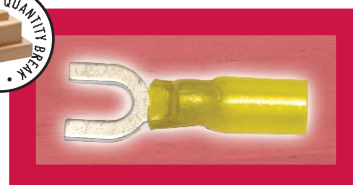
RINGS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS116-06	50	NSC116-06	5	5 clams	18-22 AWG #6 Stud Red
NS116-08	50	NSC116-08	5	5 clams	18-22 AWG #8 Stud Red
NS116-10	50	NSC116-10	5	5 clams	18-22 AWG #10 Stud Red
NS116-14	50	NSC116-14	5	5 clams	18-22 AWG 1/4" Stud Red
NS116-38	50	NSC116-38	5	5 clams	18-22 AWG 3/8" Stud Red
NS114-06	50	NSC114-06	5	5 clams	14-16 AWG #6 Stud Blue
NS114-08	50	NSC114-08	5	5 clams	14-16 AWG #8 Stud Blue
NS114-10	50	NSC114-10	5	5 clams	14-16 AWG #10 Stud Blue
NS114-14	50	NSC114-14	5	5 clams	14-16 AWG 1/4" Stud Blue
NS114-516	50	NSC114-516	5	5 clams	14-16 AWG 5/16" Stud Blue
NS114-38	50	NSC114-38	5	5 clams	14-16 AWG 3/8" Stud Blue
NS110-06	50	NSC110-06	5	5 clams	10-12 AWG #6 Stud Yellow
NS110-08	50	NSC110-08	5	5 clams	10-12 AWG #8 Stud Yellow
NS110-10N	50	NSC110-10N	5	5 clams	10-12 AWG Narrow #10 Stud Yellow
NS110-10	50	NSC110-10	5	5 clams	10-12 AWG #10 Stud Yellow
NS110-14	50	NSC110-14	5	5 clams	10-12 AWG 1/4" Stud Yellow
NS110-516	50	NSC110-516	5	5 clams	10-12 AWG 5/16" Stud Yellow
NS110-38	50	NSC110-38	5	5 clams	10-12 AWG 3/8" Stud Yellow
NS110-12	50	NSC110-12	5	5 clams	10-12 AWG 1/2" Stud Yellow
NS108L-10	50	NSC108L-10	5	5 clams	8 AWG #10 Stud Pink Lug Style
NS108L-14	50	NSC108L-14	5	5 clams	8 AWG 1/4" Stud Pink Lug Style
NS108L-516	50	NSC108L-516	5	5 clams	8 AWG 5/16" Stud Pink Lug Style
NS108L-38	50	NSC108L-38	5	5 clams	8 AWG 3/8" Stud Pink Lug Style
NS108L-12	50	NSC108L-12	5	5 clams	8 AWG 1/2" Stud Pink Lug Style



SPADE TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS216-06	50	NS216-06	5	5 clams	18-22 AWG Red #6 Stud
NS216-08	50	NS216-08	5	5 clams	18-22 AWG Red #8 Stud
NS216-10	50	NS216-10	5	5 clams	18-22 AWG Red #10 Stud
NS214-06	50	NS214-06	5	5 clams	14-16 AWG Blue #6 Stud
NS214-08	50	NS214-08	5	5 clams	14-16 AWG Blue #8 Stud
NS214-10	50	NS214-10	5	5 clams	14-16 AWG Blue #10 Stud
NS210-06	50	NS210-06	5	5 clams	10-12 AWG Yellow #6 Stud
NS210-08	50	NS210-08	5	5 clams	10-12 AWG Yellow #8 Stud
NS210-10	50	NS210-10	5	5 clams	10-12 AWG Yellow #10 Stud
NS210-14	50	NS210-14	5	5 clams	10-12 AWG Yellow 1/4" Stud



CLAM SHELL ORDERS MUST BE IN MULTIPLES OF MASTER PACK QUANTITIES.

HOOK TERMINALS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS414-10	50	NSC414-10	5	5 clams	14-16 AWG #10 Stud



SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS6-18-250F	50	NSC6-18-250F	5	5 clams	18-22 AWG Red .250 Female
NS6-18-250M	50	NSC6-18-250M	5	5 clams	18-22 AWG Red .250 Male
NS6-14-250F	50	NSC6-14-250F	5	5 clams	14-16 AWG Blue .250 Female
NS6-14-250M	50	NSC6-14-250M	5	5 clams	14-16 AWG Blue .250 Male
NS6-10-250F	50	NSC6-10-250F	5	5 clams	10-12 AWG Yellow .250 Female
NS6-10-250M	50	NSC6-10-250M	5	5 clams	10-12 AWG Yellow .250 Male



FULLY INSULATED SLIP-ON CONNECTORS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS60-18-250F	50	NSC60-18-250F	5	5 clams	18-22 AWG .250 Female Red
NS60-18-250M	50	NSC60-18-250M	5	5 clams	18-22 AWG .250 Male Red
NS60-14-250F	50	NSC60-14-250F	5	5 clams	14-16 AWG .250 Female Blue
NS60-14-250M	50	NSC60-14-250M	5	5 clams	14-16 AWG .250 Male Blue
NS60-10-250F	50	NSC60-10-250F	5	5 clams	10-12 AWG .250 Female Yellow
NS60-10-250M	50	NSC60-10-250M	5	5 clams	10-12 AWG .250 Male Yellow



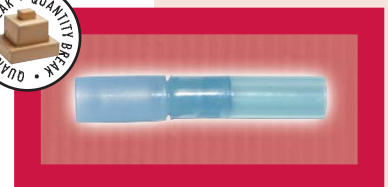
BULLET PLUGS

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS7-18-15M	50	NSC7-18-15M	5	5 clams	18-22 AWG .157 Diameter Red
NS7-18-18M	50	NSC7-18-18M	5	5 clams	18-22 AWG .180 Diameter Red
NS7-14-15M	50	NSC7-14-15M	5	5 clams	14-16 AWG .157 Diameter Blue
NS7-14-18M	50	NSC7-14-18M	5	5 clams	14-16 AWG .180 Diameter Blue



BULLET PLUG RECEPTICLES

Polybag Part#	Pkg Qty	Clam Shell Part #	Pcs/Clam	Master Pk	Description
NS7-18-15F	50	NSC7-18-15F	5	5 clams	18-22 AWG .157 Diameter Red
NS7-18-18F	50	NSC7-18-18F	5	5 clams	18-22 AWG .180 Diameter Red
NS7-14-15F	50	NSC7-14-15F	5	5 clams	14-16 AWG .157 Diameter Blue
NS7-14-18F	50	NSC7-14-18F	5	5 clams	14-16 AWG .180 Diameter Blue



PRODUCT CHARACTERISTICS

HEAT SHRINK TUBING

Material: Nylon-12 tubing with meltable, integral inner wall • Applicable Specifications: MIL-I-23053/4, Class 1; AMS 3634; UL File E-157227.

Typical Properties:

Physical: Temperature Rating: -55° to 125° C • Tensile Strength: 2200 PSI • Longitudinal Change: +1, -10%

Electrical: Dielectric Strength: 900 Volts/Mil • UL Voltage Rating: 600 Volts

Chemical: Corrosion Resistance: Non-Corrosive • Fungus Resistance: Non-Nutrient • Water Absorption: <0.25%

Rating: 105° C • 600V maximum building wire • 1000V maximum in signs and fixtures

To Be Sold Only With Installation Instructions • Not for Multiple Wire Connections

ASSORTMENTS

PART #	DESCRIPTION			
ASSORTMENTS & KITS				
NSPA-9220	3 Items	60 Pieces	Mini Kit	Butt Connectors
NSPA-5220	20 Items	115 Pieces	Starter Assortment	Butt Connectors & Terminals
NSPA-5221	3 Items	121 Pieces	Starter Assortment	Butt Connectors, Terminals & Torch
NSPA-5221-T	14 Items	122 Pieces	Starter Assortment	Butt Connectors, Terminals, Torch & Standard Crimp Tool
NSPA-1220	31 Items	320 Pieces	Maintenance Assortment	Butt Connectors & Terminals
NSPA-1221	29 Items	286 Pieces	Maintenance Assortment	Butt Connectors, Terminals & Torch
NSPA-1221-T	30 Items	287 Pieces	Maintenance Assortment	Butt Connectors, Terminals, Torch & Standard Crimp Tool



SEALED SOLDER SYSTEM FOR BATTERY TERMINALS

CABLELINK™ PRODUCT LINE

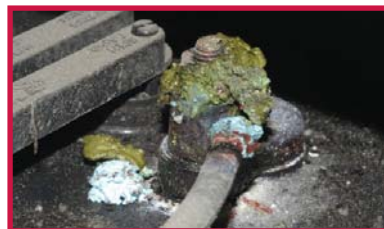
Our CableLink product line is the innovative solution for soldering cable terminations. Pre-measured solder pellets and adhesive-lined heat shrink tubing combine to provide maximum conductivity and a corrosion-proof seal. The result is a high quality termination without the need for expensive crimping tools.

FEATURES AND BENEFITS:

- Color-coded solder pellets conform to industry standards & ensure correct product identification.
- Pre-measured solder pellets assure the right amount of solder will be used in each connection.
- Flux core and "No-Clean" liquid flux prevent dirt and contaminants from hindering the soldering process.
- Color-coded, pre-cut lengths of heat shrink tubing provide positive designation of polarity and make installation easy.
- Installation requires only standard shop tools which eliminates the need for an expensive crimping tool.

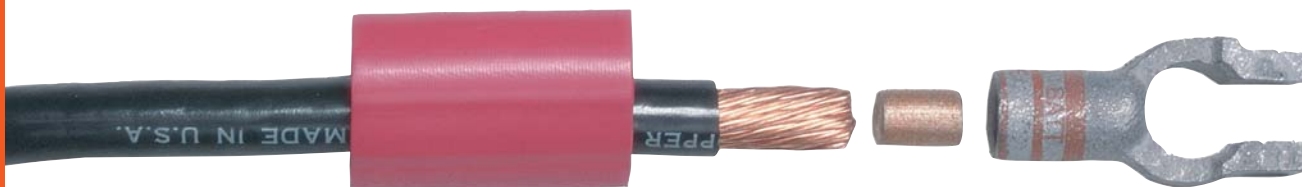
FREQUENT PROBLEMS IN BATTERY CABLE CONNECTIONS:

- Improperly installed connectors
- Voltage drop
- Vibration damage
- Corrosion in cable



THE CABLELINK™ SOLUTION:

- Easily installed termination system
- Soldered connections for maximum conductivity
- Superior tensile strength from a soldered bond
- Adhesive-lined tubing prevents cable corrosion



FLUX IT



SOLDER IT



HEAT IT



SEAL IT



PRODUCT CHARACTERISTICS

HEAT SHRINK TUBING

Material: Multiple wall polyolefin tubing with meltable, integral inner wall
 Applicable Specifications: MIL-I-23053/4, Class 1; AMS 3634; UL File E-157227
 Typical Properties:

Physical:	Temperature Rating:	-55°C to 110°C
	Tensile Strength:	2100 PSI
	Longitudinal Change:	+1, -10%
	Recovery Temperature:	120°C
Electrical:	Dielectric Strength:	500 Volts/Mil
	UL Voltage Rating:	600 Volts

SOLDER

Melt Temperature 183°C (361°F)
 Applicable Specifications: J-STD-006

Solder contains any or all of the following: Antimony, Cadmium, Copper, Indium, Silver, Iron, Aluminum, Nickel, Arsenic, Zinc, Bismuth, Gold, Tin, Lead

FLUX 2% - 3% RMA
 Applicable Specifications: J-STD-004

ASSORTMENTS

PART #	DESCRIPTION			
ASSORTMENTS				
NSPA-5111	14 Items	48 Pieces	Starter Assortment	Pellets, Tubing & Flux
NSPA-1111	16 Items	127 Pieces	Maintenance Assortment	Pellets, Tubing & Flux
NSPA-1186	23 Items	97 Pieces	Maintenance Assortment	Pellets, Tubing, Flux & Terminals

SOLDER PELLETS

Part #	Pkg Qty	Description	Color
CL-6	50	6 AWG	Grey
CL-4	50	4 AWG	Grey
CL-2	50	2 AWG	Green
CL-1	50	1 AWG	Pink
CL-1-0	25	1/0 AWG	Black
CL-2-0	25	2/0 AWG	Orange
CL-3-0	10	3/0 AWG	Purple
CL-4-0	10	4/0 AWG	Yellow



FLUX

Part #	Pkg Qty	Description
CL-FLUX	1	"No-Clean" Liquid Flux - 2 oz. plastic bottle with dropper tip



MULTIPLE WALL HEAT SHRINK TUBING

Part #	Pkg Qty	Description
HST857B-1.5	10	6 & 4 AWG, black, 1.5" length
HST857R-1.5	10	6 & 4 AWG, red, 1.5" length
HST858B-1.5	10	2, 1 & 1/0 AWG, black, 1.5" length
HST858R-1.5	10	2, 1 & 1/0 AWG, red, 1.5" length
HST859B-2	10	1/0, 2/0, 3/0 & 4/0 AWG, black, 2" length
HST859R-2	10	1/0, 2/0, 3/0 & 4/0 AWG, red, 2" length





HEAT SHRINK TUBING

HST100 SERIES

Shrink Ratio: 2 to 1

A flexible, general purpose tubing for use where an adhesive seal is not needed. Conforms well to irregular shapes.

- Insulation and strain relief for wire terminals • Color-coding of electrical harnesses • Wire bundling • Self-extinguish (except clear)

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/5, Class 1 (Colors) Class2 (Clear)	E35506 (except clear) 600V 125°C (257°F)	LR31929 (except clear) 600V 125°C (257°F)	Polyolefin	121°C (250°F)	900 Volts/mil	-55°C to 135°C (-67°F to 275°F)	Self-extinguish UL224 (except clear)



THIN WALL HEAT SHRINK TUBING LARGE CARDBOARD SPOOLS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	Part Number	Spool Length
3/64"	0.023"	0.016"		Ⓑ	HST100B-BULK	Call
1/16"	0.031"	0.017"		Ⓑ	HST101B-BULK	Call
3/32"	0.046"	0.020"		Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST102(XX)-BULK	Call
1/8"	0.062"	0.020"	24-20 AWG	Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST103(XX)-BULK	Call
3/16"	0.093"	0.020"	22-18 AWG	Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST104(XX)-BULK	Call
1/4"	0.125"	0.025"	16-14 AWG	Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST105(XX)-BULK	Call
3/8"	0.187"	0.025"	12-10 AWG	Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST106(XX)-BULK	Call
1/2"	0.250"	0.025"	8-6 AWG	Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST107(XX)-BULK	Call
3/4"	0.375"	0.030"	6-1/0 AWG	Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST108(XX)-BULK	Call
1"	0.500"	0.035"	2/0-4/0 AWG	Ⓑ ⒷL Ⓒ Ⓔ Ⓡ Ⓡ Ⓢ Ⓢ	HST109(XX)-BULK	Call
1 1/2"	0.750"	0.040"		Ⓑ	HST110B-BULK	Call
2"	1.000"	0.045"		Ⓑ	HST111B-BULK	Call
3"	1.500"	0.050"		Ⓑ	HST112B-BULK	Call
4"	2.000"	0.055"		Ⓑ	HST113B-BULK	Call

When ordering replace the (XX) with the following color codes in the part number: Ⓑ Black ⒷL Blue Ⓒ Clear Ⓔ Green Ⓡ Red Ⓢ White Ⓢ Yellow

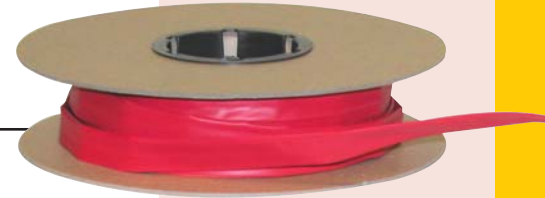


THIN WALL HEAT SHRINK TUBING SMALL CHIPBOARD SPOOLS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	Part Number	Spool Length	Part Number	Spool Length
3/64"	0.023"	0.016"		B	HST100B-100F	100 FT	HST100B-25F	25 FT
1/16"	0.031"	0.017"		B	HST101B-100F	100 FT	HST101B-25F	25FT
3/32"	0.046"	0.020"		B BL C G R W Y	HST102(XX)-100F	100 FT	HST102(XX)-25F	25 FT
1/8"	0.062"	0.020"	24-20 AWG	B BL C G R W Y	HST103(XX)-100F	100 FT	HST103(XX)-25F	25FT
3/16"	0.093"	0.020"	22-10 AWG	B BL C G R W Y	HST104(XX)-100F	100 FT	HST104(XX)-25F	25 FT
1/4"	0.125"	0.025"	16-14 AWG	B BL C G R W Y	HST105(XX)-100F	100 FT	HST105(XX)-25F	25FT
3/8"	0.187"	0.025"	12-10 AWG	B BL C G R W Y	HST106(XX)-100F	100 FT	HST106(XX)-25F	25FT
1/2"	0.250"	0.025"	8-6 AWG	B BL C G R W Y	HST107(XX)-100F	100 FT	HST107(XX)-25F	25 FT
3/4"	0.375"	0.030"	6-1/0 AWG	B BL C G R W Y	HST108(XX)-50F	50 FT	HST108(XX)-25F	25 FT
1"	0.500"	0.035"	2/0-4/0 AWG	B BL C G R W Y	HST109(XX)-50F	50 FT	HST109(XX)-25F	25FT

When ordering replace the (XX) with the following color codes in the part number:

B Black BL Blue C Clear G Green R Red W White Y Yellow



THIN WALL HEAT SHRINK TUBING CLAMSHELL SPOOLS



Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	Part Number	Spool Length	Part Number	Spool Length
3/64"	0.023"	0.016"		B	HST100B-4F	4 FT	HST100B-8F	8 FT
1/16"	0.031"	0.017"		B	HST101B-4F	4 FT	HST101B-8F	8 FT
3/32"	0.046"	0.020"		B BL C G R W Y	HST102(XX)-4F	4 FT	HST102(XX)-8F	8 FT
1/8"	0.062"	0.020"	24-20 AWG	B BL C G R W Y	HST103(XX)-4F	4 FT	HST103(XX)-8F	8 FT
3/16"	0.093"	0.020"	22-18 AWG	B BL C G R W Y	HST104(XX)-4F	4 FT	HST104(XX)-8F	8 FT
1/4"	0.125"	0.025"	16-14 AWG	B BL C G R W Y	HST105(XX)-4F	4 FT	HST105(XX)-8F	8 FT
3/8"	0.187"	0.025"	12-10 AWG	B BL C G R W Y	HST106(XX)-4F	4 FT	HST106(XX)-8F	8 FT
1/2"	0.250"	0.025"	8-6 AWG	B BL C G R W Y	HST107(XX)-4F	4 FT	HST107(XX)-8F	8 FT
3/4"	0.375"	0.030"	6-1/0 AWG	B BL C G R W Y	HST108(XX)-4F	4 FT	HST108(XX)-8F	8 FT
1"	0.500"	0.035"	2/0-4/0 AWG	B BL C G R W Y	HST109(XX)-4F	4 FT	HST109(XX)-8F	8 FT

When ordering replace the (XX) with the following color codes in the part number: B Black BL Blue C Clear G Green R Red W White Y Yellow



THIN WALL HEAT SHRINK TUBING (NO ADHESIVE)

HST100 SERIES

Shrink Ratio: 2 to 1

A flexible, general purpose tubing for use where an adhesive seal is not needed. Conforms well to irregular shapes.

- Insulation and strain relief for wire terminals
- Color-coding of electrical harnesses
- Wire bundling
- Self-extinguish (except clear)

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/5, Class 1 (Colors) Class2 (Clear)	E35506 (except clear) 600V 125°C (257°F)	LR31929 (except clear) 600V 125°C (257°F)	Polyolefin	121°C (250°F)	900 Volts/Mil	-55°C to 135°C (-67°F to 275°F)	Self-extinguish UL224 (except clear)

THIN WALL HEAT SHRINK TUBING CUT LENGTHS

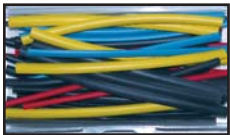
Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg. Qty.	Part Numbers	Pkg. Qty.	Part Numbers	Pkg. Qty.
3/64"	0.023"	0.016"		(B)	HST100B-6	10	HST100B-12	10	HST100B-48	10
1/16"	0.031"	0.017"		(B)	HST101B-6	10	HST101B-12	10	HST101B-48	10
3/32"	0.046"	0.020"		(B) (BL) (C) (G) (R) (W) (Y)	HST102(XX)-6	10	HST102(XX)-12	10	HST102(XX)-48	10
1/8"	0.062"	0.020"	24-20 AWG	(B) (BL) (C) (G) (R) (W) (Y)	HST103(XX)-6	10	HST103(XX)-12	10	HST103(XX)-48	10
3/16"	0.093"	0.020"	22-18 AWG	(B) (BL) (C) (G) (R) (W) (Y)	HST104(XX)-6	10	HST104(XX)-12	10	HST104(XX)-48	10
1/4"	0.125"	0.025"	16-14 AWG	(B) (BL) (C) (G) (R) (W) (Y)	HST105(XX)-6	10	HST105(XX)-12	10	HST105(XX)-48	10
3/8"	0.187"	0.025"	12-10 AWG	(B) (BL) (C) (G) (R) (W) (Y)	HST106(XX)-6	10	HST106(XX)-12	10	HST106(XX)-48	10
1/2"	0.250"	0.025"	8-6 AWG	(B) (BL) (C) (G) (R) (W) (Y)	HST107(XX)-6	10	HST107(XX)-12	10	HST107(XX)-48	10
3/4"	0.375"	0.030"	6-1/0 AWG	(B) (BL) (C) (G) (R) (W) (Y)	HST108(XX)-6	10	HST108(XX)-12	10	HST108(XX)-48	10
1"	0.500"	0.035"	2/0-4/0 AWG	(B) (BL) (C) (G) (R) (W) (Y)	HST109(XX)-6	10	HST109(XX)-12	10	HST109(XX)-48	10
1 1/2"	0.750"	0.040"		(B)	HST110B-6	10	HST110B-12	10	HST110B-48	10
2"	1.000"	0.045"		(B)	HST111B-6	10	HST111B-12	10	HST111B-48	10
3"	1.500"	0.050"		(B)	HST112B-6	10	HST112B-12	10	HST112B-48	10
4"	2.000"	0.055"		(B)	HST113B-6	10	HST113B-12	10	HST113B-48	10

When ordering replace the (XX) with the following color codes in the part number: (B) Black (BL) Blue (C) Clear (G) Green (R) Red (W) White (Y) Yellow



THIN WALL HEAT SHRINK TUBING

NSPA-9188



MINI PLASTIC ASSORTMENT
9 ITEMS • 39 PIECES

NSPA-5188



SMALL PLASTIC ASSORTMENT
9 ITEMS • 103 PIECES

NSPA-1188



LARGE METAL ASSORTMENT
9 ITEMS • 125 PIECES

NSPA-1187 - ASSORTED



LARGE METAL ASSORTMENT
25 ITEMS • 191 PIECES

FLEXIBLE ADHESIVE-LINED HEAT SHRINK TUBING

HST200 SERIES

Shrink Ratio: 3 to 1

A flame-retardant tubing (except clear) with an internal layer of thermo-plastic adhesive which provides a barrier against contaminants. Still highly flexible for conforming to irregular shapes.

- Environmental protection for electronic components
- Protection of automobile, marine and truck wire splices and harness breakouts
- Adhesive-lining provides a seal against corrosion.

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/4, Class 3	E157227	-	Polyolefin	121°C, (250°F)	700 Volts/Mil	-55°C to 110°C, (-67° to 230°F)	Self-Extinguish UL224 (except clear)



FLEXIBLE ADHESIVE-LINED HEAT SHRINK TUBING CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg. Qty.	Part Numbers	Pkg. Qty.	Part Numbers	Pkg. Qty.
1/8"	0.040"	0.040"	30-18 AWG	● B ● C ● R	HST203(X)-6	8	HST203(X)-12	4	HST203(X)-48	4
3/16"	0.062"	0.040"	20-14 AWG	● B ● C ● R	HST204(X)-6	8	HST204(X)-12	4	HST204(X)-48	4
1/4"	0.080"	0.040"	18-10 AWG	● B ● C ● R	HST205(X)-6	8	HST205(X)-12	4	HST205(X)-48	4
3/8"	0.120"	0.055"	12-16 AWG	● B ● C ● R	HST206(X)-6	8	HST206(X)-12	4	HST206(X)-48	4
1/2"	0.160"	0.070"	8-4 AWG	● B ● C ● R	HST207(X)-6	8	HST207(X)-12	4	HST207(X)-48	4
3/4"	0.250"	0.085"	4-2/0 AWG	● B ● C ● R	HST208(X)-6	8	HST208(X)-12	4	HST208(X)-48	4
1"	0.320"	0.100"	2-4/0 AWG	● B ● C ● R	HST209(X)-6	8	HST209(X)-12	4	HST209(X)-48	4

When ordering replace the (X) with the following color codes in the part number: ● B Black ● C Clear ● R Red



FLEXIBLE ADHESIVE-LINED HEAT SHRINK TUBING ASSORTMENTS

NSPA-9189



MINI PLASTIC ASST.
6 ITEMS • 24 PIECES

NSPA-5189



SMALL PLASTIC ASSORTMENT
12 ITEMS • 48 PIECES

NSPA-5215



SMALL PLASTIC ASSORTMENT
12 ITEMS • 66 PIECES

NSPA-1187 - ASSORTED



LARGE METAL ASSORTMENT
25 ITEMS • 191 PIECES

NSPA-1189



LARGE METAL ASSORTMENT
18 ITEMS • 120 PIECES

SEMI-RIGID ADHESIVE-LINED HEAT SHRINK TUBING

HST400 SERIES

Shrink Ratio: Exceeds 2:5 to 1

A semi-rigid tubing with a co-extruded integral adhesive lining. Provides a tough protective and insulating barrier, highly resistant to penetration by moisture and the attack of chemicals and solvents.

- Easy removability
- Electrical wire splices, breakouts, connections and solder joints
- End-sealing of electrical cables and rigid tubings

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/4	E157227	-	Polyolefin	135°C, (275°F)	900 Volts/Mil	55°C to 110°C, (-67° to 230°F)	Non-Flame Retardant

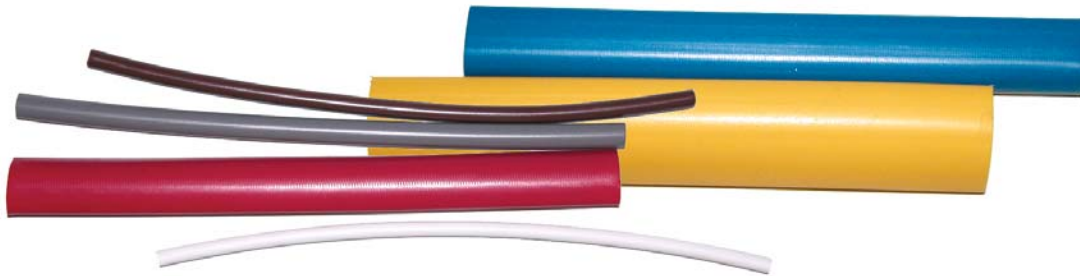


COLORS (NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION STANDARDS)

CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg Qty	Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
1/8"	0.023"	0.038"	26-18 AWG	BR	HST403BR-6	8	HST403BR-12	4	HST403BR-48	4
3/16"	0.060"	0.043"	22-16 AWG	GY	HST404GY-6	8	HST404GY-12	4	HST404GY-48	4
1/4"	0.080"	0.047"	16-12 AWG	W	HST405W-6	8	HST405W-12	4	HST405W-48	4
3/8"	0.130"	0.050"	12-8 AWG	R	HST406R-6	8	HST406R-12	4	HST406R-48	4
1/2"	0.195"	0.055"	8-4 AWG	BL	HST407BL-6	8	HST407BL-12	4	HST407BL-48	4
3/4"	0.313"	0.065"	4-1/0 AWG	Y	HST408Y-6	8	HST408Y-12	4	HST408Y-48	4
1"	0.400"	0.075"	2-4/0 AWG	B	HST409B-6	8	HST409B-12	4	HST409B-48	4

BR Brown GY Gray W White R Red BL Blue Y Yellow B Black



BLACK

CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg Qty	Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
1/8"	0.028"	0.038"	26-18 AWG	B	HST403B-6	8	HST403B-12	4	HST403B-48	4
3/16"	0.060"	0.043"	22-16 AWG	B	HST404B-6	8	HST404B-12	4	HST404B-48	4
1/4"	0.080"	0.047"	16-12 AWG	B	HST405B-6	8	HST405B-12	4	HST405B-48	4
3/8"	0.130"	0.050"	12-8 AWG	B	HST406B-6	8	HST406B-12	4	HST406B-48	4
1/2"	0.195"	0.055"	8-4 AWG	B	HST407B-6	8	HST407B-12	4	HST407B-48	4
3/4"	0.313"	0.065"	4-1/0 AWG	B	HST408B-6	8	HST408B-12	4	HST408B-48	4
1"	0.400"	0.075"	2-4/0 AWG	B	HST409B-6	8	HST409B-12	4	HST409B-48	4



HST300 SERIES

Shrink Ratio: Exceeds 3 to 1

Our tinted, semi-rigid adhesive-lined heat shrink tubing is the clear choice for insulating and color-coding small gauge wire connections.

This tubing offers several distinct advantages:

- Tubing is tinted for color-coding, but is also translucent to allow the installer to view the underlying material.
- Wire gauge imprint for ease of wire identification both before and after installation.
- Adhesive-lining provides a barrier against contaminants.

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/4	E157227	-	Polyolefin	135°C, (275°F)	900 Volts/Mil	-55°C to 110°C, (-67° to 230°F)	Non-Flame Retardant



TINTED COLORS WITH WIRE GAUGE IMPRINT

CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Colors	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg Qty	Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
0.115"	0.028"	0.06"	24-22 AWG	Ⓢ	HST303C-6	8	HST303C-12	4	HST303C-48	4
0.245"	0.045"	0.06"	20-18 AWG	Ⓡ	HST304R-6	8	HST304R-12	4	HST304R-48	4
0.245"	0.080"	0.06"	16-14 AWG	Ⓛ	HST305BL-6	8	HST305BL-12	4	HST305BL-48	4
0.360"	0.100"	0.06"	12-10 AWG	Ⓨ	HST306Y-6	8	HST306Y-12	4	HST306Y-48	4

Ⓢ Clear Ⓡ Red Ⓛ Blue Ⓨ Yellow



SEMI-RIGID ADHESIVE-LINED HEAT SHRINK TUBING ASSORTMENTS

NSPA-9190



MINI PLASTIC ASSORTMENT
9 ITEMS • 39 PIECES

NSPA-5190



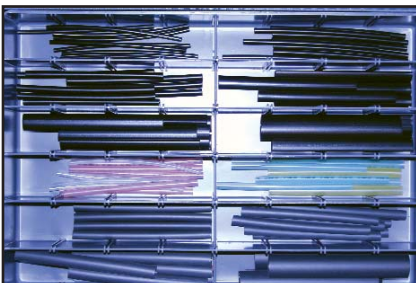
SMALL PLASTIC ASSORTMENT
10 ITEMS • 48 PIECES

NSPA-5191



SMALL PLASTIC ASSORTMENT
6 ITEMS • 32 PIECES

NSPA-1190



LARGE METAL ASSORTMENT
14 ITEMS • 94 PIECES

NSPA-1191



LARGE METAL ASSORTMENT
6 ITEMS • 82 PIECES

NSPA-1187 - ASSORTED



LARGE METAL ASSORTMENT
25 ITEMS • 191 PIECES

SPECIALTY HEAT SHRINK TUBING

HST500 SERIES

Shrink Ratio: 4 to 1

All weather, polyolefin tubing with a very active adhesive lining.

- Excellent for sealing multiple wires
- Puncture resistant
- Provides superior strain relief

Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
Chrysler MS-DB56 CAN 3686	-	-	Polyolefin	121°C	500 Volts/Mil	-55°C to 110°C	Non-Flame Retardant
Ford ESB-M97D56A1				(250°F)		(-67° to 230°F)	

HIGH ADHESIVE FLOW HEAT SHRINK TUBING



CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec. Wall Thick.	Wire Range	Color / Color Dash	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg Qty	Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
0.220"	0.045"	0.057"	24-12 AWG	(C) / (W)	HST540C-6	8	HST540C-12	4	HST540C-48	4
0.300"	0.060"	0.061"	22-10 AWG	(C) / (R)	HST541C-6	8	HST541C-12	4	HST541C-48	4
0.350"	0.080"	0.071"	16-8 AWG	(C) / (B)	HST542C-6	8	HST542C-12	4	HST542C-48	4
0.450"	0.105"	0.096"	14-4 AWG	(C) / (Y)	HST543C-6	8	HST543C-12	4	HST543C-48	4
0.700"	.0175"	0.113"	8-2/0 AWG	(C) / (O)	HST544C-6	8	HST544C-12	4	HST544C-48	4

(C) / (W) Clear Tubing/White Dash (C) / (R) Clear Tubing/Red Dash (C) / (B) Clear Tubing/Blue Dash (C) / (Y) Clear Tubing/Yellow Dash (C) / (O) Clear Tubing/Orange Dash



HST700 SERIES

Shrink Ratio: 3 to 1 • Flame-retardant tubing that offers the advantage of easy handling and installation. Maximum operating reliability and system protection. • Excellent mechanical & environmental protection • Maintains some flexibility while delivering abrasion resistance.

Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/15, Class 2	-	-	Polyolefin	121° (250°F)	500 Volts/Mil	-55°C to 110°C (-67° to 230°F)	Flame Retardant

MEDIUM DUTY ADHESIVE-LINED HEAT SHRINK TUBING



CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec. Wall Thick.	Wire Range	Color	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg Qty	Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
.40"	0.150"	0.09"	14-6 AWG	(B)	HST706B-6	8	HST706B-12	4	HST706B-48	1
.80"	0.220"	0.10"	8-1 AWG	(B)	HST708B-6	8	HST708B-12	4	HST708B-48	1
1.10"	0.370"	0.10"	2-4/0 AWG	(B)	HST709B-6	8	HST709B-12	4	HST709B-48	1
1.30"	0.430"	0.10"	2/0-4/0 AWG	(B)	HST720B-6	8	HST720B-12	4	HST720B-48	1
1.50"	0.500"	0.10"	4/0-400 MCM AWG	(B)	HST710B-6	8	HST710B-12	4	HST710B-48	1
1.70"	0.600"	0.10"		(B)	HST721B-6	8	HST721B-12	4	HST721B-48	1
2.00"	0.750"	0.10"		(B)	HST711B-6	8	HST711B-12	4	HST711B-48	1
3.00"	1.000"	0.12"		(B)	HST712B-6	8	HST712B-12	4	HST712B-48	1
4.30"	1.500"	0.15"		(B)	HST713B-6	8	HST713B-12	4	HST713B-48	1



HST600 SERIES

Shrink Ratio: 5.7 to 1

All weather, polyolefin tubing with a very active adhesive lining.

- Excellent for sealing multiple wires • Puncture resistant • Provides superior strain relief

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/15, Class 1	Meets UL-94, V-0 Flame Rating	-	Polyolefin	120°C (248°F)	500 Volts/Mil	-55°C to 110°C (-67° to 230°F)	Flame Retardant



HIGH RATIO HEAT SHRINK TUBING ADHESIVE-LINED



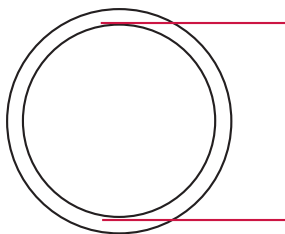
CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Color	6 INCH		12 INCH		48 INCH	
				Part Numbers	Pkg Qty	Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
0.750"	0.125"	0.123"	B	HST680B-6	8	HST680B-12	4	HST680B-48	1
1.300"	0.220"	0.135"	B	HST681B-6	8	HST681B-12	4	HST681B-48	1
1.750"	0.290"	0.140"	B	HST682B-6	8	HST682B-12	4	HST682B-48	1
2.000"	0.330"	0.170"	B	HST683B-6	8	HST683B-12	4	HST683B-48	1
2.750"	0.460"	0.190"	B	HST684B-6	8	HST684B-12	4	HST684B-48	1
3.500"	0.673"	0.170"	B	HST685B-6	8	HST685B-12	4	HST685B-48	1
4.700"	0.900"	0.190"	B	HST686B-6	8	HST686B-12	4	HST686B-48	1



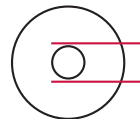
EXAMPLE OF SHRINK RATIO FOR HST680:

PRE-SHRINK ID:



MIN ID = .75

RECOVERED ID:



MIN ID = .125

HEAVY WALL HEAT SHRINK TUBING

HST800 SERIES

Shrink Ratio: 3 to 1

A sturdy, heavy wall tubing with excellent insulating, abrasion-resisting, and strain-relieving properties. The thermo-plastic adhesive provides superior environmental protection.

- Battery splices and terminals • **DIRECT BURIAL** • **UNDERWATER ENVIRONMENTS**
- Any connection in harsh conditions • Adhesive-lining provides a barrier against contaminants

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/15, Class 2	486D	-	Polyolefin	121°C (250°F)	500 Volts/Mil	-55°C to 110°C (-67° to 230°F)	Flame Retardant

HEAVY WALL FLAME RETARDANT ADHESIVE-LINED HEAT SHRINK TUBING

CUT LENGTHS

Pre-Shrink ID	Rec ID	Rec Wall Thick.	Wire Range	Color	6 INCH		12 INCH		48 INCH	
					Part Numbers	Pkg Qty	Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
0.300"	0.100"	0.08"	18-14 AWG	(B) (R)	HST805(X)-6	8	HST805(X)-12	4	HST805(X)-48	1
0.400"	0.150"	0.09"	14-6 AWG	(B) (R)	HST806(X)-6	8	HST806(X)-12	4	HST806(X)-48	1
0.800"	0.200"	0.11"	8-1 AWG	(B) (R)	HST808(X)-6	8	HST808(X)-12	4	HST808(X)-48	1
1.100"	0.370"	0.12"	2-4/0 AWG	(B) (R)	HST809(X)-6	8	HST809(X)-12	4	HST809(X)-48	1
1.500"	0.500"	0.17"	4/0-400 MCM AWG	(B)	HST810B-6	8	HST810B-12	4	HST810B-48	1
2.000"	0.650"	0.17"		(B)	HST811B-6	8	HST811B-12	4	HST811B-48	1
3.000"	1.000"	0.17"		(B)	HST812B-6	8	HST812B-12	4	HST812B-48	1
4.500"	1.500"	0.17"		(B)	HST813B-6	8	HST813B-12	4	HST813B-48	1
6.000"	1.800"	0.17"		(B)	HST814B-6	8	HST814B-12	4	HST814B-48	1
7.000"	2.000"	0.17"		(B)	HST815B-6	8	HST815B-12	4	HST815B-48	1

When ordering replace the (X) with the following color codes in the part number: (B) Black (R) Red



HEAVY WALL, FLAME RETARDANT, ADHESIVE-LINED HEAT SHRINK TUBING ASSORTMENTS

NSPA-5192



SMALL PLASTIC ASSORTMENT
6 ITEMS • 12 PIECES

NSPA-1192



LARGE METAL ASSORTMENT
8 ITEMS • 30 PIECES

NSPA-1187 - ASSORTED



LARGE METAL ASSORTMENT
25 ITEMS • 191 PIECES

HST850 SERIES

Shrink Ratio: 3 to 1

A sturdy, heavy wall tubing with excellent insulating, abrasion-resisting, and strain-relieving properties. The thermo-plastic adhesive provides superior environmental protection.

- Convenient cut lengths for insulating and sealing battery terminals
- Underwater and underground environments
- Any connection in harsh conditions
- Adhesive-lining provides a barrier against contaminants

Mil Specs	UL	CSA	Material	Recover Temp.	Dielectric Strength	Continuous Oper. Temp.	Flammability
MIL-DTL-23053/15, Class 2	486D	C22.2	Polyolefin	120° (248°F)	500 Volts/Mil	-55°C to 110°C (-67° to 230°F)	Non-Flame Retardant

HEAVY WALL, ADHESIVE-LINED, HEAT SHRINK TUBING FOR BATTERY TERMINALS

CUT LENGTHS

Pre-Shrink ID	Rec ID	REC Wall Thick.	Wire Range	Color	1.5 INCH		2 INCH	
					Part Numbers	Pkg Qty	Part Numbers	Pkg Qty
0.500"	0.160"	0.09"	12-4 AWG	B R	HST857(X)-1.5	10	HST857(X)-2	10
0.750"	0.240"	0.09"	8-1 AWG	B R	HST858(X)-1.5	10	HST858(X)-2	10
1.100"	0.350"	0.12"	2-4/0 AWG	B R			HST859(X)-2	10

When ordering replace the (X) with the following color codes in the part number: **B** Black **R** Red



HEAVY WALL HEAT SHRINK TUBING AND CABLELINK ASSORTMENTS

NSPA-5111



SMALL PLASTIC ASSORTMENTS
15 ITEMS • 53 PIECES

NSPA-1111

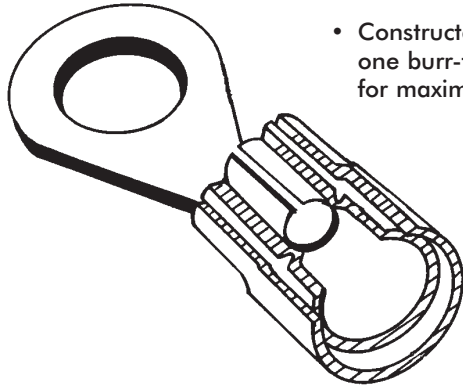


LARGE METAL ASSORTMENT
16 ITEMS • 127 PIECES

NYLON INSULATED CONNECTORS

THREE PIECE FUNNEL ENTRY DESIGN

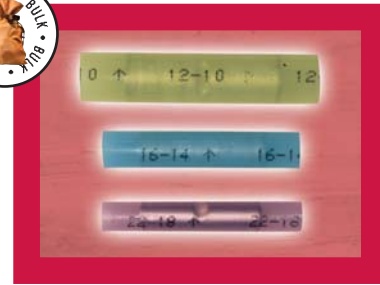
Color coded insulation for easy wire size identification.



- Constructed of pure annealed copper in one burr-free piece with electro-tin plating for maximum corrosion resistance.
- The metal sleeve has a built-in funnel entry design to eliminate wire strand hang-up and position the wire correctly.
- Extruded nylon color coded insulation for easy wire identification.

NYLON INSULATED BUTT CONNECTORS

Part #	Pkg Qty	Wire Gauge	Color
WTN-5-16	50	18-22 AWG	red
WTN-5-14	50	14-16 AWG	blue
WTN-5-10	50	10-12 AWG	yellow
WTN-5-8	50	8 AWG	pink



NYLON INSULATED DOUBLE CRIMP BUTT CONNECTORS

THESE HIGH QUALITY INSULATED CONNECTORS FEATURE FUNNEL ENTRY BRASS INSULATION GRIPS • WIRES ARE EASILY INSERTED, ELIMINATING HANG-UP THAT IS COMMON FOR MOST NYLON BUTT CONNECTORS

Part #	Pkg Qty	Description	Color
WTN-58-16	50	18-22 AWG	red
WTN-58-14	50	14-16 AWG	blue
WTN-58-10	50	10-12 AWG	yellow



NYLON INSULATED RING TERMINALS

Part #	Pkg Qty	Wire Gauge	Stud	Color
WTN-116-06	50	18-22 AWG	#6	red
WTN-116-08	50	18-22 AWG	#8	red
WTN-116-10	50	18-22 AWG	#10	red
WTN-116-14	50	18-22 AWG	1/4"	red
WTN-116-38	50	18-22 AWG	3/8"	red
WTN-114-04	50	14-16 AWG	#4	blue
WTN-114-06	50	14-16 AWG	#6	blue
WTN-114-08	50	14-16 AWG	#8	blue
WTN-114-10	50	14-16 AWG	#10	blue
WTN-114-14	50	14-16 AWG	1/4"	blue
WTN-114-516	50	14-16 AWG	5/16"	blue
WTN-114-38	50	14-16 AWG	3/8"	blue
WTN-110-08	50	10-12 AWG	#8	yellow
WTN-110-10	50	10-12 AWG	#10	yellow
WTN-110-14	50	10-12 AWG	1/4"	yellow
WTN-110-516	50	10-12 AWG	5/16"	yellow
WTN-110-38	50	10-12 AWG	3/8"	yellow
WTN-110-12	50	10-12 AWG	1/2"	yellow



NYLON INSULATED SPADE TERMINALS

Part #	Pkg Qty	Wire Gauge	Stud	Color
WTN-216-06	50	18-22 AWG	#6	red
WTN-216-08	50	18-22 AWG	#8	red
WTN-216-10	50	18-22 AWG	#10	red
WTN-214-06	50	14-16 AWG	#6	blue
WTN-214-08	50	14-16 AWG	#8	blue
WTN-214-10	50	14-16 AWG	#10	blue
WTN-210-06	50	10-12 AWG	#6	yellow
WTN-210-08	50	10-12 AWG	#8	yellow
WTN-210-10	50	10-12 AWG	#10	yellow



NYLON INSULATED FLANGED BLOCK SPADE TERMINALS

Part #	Pkg Qty	Wire Gauge	Stud	Color
WTN-316-06	50	18-22 AWG	#6	red
WTN-316-08	50	18-22 AWG	#8	red
WTN-316-10	50	18-22 AWG	#10	red
WTN-314-06	50	14-16 AWG	#6	blue
WTN-314-08	50	14-16 AWG	#8	blue
WTN-314-10	50	14-16 AWG	#10	blue
WTN-310-06	50	10-12 AWG	#6	yellow
WTN-310-08	50	10-12 AWG	#8	yellow
WTN-310-10	50	10-12 AWG	#10	yellow



NYLON INSULATED SPRING SPADE TERMINALS

Part #	Pkg Qty	Wire Gauge	Stud	Color
WTN-316S-06	50	18-22 AWG	#6	red
WTN-316S-08	50	18-22 AWG	#8	red
WTN-316S-10	50	18-22 AWG	#10	red
WTN-314S-06	50	14-16 AWG	#6	blue
WTN-314S-08	50	14-16 AWG	#8	blue
WTN-314S-10	50	14-16 AWG	#10	blue
WTN-310S-06	50	10-12 AWG	#6	yellow
WTN-310S-08	50	10-12 AWG	#8	yellow
WTN-310S-10	50	10-12 AWG	#10	yellow



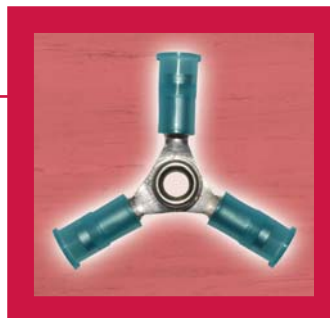
NYLON INSULATED HOOK TERMINALS

Part #	Pkg Qty	Wire Gauge	Stud	Color
WTN-416-06	50	18-22 AWG	#6	red
WTN-416-10	50	18-22 AWG	#10	red
WTN-414-06	50	14-16 AWG	#6	blue
WTN-414-10	50	14-16 AWG	#10	blue
WTN-410-10	50	10-12 AWG	#10	yellow



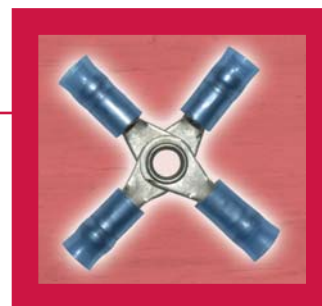
NYLON INSULATED THREE-WAY BUTT CONNECTORS

Part #	Pkg Qty	Wire Gauge	Color
WTN-53-16	50	18-22 AWG	red
WTN-53-14	50	14-16 AWG	blue
WTN-53-10	50	10-12 AWG	yellow



NYLON INSULATED FOUR-WAY BUTT CONNECTORS

Part #	Pkg Qty	Wire Gauge	Color
WTN-54-16	50	18-22 AWG	red
WTN-54-14	50	14-16 AWG	blue
WTN-54-10	50	10-12 AWG	yellow



NYLON INSULATED FEMALE SLIP-ONS

Part #	Pkg Qty	Wire Gauge	Tab Width	Color
WTN-6-18-187F	50	18-22 AWG	.187"	red
WTN-6-18-250F	50	18-22 AWG	.250"	red
WTN-6-14-187F	50	14-16 AWG	.187"	blue
WTN-6-14-250F	50	14-16 AWG	.250"	blue
WTN-6-10-250F	50	10-12 AWG	.250"	yellow



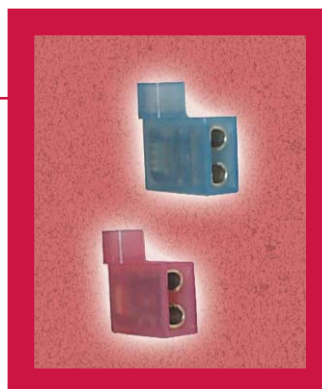
NYLON INSULATED MALE SLIP-ONS

Part #	Pkg Qty	Wire Gauge	Tab Width	Color
WTN-6-18-187M	50	18-22 AWG	.187"	red
WTN-6-18-250M	50	18-22 AWG	.250"	red
WTN-6-14-250M	50	14-16 AWG	.250"	blue
WTN-6-14-187M	50	14-16 AWG	.187"	blue
WTN-6-10-250M	50	10-12 AWG	.250"	yellow



NYLON INSULATED FLAG-STYLE FULLY INSULATED FEMALE COUPLERS

Part #	Pkg Qty	Wire Gauge	Tab Width	Color
WTN-68-18-250F	50	18-22 AWG	.250"	red
WTN-68-14-250F	50	14-16 AWG	.250"	blue



PIGGY BACK

Part #	Pkg Qty	Wire Gauge	Tab Width	Color
WTS-9-116	50	18-22	.250"	Red
WTS-9-114	50	14-16	.250"	Blue



FULLY INSULATED NYLON COUPLERS

Part #	Pkg Qty	Style	Wire Gauge	Tab Width	Color
WTN-66-18-250M	50	male	18-22 AWG	.250"	red
WTN-66-18-250F	50	female	18-22 AWG	.250"	red
WTN-66-14-250M	50	male	14-16 AWG	.250"	blue
WTN-66-14-250F	50	female	14-16 AWG	.250"	blue
WTN-66-10-250M	50	male	10-12 AWG	.250"	yellow
WTN-66-10-250F	50	female	10-12 AWG	.250"	yellow



3M FULLY INSULATED NYLON COUPLERS

Part #	Pkg Qty	Style	Wire Gauge	Tab Width	Color
WTN-67-18-250M	50	male	18-22 AWG	.250"	red
WTN-67-18-250F	50	female	18-22 AWG	.250"	red
WTN-67-14-250M	50	male	14-16 AWG	.250"	blue
WTN-67-14-250F	50	female	14-16 AWG	.250"	blue
WTN-67-10-250M	50	male	10-12 AWG	.250"	yellow
WTN-67-10-250F	50	female	10-12 AWG	.250"	yellow



MOLEX-ETC FULLY INSULATED NYLON COUPLERS

Part #	Pkg Qty	Style	Wire Gauge	Tab Width	Color
WTN-60-18-250M	50	male	18-22 AWG	.250"	red
WTN-60-18-250F	50	female	18-22 AWG	.250"	red
WTN-60-14-250M	50	male	14-16 AWG	.250"	blue
WTN-60-14-250F	50	female	14-16 AWG	.250"	blue
WTN-60-10-250M	50	male	10-12 AWG	.250"	yellow
WTN-60-10-250F	50	female	10-12 AWG	.250"	yellow



SURE CRIMP FULLY INSULATED NYLON COUPLERS

Part #	Pkg Qty	Style	Wire Gauge	Tab Width	Color
WTN-61-18-187M	50	male	18-22 AWG	.187"	red
WTN-61-18-187F	50	female	18-22 AWG	.187"	red
WTN-61-18-250M	50	male	18-22 AWG	.250"	red
WTN-61-18-250F	50	female	18-22 AWG	.250"	red
WTN-61-14-187M	50	male	14-16 AWG	.187"	blue
WTN-61-14-187F	50	female	14-16 AWG	.187"	blue
WTN-61-14-250M	50	male	14-16 AWG	.250"	blue
WTN-61-14-250F	50	female	14-16 AWG	.250"	blue
WTN-61-10-250M	50	male	10-12 AWG	.250"	yellow
WTN-61-10-250F	50	female	10-12 AWG	.250"	yellow



NYLON INSULATED BULLET PLUGS

Part #	Pkg Qty	Wire Gauge	Bullet Diameter	Color
WTN-7-18-15M	50	18-22 AWG	.157"	red
WTN-7-18-17M	50	18-22 AWG	.176"	red
WTN-7-18-18M	50	18-22 AWG	.180"	red
WTN-7-14-15M	50	14-16 AWG	.157"	blue
WTN-7-14-17M	50	14-16 AWG	.176"	blue
WTN-7-14-18M	50	14-16 AWG	.180"	blue



NYLON INSULATED BULLET PLUG RECEPTACLES

Part #	Pkg Qty	Wire Gauge	Bullet Diameter	Color
WTN-7-18-15F	50	18-22 AWG	.157"	red
WTN-7-18-17F	50	18-22 AWG	.176"	red
WTN-7-18-18F	50	18-22 AWG	.180"	red
WTN-7-14-15F	50	14-16 AWG	.157"	blue
WTN-7-14-17F	50	14-16 AWG	.176"	blue
WTN-7-14-18F	50	14-16 AWG	.180"	blue



NYLON INSULATED PIGTAIL (CLOSED-END) CONNECTORS

Part #	Pkg Qty	Wire Gauge	Color
WTN-8-22-14	50	14-22 AWG	clear
WTN-8-18-10	50	10-18 AWG	clear



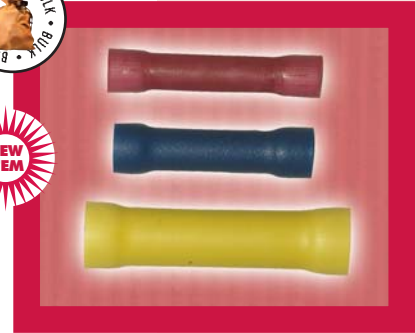
WIRE TERMINAL ASSORTMENTS & KITS

Mini Kit	NSPA-9000
Starter Assortment	NSPA-5000 • NSPA5000-R • NSPA-5000-B • NSPA-5000-Y • NSPA-5193
Maintenance Assortment	NSPA-1000 • NSPA-1000-R • NSPA-1000-B • NSPA-1000-Y • NSPA-1193

VINYL INSULATED CONNECTORS

VINYL INSULATED BUTT CONNECTORS

Part #	Pkg Qty	Wire Range	Color
WTV-5-16	50	18-22	red
WTV-5-14	50	14-16	blue
WTV-5-10	50	10-12	yellow



VINYL INSULATED STEP DOWN BUTT CONNECTORS

Part #	Pkg Qty	Wire Range	Color
WTV-56-20	50	24-26 AWG to 18-22 AWG	red
WTV-56-16	50	18-22 AWG to 14-16 AWG	blue
WTV-56-14	50	14-16 AWG to 10-12 AWG	yellow
WTV-56-10	50	10-12 AWG to 8 AWG	pink



VINYL INSULATED RING TERMINALS

Part #	Pkg Qty	Wire Gauge	Stud	Color
WTV-116-06	50	18-22 AWG	#6	red
WTV-116-08	50	18-22 AWG	#8	red
WTV-116-10	50	18-22 AWG	#10	red
WTV-116-14	50	18-22 AWG	1/4"	red
WTV-114-06	50	14-16 AWG	#6	blue
WTV-114-08	50	14-16 AWG	#8	blue
WTV-114-10	50	14-16 AWG	#10	blue
WTV-114-14	50	14-16 AWG	1/4"	blue
WTV-114-516	50	14-16 AWG	5/16"	blue
WTV-114-38	50	14-16 AWG	3/8"	blue
WTV-110-08	50	10-12 AWG	#8	yellow
WTV-110-10	50	10-12 AWG	#10	yellow
WTV-110-14	50	10-12 AWG	1/4"	yellow
WTV-110-516	50	10-12 AWG	5/16"	yellow
WTV-110-38	50	10-12 AWG	3/8"	yellow



VINYL INSULATED SPADE TERMINALS

Part #	Pkg Qty	Wire Gauge	Stud	Color
WTV-216-10	50	18-22 AWG	#10	red
WTV-214-10	50	14-16 AWG	#10	blue
WTV-210-10	50	10-12 AWG	#10	yellow



VINYL INSULATED FEMALE SLIP-ONS

Part #	Pkg Qty	Wire Gauge	Tab Width	Color
WTV-6-18-250F	50	18-22 AWG	.250"	red
WTV-6-14-250F	50	14-16 AWG	.250"	blue
WTV-6-10-250F	50	10-12 AWG	.250"	yellow



VINYL INSULATED MALE SLIP-ONS

Part #	Pkg Qty	Wire Gauge	Tab Width	Color
WTV-7-18-250M	50	18-22 AWG	.250"	red
WTV-7-14-250M	50	14-16 AWG	.250"	blue
WTV-7-10-250M	50	10-12 AWG	.250"	yellow



VINYL INSULATED BULLET PLUGS

Part #	Pkg Qty	Wire Gauge	Bullet Diameter	Color
WTV-7-14-15M	50	14-16 AWG	.157"	blue
WTV-7-14-18M	50	14-16 AWG	.180"	blue



VINYL INSULATED BULLET PLUG RECEPTACLES

Part #	Pkg Qty	Wire Gauge	Bullet Diameter	Color
WTV-7-14-15F	50	14-16 AWG	.157"	blue

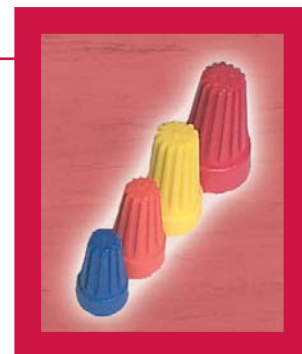


MISCELLANEOUS CONNECTORS

WIRE NUTS

SOLDERLESS AND TAPELESS WIRE CONNECTORS • PHENOLIC COMPOUND WITH METAL INSERT • U.L. AND C.S.A. APPROVED FOR FIXTURE CONNECTORS

Part #	Pkg Qty	Wire Gauge	Wire Combination Minimum	Approved Maximum	Voltage	Color
WN-1	50	16-22	1 #20 with 1 #22	2 #16	300	gray
WN-2	50	16-22	3 #22	3 #16	300	blue
WN-3	50	14-22	3 #20	4 #16 with 1 #20	600	orange
WN-4	50	10-18	1 #14 with 1 #18	4 #14	600	yellow
WN-5	50	10-18	1 #12 with 2 #18	2 #10 with 2 #12	600	red

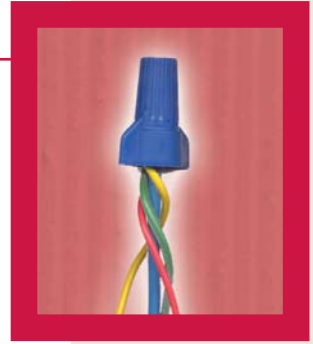


WIRE TERMINAL ASSORTMENTS & KITS

Mini Kit	NSPA-9195
Starter Assortment	NSPA-5194 • NSPA-5195
Maintenance Assortment	NSPA-1194 • NSPA-1195

WINGED WIRE NUTS

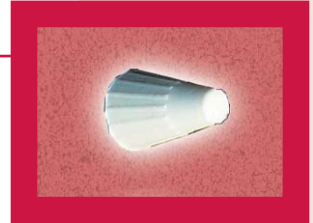
Part #	Pkg Qty	Wire Range	Wire Combo Minimum	Approved Maximum	Voltage	Color
WN-6	50	10-18	2 #18	3 #12	600	yellow
WN-7	50	10-18	2 #14	5 #12	600	red
WN-8	50	8-18	2 #12	3 #10 with 1 #8	600	green
WN-9	50	6-14	3 #12	1 #6 with 2 #8	600	blue



HIGH TEMPERATURE PORCELAIN WIRE NUTS

FOR HIGH TEMPERATURE APPLICATIONS OVER 105°C • RATED TO 300 VOLTS • UL LISTED AND CSA CERTIFIED

Part#	Pkg Qty	Wire Range	Wire Combination Minimum	Wire Combination Maximum
WNHT-1	50	14-18	2 #18	1 #16 with 2 #18
WNHT-2	50	14-18	2 #18	1 #18 with 2 #16
WNHT-3	50	14-18	2 #18	4 #16



INSTANT AUTO-ELECTRIC CONNECTORS

USE ON STRANDED OR SOLID WIRE FOR INLINE, PIGTAIL AND TAP SPLICES • NO SPECIAL TOOLS REQUIRED USE ONLY A STANDARD PAIR OF PLIERS

Part #	Pkg Qty	Description	Wire Range	Tap Run	Color
WTS-90-18	50	general purpose	18-22	18-22	red
WTS-90-16	50	general purpose	14-18	14-18	white
WTS-90-14	50	general purpose	14-18	14-18	blue
WTS-90-12	50	heavy duty	10-12	10-12	brown
WTS-90-10	50	heavy duty	10-12	10-12	yellow



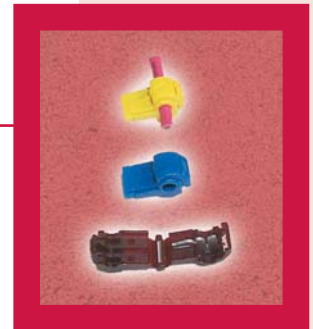
WIRE TERMINAL ASSORTMENTS & KITS

Starter Assortment - NSPA-5194 • Maintenance Assortment - NSPA-1194

FEMALE T-TAP QUICK SLIDES

Part #	Pkg Qty	Wire Range	Tab Width	Color
WTS-90-51	50	18-22	.250"	red
WTS-90-52	50	14-18	.250"	blue
WTS-90-53	50	10-12	.250"	yellow

Use with male .250" wire terminals.



SELF-STRIPPING INSULATION DISPLACEMENT CONNECTORS

COPPER WIRE PIGTAIL CONNECTIONS OF 2 OR 3 WIRES • PROTECTS SOLID OR STRANDED CONTACT AGAINST CORROSION IN DAMP CONDITIONS • GEL FILLED

Part #	Pkg Qty	Wire Range	Color
WTS-90-75	50	14-22	blue/clear



SPECIALTY TERMINALS

SPLIT BOLT CONNECTORS

BOLT AND NUT ARE MADE OF HIGH STRENGTH CORROSION RESISTANT COPPER ALLOY • FOR COPPER TO COPPER CONNECTIONS • UL LISTED & CSA CERTIFIED TO 600 VOLTS

Part #	Pkg qty	Wire range min	Equal main and tap	Min. tap with one max. main
SB1	10	12 str	10 str	16 str
SB2	10	16 str	8 str	16 str
SB3	10	10 sol	6 sol	16 sol
SB4	10	8 sol	4 sol	16 sol
SB5	10	6 sol	2 sol	12 sol
SB6	10	6 sol	2 str	14 str
SB7	5	4 sol	1/0 str	14 sol
SB8	5	2 sol	2/0 str	14 str
SB9	5	1/0 sol	250 mcm	10 sol



PIGGY BACK CHAIR ADAPTER

Part #	Pkg Qty	Tab Width	Description
WTS-9-0010	50	.250"	For stacking two male tabs.



DOUBLE MALE TAB

Part #	Pkg Qty	Tab Width	Description
WTS-9-0014	50	.250"	Connects two female .250" tabs. Molded vinyl insulation.



DOUBLE MALE-FEMALE ADAPTER

Part #	Pkg Qty	Tab Width	Description
WTS-9-0018	50	.250"	Accepts two .250" female tabs instead of one.



DOUBLE BULLET

Part #	Pkg Qty	Description
WTS-9-0019	50	Connects two .157" standard bullets. Vinyl insulated.



HIGH TEMPERATURE TERMINALS

ONE PIECE, STEEL CONSTRUCTION • NICKEL PLATED FOR PROTECTION • CAPABLE OF PROVIDING RELIABLE CIRCUITRY IN TEMPERATURES UP TO 900°F

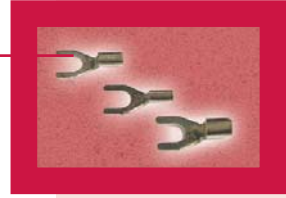
HIGH TEMPERATURE RINGS

Part #	Pkg Qty	Wire GA	Stud
WTHT-116-10	50	18-22	#10
WTHT-114-06	50	14-16	#6
WTHT-114-10	50	14-16	#10
WTHT-114-14	50	14-16	1/4"
WTHT-110-10	50	10-12	#10
WTHT-110-14	50	10-12	1/4"



HIGH TEMPERATURE SPADES

Part #	Pkg Qty	Wire GA	Stud
WTHT-216-10	50	18-22	#10
WTHT-214-10	50	14-16	#10
WTHT-210-10	50	10-12	#10



HIGH TEMPERATURE BUTT CONNECTORS

Part #	Pkg Qty	Wire GA
WTHT-5-16	50	18-22
WTHT-5-14	50	14-16
WTHT-5-10	50	10-12



HIGH TEMPERATURE FEMALE DISCONNECTS

Part #	Pkg Qty	Wire GA	Tab Width
WTHT-6-14-250F	50	14-16	.250"
WTHT-6-10-250F	50	10-12	.250"



HIGH TEMPERATURE MALE DISCONNECTS

Part #	Pkg Qty	Wire GA	Tab Width
WTHT-6-14-250M	50	14-16	.250"
WTHT-6-10-250M	50	10-12	.250"



HIGH TEMPERATURE ASSORTMENTS & KITS

Mini Kit - NSPA-9145 • Starter Assortment - NSPA-5145 • Maintenance Assortment - NSPA-1145

NON-INSULATED TERMINALS

BRAZED SEAM • HEAVY DUTY APPLICATIONS • BRAZED WITH A HIGH GRADE SILVER ALLOY FOR MAXIMUM STRENGTH

NON-INSULATED RINGS

Part #	Pkg Qty	Wire Ga	Stud
WTU-108-10	50	8	#10
WTU-108-14	50	8	1/4"
WTU-108-516	50	8	5/16"
WTU-108-38	50	8	3/8"
WTU-108-12	50	8	1/2"
WTU-106-14	50	6	1/4"
WTU-106-38	50	6	3/8"
WTU-106-12	50	6	1/2"
WTU-104-14	50	4	1/4"
WTU-104-38	50	4	3/8"
WTU-104-12	50	4	1/2"
WTU-102-14	50	2	1/4"
WTU-102-38	50	2	3/8"
WTU-102-12	50	2	1/2"



NON-INSULATED BUTT CONNECTORS

Part #	Pkg Qty	Wire Ga
WTU-5-08	50	8
WTU-5-06	50	6
WTU-5-04	50	4
WTU-5-02	50	2



NON-INSULATED BUTT CONNECTOR ASSORTMENT

Maintenance Assortment - NSPA-1000-HD



AMALGAMATING TAPE

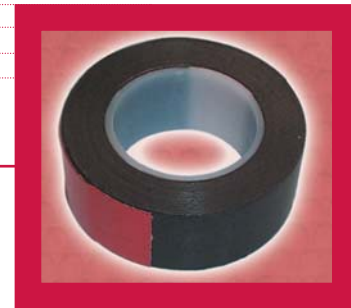
- A positive sealing cold shrink tape
- Requires no heat and can be applied in any weather condition
- Cures to a tight, yet flexible, waterproof bond
- For sealing leaky pipes and hoses
- Insulating wires and cables
- Bundling or taping loose objects
- Replacing heat shrink tubing, but without the heat
- Ideal for underground applications
- Withstands harsh cleaning chemicals and steam.
- Incidental contact with petroleum products o.k., but cannot be soaked or submerged in oil
- When removed leaves no residue
- Use on odd shaped objects because it flows to the contours
- Operates at -40°F to 100°F continuously and will withstand intermittent temperatures of up to 130°F

COMPARISON

	AMALGAMATION TAPE	VS.	SILICON TAPE
Base	Ethylene Propylene Rubber		Silicon Rubber
Elongation	800% 300%		
Water Absorption	0.05%3		
Temperature Range	-40° to 100°C continuous -40° to 130°C limited		-60° to 180°C continuous -60° to 260°C limited
Amalgamation	2 minutes to a few hours and continues to constrict for 24 hours		24 hours
Temperature Application	Can be applied in lower temperatures		Requires some heat in lower temperatures
A Cold Shrink Tape	Yes		No
Hose Repair	Yes		No
Pipe Repair	Yes		No
Shelf Life	5 years		1 year

AMALGAMATING TAPE

Part #	Pkg Qty	Size	Description
TP108	1	1" x 10'	Black amalgamating tape
TP109	1	1" x 30'	Black amalgamating tape



ELECTRICAL TAPE

7 MIL. GENERAL PURPOSE VINYL

- All purpose electrical tape
- Weather resistant
- Provides moisture-tight electrical and mechanical protection
- Resists: UV rays, acids, alkalis, abrasion, moisture, and corrosion
- Meets UL510 requirements
- UL approved

Part #	Pkg Qty	Size
TP100	1	3/4" x 66'



8 MIL. ALL WEATHER VINYL

- Premium quality heavy duty
- Flame retardant
- Cold and weather resistant
- A year-round, all-weather tape providing complete electrical insulation and mechanical protection
- Tough, yet flexible offering a moisture tight seal even in extremely hot and cold temperatures
- High electrical resistance and excellent insulation efficiency
- Excellent resistance to weathering in rain, snow, and sunlight
- Resistant to chemicals, corrosive acids, alkalis and solvents
- Applications: primary electrical insulation for all wire and cable splices rated up to 600 volts, protective jacketing for high voltage cable splices and repairs, harnessing of wires and cables
- Meets requirements of UL510, CSA

Part #	Pkg Qty	Size
TP101	1	3/4" x 66'

P.T.F.E. THREAD SEAL TAPE

Part #	Pkg Qty	Size	Description
TP103	1	1/2" x 520"	Teflon pipe-thread tape



3M™ TAPES

3M™ SCOTCH® SUPER 33+™ ELECTRICAL TAPE

Black, 7 mil tape, on a 1 inch core, combines the flexibility of a PVC backing with excellent electrical insulating properties to provide primary electrical insulation for splices up to 600V. Abrasion-, corrosion-, and UV-resistant, it makes an excellent protective jacketing for high-voltage cables and wire harnessing. UL Listed and CSA Certified, it resists alkalis and acids, and is flame-retardant. Excellent all-weather performance in cold to 0°F (-18°C) or hot to 220°F (105°C).

Part #	Description	Pkg Qty
TP33	Vinyl Tape 3/4" x 66'	1



3M™ SCOTCH® PREMIUM VINYL ELECTRICAL TAPE SUPER 88

Offers better mechanical/abrasion resistance, and is thicker for quicker build-up. For professional use, this tape combines the flexibility of a PVC backing with excellent electrical insulating properties to provide primary electrical insulation for splices up to 600V and protective jacketing. UL Listed and CSA Certified. Excellent resistance to UV rays, abrasion, moisture, copper corrosion, alkalis and acids. Excellent all-weather performance in cold to 0°F (-18°C) or hot to 220°F (105°C).

Part #	Description	Pkg Qty
TP88	Vinyl Electrical Tape 3/4" x 66'	1



3M™ TEMFLEX™ GENERAL USE VINYL ELECTRICAL TAPE 1700

Is used for protective jacketing and harnessing. Abrasive- and UV-resistant. UL Listed and CSA Certified for 176°F (80°C).

Part #	Description	Pkg Qty
TP1700	Vinyl Tape 3/4" x 60' 1.5" Core	1



3M™ SCOTCH® 35 VINYL ELECTRICAL COLOR CODING TAPE

Is used in phase identification, color coding leads and piping systems and for marking safety areas. This tape is abrasion- and weather-resistant, with excellent mechanical and electrical insulation properties that wraps smoothly and holds tight over a wide range of temperatures. UL Listed and CSA Certified, and is flame-retardant. Excellent all-weather performance in cold to 0°F (-18°C) or hot to 220°F (105°C).

Part #	Description	Pkg Qty
TP35X*	Vinyl Color Coding Tape 3/4" X 66' (red, blue, white, green)	1

*X = Color R, BL, W, G



3M™ SCOTCH® 06149

Pads are self-fusing, rubber based thin insulating mastic compounds laminated to a flexible, all-weather grade PVC backing and are designed for moisture sealing of electrical connections up to 600 volts.

Part #	Description	Pkg Qty
TP06149	Electrical Moisture Sealant Pads 2 1/2" X 2 1/2" (25 pads/box)	25





CABLELINK STARTER LUGS

These high quality lugs will deliver as many amps as the wire you put them on and more cranking power than any other lug!

- Thicker than standard copper lugs
- Longer barrel - more contact!
- 100% bright tin plating
- Color-coded for easy cable & crimp nest matching
- Additional wire gauge stamp on each connector
- 99.9% pure electrolytic tough pitch copper for greater conductivity

STANDARD COPPER LUGS



CABLELINK STARTER LUGS



CABLELINK STARTER LUGS

LUGS

Part #	Pkg Qty	AWG	Stud Size	Color Code
CLSL-614	10	6	1/4"	gray
CLSL-6516	10	6	5/16"	gray
CLSL-638	10	6	3/8"	gray
CLSL-414	10	4	1/4"	gray
CLSL-4516	10	4	5/16"	gray
CLSL-438	10	4	3/8"	gray
CLSL-2138	10	2-1	3/8"	pink
CLSL-2112	10	2-1	1/2"	pink
CLSL-1038	10	1/0	3/8"	black
CLSL-1012	10	1/0	1/2"	black
CLSL-2038	10	2/0	3/8"	orange
CLSL-2012	10	2/0	1/2"	orange
CLSL-3038	10	3/0	3/8"	purple
CLSL-3012	10	3/0	1/2"	purple
CLSL-4038	10	4/0	3/8"	yellow
CLSL-4012	10	4/0	1/2"	yellow



CABLELINK STARTER LUG ASSORTMENTS

Maintenance Assortments - NSPA-1196 • NSPA-1197 • NSPA-1186 • NSPA-1186-T

CABLE SPLICES

SPLICES

Part #	Pkg Qty	AWG	Color Code
CLSS-6	10	6	gray
CLSS-4	10	4	gray
CLSS-21	10	2-1	pink
CLSS-10	10	1/0	black
CLSS-20	10	2/0	orange
CLSS-30	10	3/0	purple
CLSS-40	10	4/0	yellow



STARTER LUGS

COPPER WITH TIN PLATING

Part #	Pkg Qty	Wire Gauge	Stud Size	Color Code
BAL-414	10	4	1/4"	grey
BAL-4516	10	4	5/16"	grey
BAL-438	10	4	3/8"	grey
BAL-238	10	2	3/8"	green
BAL-212	10	2	1/2"	green
BAL-138	10	1	3/8"	pink
BAL-112	10	1	1/2"	pink
BAL-1038	10	1/0	3/8"	black
BAL-1012	10	1/0	1/2"	black
BAL-2038	10	2/0	3/8"	orange
BAL-2012	10	2/0	1/2"	orange
BAL-3038	10	3/0	3/8"	purple
BAL-3012	10	3/0	1/2"	purple
BAL-4038	10	4/0	3/8"	yellow
BAL-4012	10	4/0	1/2"	yellow



STACKABLE STARTER LUGS

COPPER WITH LEAD PLATING • ANTI-ROTATIONAL FEATURE • MAINTENANCE FREE • PROVISION FOR STACKING • 3/8" THREADED STUDS

Part #	Pkg Qty	Wire Gauge	Stud Size	Color Code
BAC-438	10	4	3/8"	grey
BAC-238	10	2	3/8"	green
BAC-138	10	1	3/8"	pink
BAC-1038	10	1/0	3/8"	black
BAC-2038	10	2/0	3/8"	orange
BAC-3038	10	3/0	3/8"	purple
BAC-4038	10	4/0	3/8"	yellow



CABLE SPLICES

COPPER WITH TIN PLATING

Part #	Pkg Qty	Wire Gauge	Color Code
BAS-4	10	4	grey
BAS-2	10	2	green
BAS-1	10	1	pink
BAS-10	10	1/0	black
BAS-20	10	2/0	orange
BAS-30	10	3/0	purple
BAS-40	10	4/0	yellow



THOMAS & BETTS STARTER LUG & SPLICES ASSORTMENTS

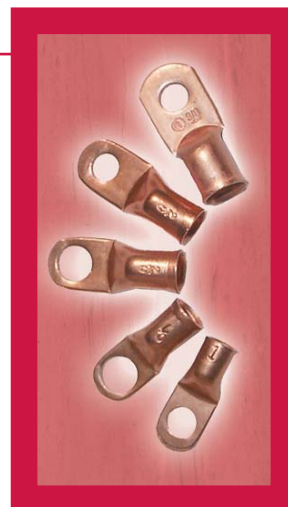
Maintenance Assortments - NSPA-1086 • NSPA-1198

STARTER CABLE LUGS

COPPER STARTER CABLE LUGS

FOR CRIMP OR SOLDER APPLICATIONS • FLARED FOR EASY WIRE INSERTION • HIGHEST GRADE ELECTROLYTIC COPPER • FULLY ANNEALED FOR EASY AND SECURE CRIMPING • CABLE SIZE STAMPED ON ALL LUGS

Part #	Pkg Qty	Wire Gauge	Stud Size
SLC-11-L-6	10	6	5/16"
SLC-11-L-6-1	10	6	3/8"
SLC-11-L-4	10	4	3/8"
SLC-11-L-4-1	10	4	1/2"
SLC-11-L-2	10	2	3/8"
SLC-11-L-2-1	10	2	1/2"
SLC-11-L-1	10	1	3/8"
SLC-11-L-1-1	10	1	1/2"
SLC-11-L-1/0	10	1/0	3/8"
SLC-11-L-1/0-1	10	1/0	1/2"
SLC-11-L-2/0	10	2/0	3/8"
SLC-11-L-2/0-1	10	2/0	1/2"
SLC-11-L-3/0	10	3/0	3/8"
SLC-11-L-3/0-1	10	3/0	1/2"
SLC-11-L-4/0	10	4/0	3/8"
SLC-11-L-4/0-1	10	4/0	1/2"



TIN-PLATED STARTER CABLE LUGS

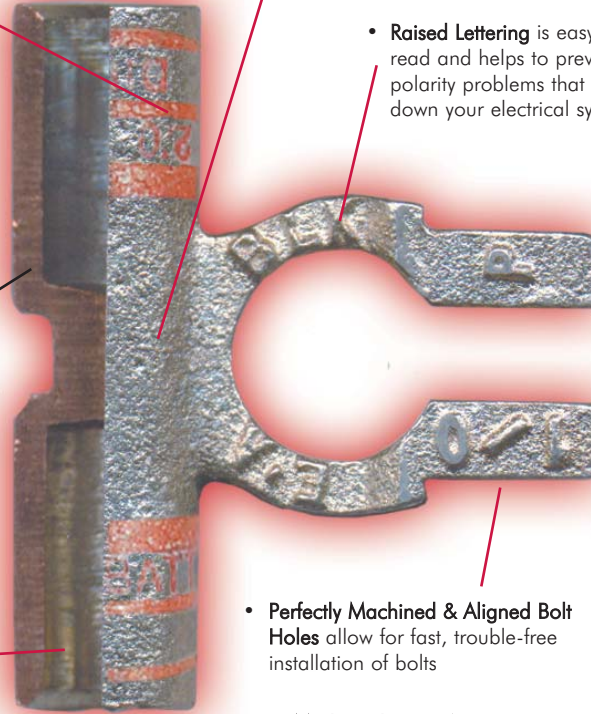
Part #	Pkg Qty	Wire Gauge	Stud Size
SLT-810	10	8	#10
SLT-814	10	8	1/4"
SLT-8516	10	8	5/16"
SLT-838	10	8	3/8"
SLT-812	10	8	1/2"



CABLELINK BATTERY TERMINALS: PREMIUM QUALITY, AFFORDABLE PRICE!

Our new CableLink Battery Terminals are manufactured to the most stringent standards, yet will not blow the budget. They are the perfect complement to our innovative CableLink soldering system. Look for these features:

- **Color-Coded Crimp Barrels** for easy identification of the correct cable size and crimp nest
- **Quality Electro-Tin Plating** extends the life of the terminal
- **Raised Lettering** is easy to read and helps to prevent cross polarity problems that can shut down your electrical system
- **Uniform Copper Thickness** assures solid contact
- **131 Contact Copper Material** increases ductility & conductivity for crimping ease and maximum current flow
- **Deep Chamfer & Machined Barrels** make insertion of a cable a breeze
- **Perfectly Machined & Aligned Bolt Holes** allow for fast, trouble-free installation of bolts
- **Made in the U.S.A.**



CABLELINK STRAIGHT BATTERY TERMINALS

Part #	Pkg Qty	Wire Gauge	Polarity	Color Code
CLBT-6U	10	6	universal	grey
CLBT-4U	10	4	universal	grey
CLBT-4P	10	4	positive	grey
CLBT-4N	10	4	negative	grey
CLBT-1/P	10	2-1	positive	pink
CLBT-1/N	10	2-1	negative	pink
CLBT-1/OP	10	1/0	positive	black
CLBT-1/ON	10	1/0	negative	black
CLBT-2/OP	10	2/0	positive	orange
CLBT-2/ON	10	2/0	negative	orange
CLBT-3/OP	10	3/0	positive	purple
CLBT-3/ON	10	3/0	negative	purple
CLBT-4/OP	10	4/0	positive	yellow
CLBT-4/ON	10	4/0	negative	yellow



CABLELINK FLAG BATTERY TERMINALS

Part #	Pkg Qty	Wire Gauge	Polarity	Color Code
CLFT-1/OP	10	1/0	positive	black
CLFT-1/ON	10	1/0	negative	black
CLFT-2/OP	10	2/0	positive	orange
CLFT-2/ON	10	2/0	negative	orange
CLFT-3/OP	10	3/0	positive	purple
CLFT-3/ON	10	3/0	negative	purple

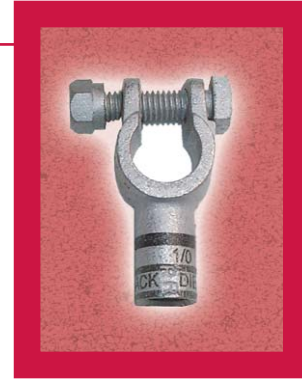


CABLELINK ASSORTMENTS

Maintenance Assortments - NSPA-1186 • NSPA-1083 • NSPA-1084

T&B STRAIGHT BATTERY TERMINALS

Part #	Pkg Qty	Wire Gauge	Polarity	Color Code
BAC-4SU	10	4	universal	grey
BAC-2SU	10	2	universal	green
BAC-1SU	10	1	universal	pink
BAC-10SP	10	1/0	positive	black
BAC-10SN	10	1/0	negative	black
BAC-20SP	10	2/0	positive	orange
BAC-20SN	10	2/0	negative	orange
BAC-30SP	10	3/0	positive	purple
BAC-30SN	10	3/0	negative	purple
BAC-40SU	10	4/0	universal	yellow



THOMAS & BETTS BATTERY TERMINAL ASSORTMENTS

Maintenance Assortments - NSPA-1084 • NSPA-1083 • NSPA-1198

MARINE BATTERY TERMINALS

CAST BRASS CONSTRUCTION

Part #	Pkg Qty	Stud Size	Polarity
MT-516N	10	5/16"	negative
MT-38P	10	3/8"	positive



EMERGENCY TYPE BATTERY CABLE TERMINALS

CAST LEAD • HEAVY DUTY

Part #	Pkg Qty	Wire Gauge	Polarity	Post Type
EBT-838U	5	6 - 2/0	universal	side mount
EBT-880U	5	6 - 2/0	universal	top mount
EBT-890U	5	1 - 4/0	universal	top mount



MISCELLANEOUS BATTERY & CABLE ACCESSORIES

SIDE MOUNT BOLTS

Part #	Pkg Qty	Description
BA-SMS-1	10	OEM



SIDE MOUNT TO POST CONVERSION TERMINALS

ALLOWS USE OF POST-TYPE BATTERY TERMINALS ON SIDE MOUNT BATTERIES • CAST LEAD • RAISED LETTERING IDENTIFIES POLARITY

Part #	Pkg Qty	Description
BA-SMC-P	10	positive
BA-SMC-N	10	negative



TOP MOUNT NUTS

Part #	Pkg Qty	Description
BA-TMN	10	stainless steel



BATTERY BOLTS AND NUTS

ZINC PLATED

Part #	Pkg Qty	Thread	Length	Description
BA-800	50	5/16"-18	1-1/4"	bolt
BA-802	50	5/16"-18		nut



BATTERY CORROSION GUARD

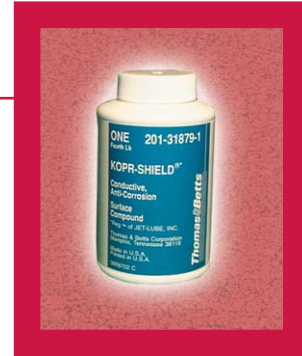
Simply apply Battery Corrosion Guard to corroded parts and corrosion will disappear! • Battery Corrosion Guard hardens in a few days to form a thin, transparent rubberlike film that carries its own acid neutralizer • It does not leave a sticky residue

Part #	Pkg Qty	Description
BA-BCG-1	1	3 oz. jar



KOPR-SHIELD CONDUCTIVE ANTI-SEIZE COMPOUND

Part #	Pkg Qty	Description
BA-CP4	1	4 oz. can with brush





WIRE & CABLE

BATTERY CABLE FEATURES

USE COLOR-CODED BATTERY CABLE FOR THESE REASONS:

- Quick & easy identification of the cable gauge is provided
- Color coding matches the cable to the connector & crimper
- The color stripe helps you measure the length of your cable

HOW TO MATCH CABLE & EQUIPMENT

Type of Equipment	Typical Wire Ga.
Garden Tractor	8,6,4
Compact Car, RV	6,4
Standard Car	4,2
Full-size Car, Van	2,1
Tractor, Light Truck, Construction	1/0
HD Tractor, Truck, Bus, Construction	2/0, 3/0
Extra Heavy Duty	4/0, 250 MCM



YOU NEED BOTH RED & BLACK CABLE. HERE'S WHY: The generally accepted industry practice is to use black insulated cable for negative (ground) wires & red insulated cable for positive wires. By using both black & red cable, your wiring system will be easier to install & trouble-shoot.

PREMIUM COLOR-CODED BATTERY CABLE

Meets SAE J1127 specifications • Color coded for easy wire gauge identification
Available in both red and black 25 foot rolls

Part #	Cable Color	Wire Gauge	Color Code	Length
BC-6-25	black	6	gray	25'
BC-6-25R	red	6	gray	25'
BC-4-25	black	4	gray	25'
BC-4-25R	red	4	gray	25'
BC-2-25	black	2	green	25'
BC-2-25R	red	2	green	25'
BC-1-25	black	1	pink	25'
BC-1-25R	red	1	pink	25'
BC10-25	black	1/0	black	25'
BC10-25R	red	1/0	black	25'
BC20-25	black	2/0	orange	25'
BC20-25R	red	2/0	orange	25'
BC30-25	black	3/0	purple	25'
BC30-25R	red	3/0	purple	25'
BC40-25	black	4/0	yellow	25'
BC40-25R	red	4/0	yellow	25'



ECONOMICAL BATTERY CABLE

105°C starter cable is available in both red and black 100 foot rolls
Recommended for buses, trucks, and marine applications

Part #	Cable Color	Wire Gauge	Length
SC-6-100	black	6	100'
SC-6-100R	red	6	100'
SC-4-100	black	4	100'
SC-4-100R	red	4	100'
SC-2-100	black	2	100'
SC-2-100R	red	2	100'
SC-1-100	black	1	100'
SC-1-100R	red	1	100'
SC10-100	black	1/0	100'
SC10-100R	red	1/0	100'
SC20-100	black	2/0	100'
SC20-100R	red	2/0	100'





WHEN THE HEAT IS ON - USE CROSS-LINKED WIRE!

When faced with wiring in hot, abrasive environments, there is no better problem-solver than cross-linked wire. This high quality wire is insulated with cross-linked polyethylene that can withstand heat up to 125°C. This far exceeds the heat resistance of standard plastic primary wire. To top it off, cross-linked is a much tougher insulation, providing superior protection against abrasion. There are many applications:

- Passenger cars
- Trucks
- Tractors
- Off-Road vehicles

S.A.E. TYPE SXL CROSS-LINKED PRIMARY WIRE

Chemically cross-linked polyethylene • Vulcanized to obtain a thermosetting which does not melt when exposed to heat after the vulcanizing process • high heat resistance of 350°C • Weatherproof
Meets SAE 1128 type SXL specification

Pkg Qty	Length	Color	PART NUMBERS			
			20 Gauge	18 Gauge	16 Gauge	14 Gauge
1	100 ft	red	SXL-20-R	SXL-18-R	SXL-16-R	SXL-14-R
1	100 ft	blue	SXL-20-B	SXL-18-B	SXL-16-B	SXL-14-B
1	100 ft	white	SXL-20-W	SXL-18-W	SXL-16-W	SXL-14-W
1	100 ft	black	SXL-20-BX	SXL-18-BX	SXL-16-BX	SXL-14-BX
1	100 ft	green	SXL-20-G	SXL-18-G	SXL-16-G	SXL-14-G
1	100 ft	yellow	SXL-20-Y	SXL-18-Y	SXL-16-Y	SXL-14-Y
1	100 ft	brown	SXL-20-BR	SXL-18-BR	SXL-16-BR	SXL-14-BR
1	100 ft	orange	SXL-20-O	SXL-18-O	SXL-16-O	

Pkg Qty	Length	Color	PART NUMBERS		
			12 Gauge	10 Gauge	8 Gauge
1	100 ft	red	SXL-12-R	SXL-10-R	SXL-8-R
1	100 ft	blue	SXL-12-B	SXL-10-B	SXL-8-B
1	100 ft	white	SXL-12-W	SXL-10-W	SXL-8-W
1	100 ft	black	SXL-12-BX	SXL-10-BX	SXL-8-BX
1	100 ft	green	SXL-12-G	SXL-10-G	SXL-8-G
1	100 ft	yellow	SXL-12-Y	SXL-10-Y	SXL-8-Y
1	100 ft	brown	SXL-12-BR	SXL-10-BR	SXL-8-BR
1	100 ft	orange	SXL-12-O	SXL-10-O	SXL-8-O



SAE TYPE GPT PLASTIC PRIMARY WIRE

STRANDED FLEXIBLE COPPER CONDUCTOR WITH RUGGED PVC INSULATION • RESISTS ACID, OIL, HEAT AND MOISTURE • FREE STRIPPING WITH GOOD ABRASION RESISTANCE • GOOD FOR GENERAL SERVICE • MEETS SAE 1128 TYPE G.P.T. SPECIFICATION • RATED FOR 105° C

Pkg Qty	Length	Color	Part Numbers			
			22 Gauge	20 Gauge	18 Gauge	16 Gauge
1	100 ft	red	GPT-22-R	GPT-20-R	GPT-18-R	GPT-16-R
1	100 ft	blue	GPT-22-B	GPT-20-B	GPT-18-B	GPT-16-B
1	100 ft	white	GPT-22-W	GPT-20-W	GPT-18-W	GPT-16-W
1	100 ft	black	GPT-22-BX	GPT-20-BX	GPT-18-BX	GPT-16-BX
1	100 ft	green	GPT-22-G	GPT-20-G	GPT-18-G	GPT-16-G
1	100 ft	yellow	GPT-22-Y	GPT-20-Y	GPT-18-Y	GPT-16-Y



Pkg Qty	Length	Color	Part Numbers			
			14 Gauge	12 Gauge	10 Gauge	8 Gauge
1	100 ft	red	GPT-14-R	GPT-12-R	GPT-10-R	GPT-8-R
1	100 ft	blue	GPT-14-B	GPT-12-B	GPT-10-B	GPT-8-B
1	100 ft	white	GPT-14-W	GPT-12-W	GPT-10-W	GPT-8-W
1	100 ft	black	GPT-14-BX	GPT-12-BX	GPT-10-BX	GPT-8-BX
1	100 ft	green	GPT-14-G	GPT-12-G	GPT-10-G	GPT-8-G
1	100 ft	yellow	GPT-14-Y	GPT-12-Y	GPT-10-Y	GPT-8-Y

PLASTIC BONDED PARALLEL PRIMARY WIRE

MULTI-CONDUCTOR PARALLEL PVC PRIMARY WITH WIRE COLOR CODED CONDUCTORS • IDEAL FOR MULTI-CIRCUIT TERMINATING IN A AREA • STRANDED COPPER CONDUCTORS

Part #	Pkg Qty	Length	Wire Gauge	Conductors	Conductor Colors
PVC-18-2	1	100 ft	18	2	red-black
PVC-18-3	1	100 ft	18	3	yellow-brown-green
PVC-16-2	1	100 ft	16	2	red-black
PVC-14-2	1	100 ft	14	2	red-black
PVC-14-3	1	100 ft	14	3	yellow-brown-green
PVC-14-4	1	100 ft	14	4	yellow-brown-green-white



JACKETED MULTIPLE CONDUCTOR PLASTIC PRIMARY WIRE

HEAVY DUTY GREY PVC JACKET WITH BLACK & WHITE JACKETED CONDUCTORS OF STRANDED COPPER WIRE • HIGHLY RESISTANT TO WEATHER, WATER, OIL, GREASE & ACIDS • ESPECIALLY RECOMMENDED FOR MARINE, AUTOMOTIVE & GENERAL USE

Part #	Pkg Qty	Length	Wire Gauge	Conductors	Conductor Colors
PVC-18-2J	1	100 ft	18	2	black-white
PVC-16-2J	1	100 ft	16	2	black-white
PVC-14-2J	1	100 ft	14	2	black-white



SAE TYPE GPTM MARINE PLASTIC PRIMARY WIRE

STRANDED FLEXIBLE COPPER CONDUCTOR • TINNED WIRE STRANDS • RUGGED PVC INSULATION
 RESISTS ACID, OIL, HEAT & MOISTURE • FREE STRIPPING • GOOD ABRASION RESISTANCE •
 MEETS SAE J1128 & SAE J378 • TYPE GPTM • RATED FOR 105°C



Pkg Qty	Length	Color	PART NUMBERS	
			18 Gauge	16 Gauge
1	100 ft	red	GPTM-18-R	GPTM-16-R
1	100 ft	blue	GPTM-18-B	GPTM-16-B
1	100 ft	white	GPTM-18-W	GPTM-16-W
1	100 ft	black	GPTM-18-BX	GPTM-16-BX
1	100 ft	green	GPTM-18-G	GPTM-16-G
1	100 ft	yellow	GPTM-18-Y	GPTM-16-Y

Pkg Qty	Length	Color	PART NUMBERS			
			14 Gauge	12 Gauge	10 Gauge	8 Gauge
1	100 ft	red	GPTM-14-R	GPTM-12-R	GPTM-10-R	GPTM-8-R
1	100 ft	blue	GPTM-14-B	GPTM-12-B	GPTM-10-B	GPTM-8-B
1	100 ft	white	GPTM-14-W	GPTM-12-W	GPTM-10-W	GPTM-8-W
1	100 ft	black	GPTM-14-BX	GPTM-12-BX	GPTM-10-BX	GPTM-8-BX
1	100 ft	green	GPTM-14-G	GPTM-12-G	GPTM-10-G	GPTM-8-G
1	100 ft	yellow	GPTM-14-Y	GPTM-12-Y	GPTM-10-Y	GPTM-8-Y

MECHANICS WIRE

SOFT ANNEALED

Part #	Pkg Qty	Ft/Spool	Description	Wire GA
MW-18-M	1	830'	5 lb spool	18
MW-16-M	1	480'	5 lb spool	16
MW-14-M	1	295'	5 lb spool	14



SOLDER

TIN/LEAD ACID CORE SOLDER

MEETING TEMPERATURE IS 460°F • ACID FLUX CORE • 40 % TIN & 60% LEAD • USE FOR NON-ELECTRICAL APPLICATIONS: TOOLS, RADIATORS, GENERAL AUTOMOTIVE, SHEET METAL, ETC.

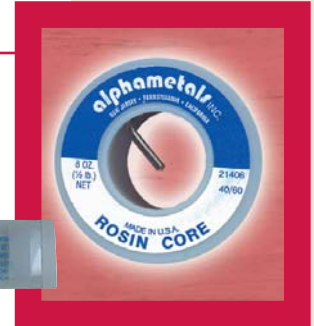
Part #	Pkg Qty	Wire Dia.	Description
S-340AC	1	.062"	.90 oz. tube (9ft.)
S-350AC	1	.093"	1/2 lb. spool



TIN/LEAD ROSIN CORE SOLDER

MEETING TEMPERATURE IS 460°F • ROSIN FLUX CORE • 40 % TIN & 60% LEAD • USE FOR MANY ELECTRICAL APPLICATIONS: WIRING, MOTORS, RADIOS, TVS, VCRS, STEREOS, ETC.

Part #	Pkg Qty	Wire Dia.	Description
S-340RC	1	.062"	.90 oz. tube (9ft.)
S-350RC	1	.093"	1/2 lb. spool



SILVER-BEARING LEAD-FREE ACID CORE SOLDER

MEETING TEMPERATURE IS 430°F • ACID FLUX CORE • CADMIUM, ZINC, ANTIMONY & LEAD FREE • HIGH LUSTURE • COLOR MATCH ON STAINLESS STEEL • NON-ELECTRICAL APPLICATIONS

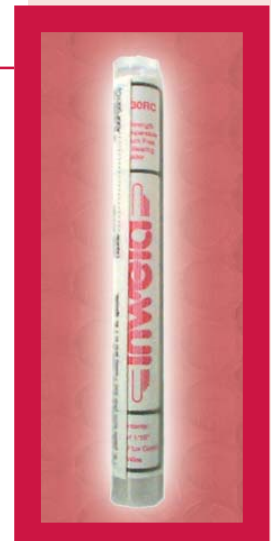
Part #	Pkg Qty	Wire Dia.	Description
S-330AC	1	.062"	.90 oz. tube (9ft.)



SILVER-BEARING LEAD-FREE ROSIN CORE SOLDER

MEETING TEMPERATURE IS 430°F • ROSIN FLUX CORE • CADMIUM, ZINC, ANTIMONY & LEAD FREE • HIGH LUSTURE • COLOR MATCH ON STAINLESS STEEL • ELECTRICAL APPLICATIONS

Part #	Pkg Qty	Wire Dia.	Description
S-330RC	1	.062"	.90 oz. tube (9ft.)

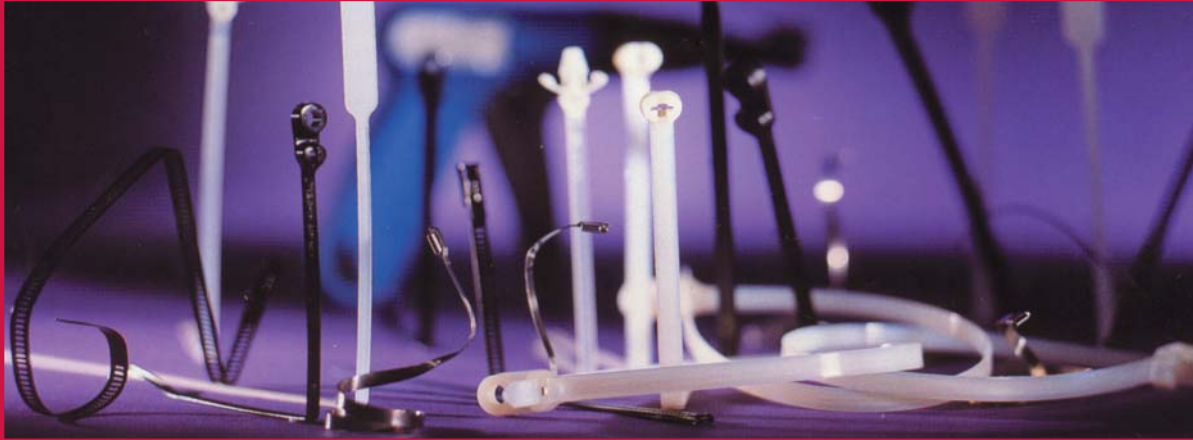


CABLE TIES

Thomas & Betts

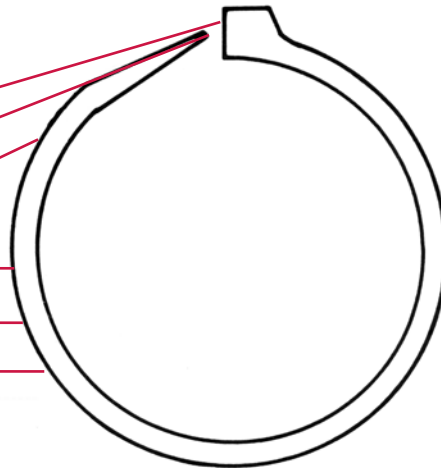


CABLE TIE FEATURES



CABLE TIE FEATURES

- Low profile head. Looks good—won't snag.
- Stainless steel lock. Maintains right tension.
- Easy to install, won't slip. Mechanic's grip.
- Infinitely adjustable design. Always the "right" size.
- Smooth molded body. Won't cut into insulation.
- Ribbed and stippled back. Won't slip on bundle.



- **SMOOTH BODY DESIGN** with smooth rounded edges and uniform cross sections. They have no notches, thereby reducing stress areas that can weaken the tie and cause brittle breakage, especially in cold temperature conditions. The smooth design also avoids damage to cable insulation.
- **STAINLESS STEEL LOCKING DEVICE** in the head. This means they are infinitely adjustable within their bundle range. You get the right bundle tightness every time. Corrosion resistant type 316 stainless steel.



STANDARD TY-RAP CABLE TIES

*BLACK CABLE TIES ARE OUTDOOR TYPE MADE OF WEATHER STABILIZED NYLON MIL-5-23190 (TYPE 1, CLASS 1)



Part #	Pkg Qty	Bundle Range	Tensile Strength	Width	Length	Color
TY23M	100	1/16" to 5/8"	18 lbs	.094"	3.62"	natural
TY23MX*	100	1/16" to 5/8"	18 lbs	.094"	3.62"	black
TY2315M	100	1/16" to 1.5"	18 lbs	.094"	7.00"	natural
TY232M	100	1/16" to 2"	18 lbs	.094"	8.00"	natural
TY232MX*	100	1/16" to 2"	18 lbs	.094"	8.00"	black
TY234M	100	1/16" to 4"	18 lbs	.094"	14.00"	natural
TY24M	100	1/16" to 1.25"	30 lbs	.140"	5.50"	natural
TY24MX*	100	1/16" to 1.25"	30 lbs	.140"	5.50"	black
TY242M	100	1/16" to 2"	40 lbs	.140"	8.19"	natural
TY242MX*	100	1/16" to 2"	40 lbs	.140"	8.19"	black
TY26M	100	1/16" to 3"	40 lbs	.140"	11.08"	natural
TY26MX*	100	1/16" to 3"	40 lbs	.140"	11.08"	black
TY244M	100	1/16" to 4"	40 lbs	.140"	14.50"	natural
TY244MX*	100	1/16" to 4"	40 lbs	.140"	14.50"	black
TY25M	100	1/16" to 1.75"	50 lbs	.184"	7.31"	natural
TY25MX*	100	1/16" to 1.75"	50 lbs	.184"	7.31"	black
TY253M	100	1/16" to 3"	50 lbs	.184"	11.41"	natural
TY253MX*	100	1/16" to 3"	50 lbs	.184"	11.41"	black
TY28M	100	1/16" to 4"	50 lbs	.184"	14.19"	natural
TY28MX*	100	1/16" to 4"	50 lbs	.184"	14.19"	black
TY272M	100	3/16" to 2"	120 lbs	.301"	8.00"	natural
TY272MX*	100	3/16" to 2"	120 lbs	.301"	8.00"	black
TY27M	50	3/16" to 3.5"	120 lbs	.301"	13.38"	natural
TY27MX*	50	3/16" to 3.5"	120 lbs	.301"	13.38"	black
TY29M	50	1/2" to 9"	120 lbs	.301"	30"	natural
TY29MX	50	1/2" to 9"	120 lbs	.301"	30"	black

THOMAS & BETTS CABLE TIE ASSORTMENTS
 Starter Assortment - NSPA-5006 • Maintenance Assortments - NSPA-1006



COLORED TY RAP CABLE TIES

Part #	Pkg Qty	Bundle Range	Tensile Strength	Width	Length	Color
TY25M-R	100	1/16" to 1.75"	50 lbs	.184"	7.31"	red
TY25M-G	100	1/16" to 1.75"	50 lbs	.184"	7.31"	green
TY25M-Y	100	1/16" to 1.75"	50 lbs	.184"	7.31"	yellow
TY25M-B	100	1/16" to 1.75"	50 lbs	.184"	7.31"	blue
TY25M-OR	100	1/16" to 1.75"	50 lbs	.184"	7.31"	orange



MOUNTING TY-RAP CABLE TIES

BLACK CABLE TIES ARE OUTDOOR TYPE MADE OF WEATHER STABILIZED NYLON

SCREW MOUNT

Part#	Pkg Qty	Screw Size	Bundle Range	Tensile Strength	Width	Length	Color
TY33M	100	#4	1/16" to 5/8"	18 lbs	.091"	4"	natural
TY33MX*	100	#4	1/16" to 5/8"	18 lbs	.091"	4"	black
TY34M	100	#8	1/16" to 1-1/8"	40 lbs	.140"	6"	natural
TY635M	100	#6	1/16" to 1-3/4"	50 lbs	.184"	7.81"	natural
TY35M	100	#10	1/16" to 1-3/4"	50 lbs	.184"	7.81"	natural
TY354M	100	#10	1/16" to 4"	50 lbs	.184"	14.6"	natural
TY37M	50	1/4"	3/16" to 3-1/2"	120 lbs	.301"	13.93"	natural
TY37MX*	50	1/4"	3/16" to 3-1/2"	120 lbs	.301"	13.93"	black



HOLE MOUNT

Part#	Pkg Qty	Hole Size	Bundle Range	Tensile Strength	Width	Length	Color
TY554M	100	3/16"	1/16" to 1-1/4"	40 lbs	.140"	5.96"	natural
TY38M	100	1/4"	1/16" to 1-3/4"	50 lbs	.184"	7.78"	natural



TY-RAP CABLE TIES

Part#	Pkg Qty	Marking Pad Size	Bundle Range	Tensile Strength	Width	Length	Color
TY46M	100	1/2" x 7/8"	3/8" to 1-3/4"	50 lbs.	.184"	7.25"	natural
TY48M	100	1/2" x 2-1/8"	3/4" to 4"	50 lbs.	.184"	14.18"	natural



TY-RAP UNIVERSAL CLAMP

Part #	Pkg Qty	Hole Size	Max. Bundle Dia.	Tensile Strength	Length	Color
TY54407X	50	.32"-.68"	2.37"	65 lbs	.96"	black



TY-RAP HANGER STRAPS

BLACK NYLON STRAP WITH ZINC PLATED STEEL BRACKET

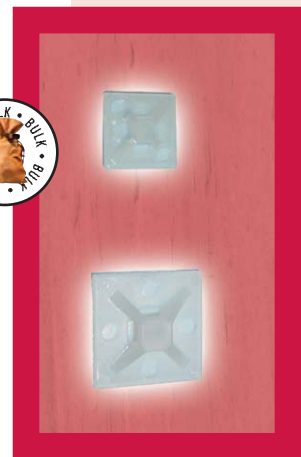
Part #	Pkg Qty	Max. Bundle Dia.	Tensile Strength	Length	Width	Color
TY54407X	50	2.00"	200 lbs	6.36"	.500"	black
TY54413X	25	4.00"	200 lbs	13.75"	.500"	black



MOUNTING BASES

Adhesive back with two screw holes

Part #	Pkg Qty	Base Size	Screw Size	Maximum Tie Width	Color
TC344A	50	.75" x .75"	#4	.140"	natural
TC345A	50	1.125 x 1.125"	#8	.184"	natural





LOW-PROFILE & STANDARD HEAD CABLE TIES

LOW-PROFILE & HEAD CABLE TIES

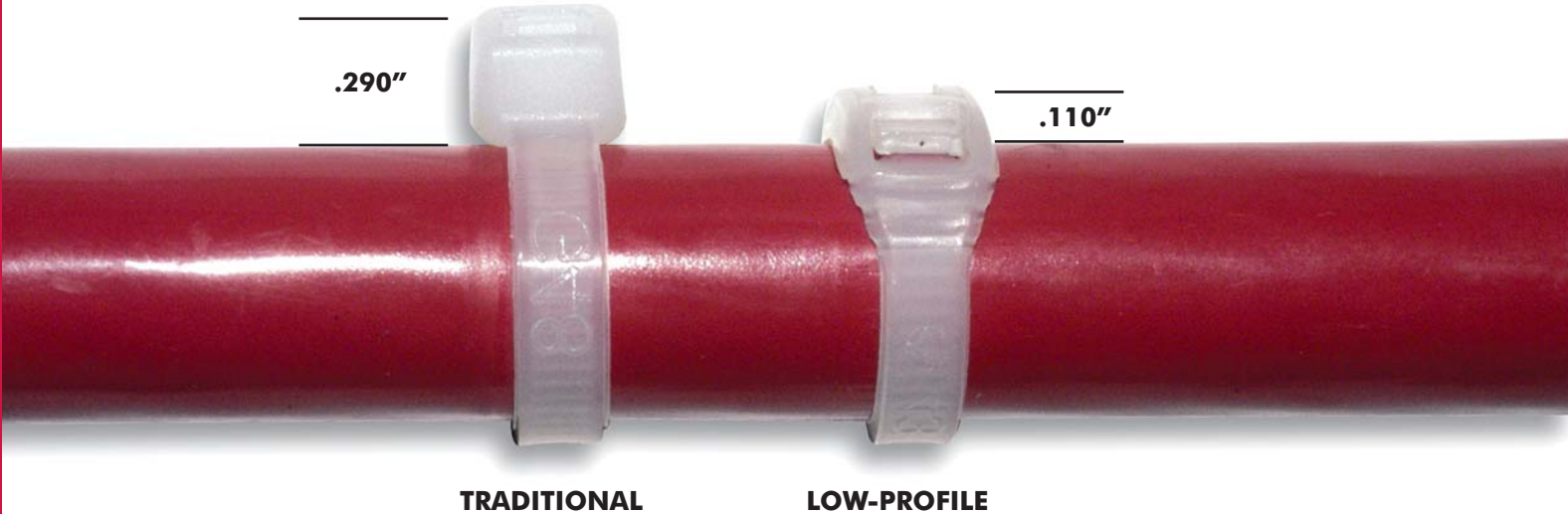
LOW PROFILE CABLE TIES ARE "SAFER" BY DESIGN WITH A POCKET THAT CAPTURES THE TRIMMED STUB THE LOW PROFILE TIES PRESENT A SMOOTH "NO BUMP...NO BARB" SILHOUETTE WHICH IS ATTRACTIVE, FUNCTIONAL AND USER FRIENDLY.

Part #	Pkg Qty	Description
CTLP400	100	7" 50 LB Natural
CTLP400B	100	7" 50 LB UV Black
CTLP600	100	14" 50 LB Natural
CTLP600B	100	14" 50 LB UV Black
CTLP700	100	14" 120 LB Natural
CTLP700B	100	14" 120 LB UV Black

- Ultra low profile / no bump - no barb
- Application tools: industry standard
- Underside latch gives longer life
- Top head grooves aid tensioning
- Flexing head conforms to bundle
- UL/CSA listed / QPL approved
- Protected by two US patents



NO BUMP ... NO BARB



ALL-PLASTIC CABLE TIES

STANDARD CABLE TIES ARE MOLDED ONE-PIECE TIES AVAILABLE IN HIGH QUALITY STANDARD NATURAL AND BLACK NYLON

Part #	Pkg Qty	Bundle Range	Length	Width	Tensile Strength	Color
CT100	100	1/16"-7/8"	4"	.10"	18 lbs	natural
CT100B	100	1/16"-7/8"	4"	.10"	18 lbs	black
CT200	100	1/16"-7/8"	5 3/4"	.14"	40 lbs	natural
CT200B	100	1/16"-7/8"	5 3/4"	.14"	40 lbs	black
CT400	100	1/16"-1 7/8"	7 1/2"	.19"	50 lbs	natural
CT400B	100	1/16"-1 7/8"	7 1/2"	.19"	50 lbs	black
CT500	100	1/16"-3 1/16"	11 1/4"	.19"	50 lbs	natural
CT500B	100	1/16"-3 1/16"	11 1/4"	.19"	50 lbs	black
CT600	100	1/16"-4 1/8"	14 1/2"	.19"	50 lbs	natural
CT600B	100	1/16"-4 1/8"	14 1/2"	.19"	50 lbs	black
CT700	100	1/16"-4 1/16"	15"	.30"	120 lbs	natural
CT700B	100	1/16"-4 1/16"	15"	.30"	120 lbs	black



HEAVY DUTY ALL-PLASTIC CABLE TIES

Part #	Pkg Qty	Bundle Range	Tensile Strength	Width	Length	Color
CT1100	25	3/16"-7 3/16"	175 lbs	.345"	24"	natural
CT1100B	25	3/16"-7 3/16"	175 lbs	.345"	24"	black
CT1200	25	3/16"-11"	175 lbs	.345"	36"	natural
CT1200B	25	3/16"-11"	175 lbs	.345"	36"	black
CT1300	25	3/16"-15"	175 lbs.	.345"	48"	natural



SCREW MOUNT ALL-PLASTIC CABLE TIES

SCREW MOUNT CABLE TIES ARE MADE OF THE SAME HIGH QUALITY STANDARD NATURAL AND BLACK NYLON AS THE STANDARD TIES WITH A CONVENIENT HOLE FOR SCREW MOUNTING.

Part #	Pkg Qty	Screw Size	Bundle Range	Tensile Strength	Width	Length	Color
CT800	100	#10	1/16"-1 3/4"	50 lbs	.178"	8"	natural
CT800B	100	#10	1/16"-1 3/4"	50 lbs	.178"	8"	black
CT900	100	#10	1/16"-4"	50 lbs	.190"	16"	natural
CT900B	100	#10	1-16"-4"	50 lbs	.190"	16"	black



RELEASABLE ALL-PLASTIC CABLE TIES

THESE CABLE TIES HAVE A RELEASE MECHANISM MAKING THEM REUSABLE

Part #	Pkg Qty	Bundle Range	Tensile Strength	Width	Length	Color
CT1500	100	1/8"-1 1/4"	50 lbs	.298"	6"	natural
CT1500B	100	1/8"-1 1/4"	50 lbs	.298"	6"	black
CT1600	100	1/8"-3"	50 lbs	.298"	11.75"	natural
CT1600B	100	1/8"-3"	50 lbs	.298"	11.75"	black



ALL-PLASTIC CABLE TIE MOUNTING BASE

ADHESIVE BACKED • NATURAL NYLON

Part #	Pkg Qty	Base Size	Max Tie Width	Color
CTMB-1	50	.75" x .75"	.200"	natural
CTMB-2	50	1" X 1"	.200"	natural



WIRE CONDUIT & CLIPS

SPIRAL WRAP

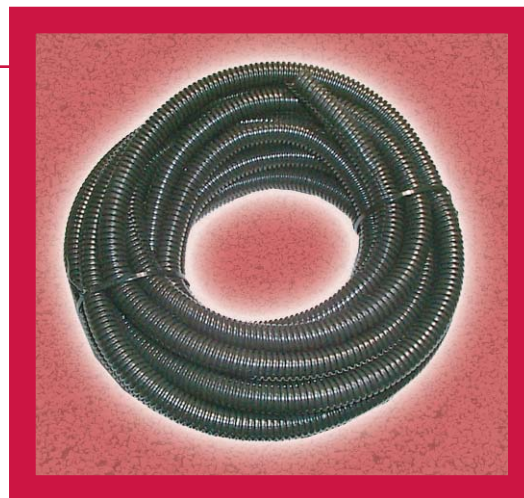
SPIRAL WRAP IS AN EXPANDABLE CABLE HARNESS FOR BUNDLING WIRES, CABLES, HOSES AND TUBING FIRMLY YET FLEXIBLY • IT WRAPS ON LIKE TAPE BUT CAN BE REUSED QUICKLY AND SIMPLY • IT ALLOWS WIRE AND HOSE BREAKOUTS IN ANY CONFIGURATION AND ALLOWS EASY REROUTING OF NEW OR REPLACEMENT WIRES • AVAILABLE IN BLACK POLYETHELENE

Part #	Pkg Qty	Size
HT3/8	25 ft	3/8"
HT1/2	25 ft	1/2"
HT3/4	25 ft	3/4"



CONVOLUTED TUBING

Part #	Pkg Qty	Size
CVT-1	25 ft	1/4"
CVT-2	25 ft	3/8"
CVT-3	25 ft	1/2"
CVT-4	25 ft	5/8"
CVT-5	25 ft	3/4"
CVT-6	25 ft	1"



DIPPED WIRE LOOM CLIPS

CLOSED TYPE • STEEL • ZINC PLATED WITH DIPPED BLACK VINYL CUSHION



Part #	Pkg Qty	Maximum Clip Range	Bolt Size	Part #	Pkg Qty	Maximum Clip Range	Bolt Size
WLDL-1/4	50	1/4"	3/8"	WLDS-1/4	50	1/4"	1/4"
WLDL-3/8	50	3/8"	3/8"	WLDS-3/8	50	3/8"	1/4"
WLDL-1/2	50	1/2"	3/8"	WLDS-1/2	50	1/2"	1/4"
WLDL-5/8	25	5/8"	3/8"	WLDS-5/8	25	5/8"	1/4"
WLDL-3/4	25	3/4"	3/8"	WLDS-3/4	25	3/4"	1/4"
WLDL-1	25	1"	3/8"	WLDS-1	25	1"	1/4"
WLDL-1-1/8	25	1-1/8"	3/8"	WLDS-1-1/8	25	1-1/8"	1/4"
WLDL-1-1/4	10	1-1/4"	3/8"	WLDS-1-1/4	10	1-1/4"	1/4"
WLDL-1-3/8	10	1-3/8"	3/8"	WLDS-1-3/8	10	1-3/8"	1/4"
WLDL-1-1/2	10	1-1/2"	3/8"	WLDS-1-1/2	10	1-1/2"	1/4"



DIPPED WIRE LOOM CLIP ASSORTMENTS
Maintenance Assortments - NSPA-1005

PADDED WIRE LOOM CLIPS

CLOSED TYPE • STEEL • ZINC PLATED WITH BLACK RUBBER CUSHION



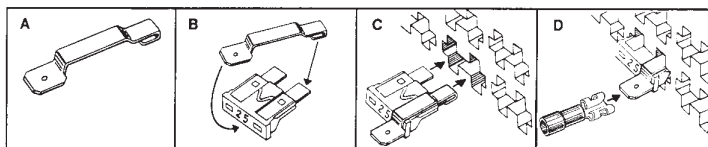
Part #	Pkg Qty	Maximum Clip Range	Bolt Size	Part #	Pkg Qty	Maximum Clip Range	Bolt Size
WLPL-1/4	50	1/4"	3/8"	WLPS-1/4	50	1/4"	1/4"
WLPL-3/8	50	3/8"	3/8"	WLPS-3/8	50	3/8"	1/4"
WLPL-1/2	50	1/2"	3/8"	WLPS-1/2	50	1/2"	1/4"
WLPL-5/8	25	5/8"	3/8"	WLPS-5/8	25	5/8"	1/4"
WLPL-3/4	25	3/4"	3/8"	WLPS-3/4	25	3/4"	1/4"
WLPL-1	25	1"	3/8"	WLPS-1	25	1"	1/4"
WLPL-1-1/8	25	1-1/8"	3/8"	WLPS-1-1/8	25	1-1/8"	1/4"
WLPL-1-1/4	10	1-1/4"	3/8"	WLPS-1-1/4	10	1-1/4"	1/4"
WLPL-1-3/8	10	1-3/8"	3/8"	WLPS-1-3/8	10	1-3/8"	1/4"
WLPL-1-1/2	10	1-1/2"	3/8"	WLPS-1-1/2	10	1-1/2"	1/4"



PADDED WIRE LOOM CLIP ASSORTMENTS
Maintenance Assortments - NSPA-1200

FUSE TAPS

Part #	Pkg Qty	Tab Width	Description
WTS-9-0000	50	.250"	Allows .250" female take off from most glass fuse blocks.
WTS-9-0003	50	.250"	Allows .250" female take off from blade type fuses.
WTS-9-0004	50	.187"	Allows .187" take off from MiniFuses.



FUSES



SMART GLOW™ FUSES

The Smart Glow Fuse line of products provides an innovative “step-up” for this automotive electronic category. When a vehicle is equipped with Smart Glow Fuses and a circuit short or surge occurs, a light atop the fuse immediately indicates which fuse needs replacing. A fuse that “glows when it blows” is an innovative alternative to old-fashioned fuses that leave consumers guessing. It saves time and effort and eliminates guesswork and testing.

Meets OEM Specifications

Smart Glow Fuses are built to exacting OEM specifications, only better. The color-coded fuses instantly let customers know the right amperage of the fuses to be replaced. Smart Glow Fuses snaps into place without the use of special tools and provide easy identification of blown fuses in hard-to-reach locations. Smart Glow Fuse is the intelligent choice.

Replaces Standard Amperage and Fuse Sizes

Smart Glow Fuses fit any automobile, recreational vehicle or SUV requiring large, small or maxi blade fuses. Amperages are available for virtually every application.

Part #	Pkg Qty	Description	AMP Rating	Color
GLO-9104	10	ATO	10	red
GLO-9105	10	ATO	15	blue
GLO-9106	10	ATO	20	yellow
GLO-9107	10	ATO	25	clear
GLO-9108	10	ATO	30	green
GLO-91100	10	MIN	10	red
GLO-91150	10	MIN	15	blue
GLO-91200	10	MIN	20	yellow
GLO-91250	10	MIN	25	clear
GLO-91300	10	MIN	30	green



GLASS TUBE AND CERAMIC FUSES

- AG** Standard all-glass fuses
- GBC** Torpedo-type ceramic fuses that can currently be found in European cars
- SFE** Glass fuses designed by Society of Fuse Engineers
They are 1/4" in diameter, and vary in length according to ampere rating

Part #	Pkg Qty	Prefix/ AMP Rating	Size
9002	5	AGA 2	1/4" x 5/8"
9004	5	AGA 3	1/4" x 5/8"
9005	5	AGA 5	1/4" x 5/8"
9012	5	AGA 30	1/4" x 5/8"
9013	5	AGC 1	1/4" x 1-1/4"
9014	5	AGC 2	1/4" x 1-1/4"
9016	5	AGC 3	1/4" x 1-1/4"
9017	5	AGC 4	1/4" x 1-1/4"
9018	5	AGC 5	1/4" x 1-1/4"
9020	5	AGC 7½	1/4" x 1-1/4"
9021	5	AGC 10	1/4" x 1-1/4"
9022	5	AGC 15	1/4" x 1-1/4"
9023	5	AGC 20	1/4" x 1-1/4"
9024	5	AGC 25	1/4" x 1-1/4"
9025	5	AGC 30	1/4" x 1-1/4"
9045	5	AGW 4	1/4" x 7/8"
9049	5	AGW 15	1/4" x 7/8"
9056	5	AGX 20	1/4" x 1"
9057	5	AGX 25	1/4" x 1"
9058	5	AGX 30	1/4" x 1"
9062	5	GBC 5	1/4" x 31/32"
9063	5	GBC 8	1/4" x 31/32"
9064	5	GBC 16	1/4" x 31/32"
9085	5	SFE 4	1/4" x 5/8"
9086	5	SFE 6	1/4" x 3/4"
9087	5	SFE 7½	1/4" x 7/8"
9088	5	SFE 9	1/4" x 7/8"
9089	5	SFE 14	1/4" x 1-1/16"
9090	5	SFE 20	1/4" x 1-1/4"
9091	5	SFE 30	1/4" x 1-7/16"



PADDED WIRE LOOM CLIP ASSORTMENTS

Mini Kit - NSPA-9018 • Starter Assortment - NSPA-5018 • Maintenance Assortments - NSPA-1018

PAL™ FUSES

PAL (Pacific Auto Link) fuses are replacements for the original equipment fusible links installed in many Domestic and Japanese cars • Capable of withstanding high levels of current and high temperatures for extended periods by matching the fuse's characteristics with the automotive cable's thermal insulation rating

Part #	Pkg Qty	AMP Rating	Terminal Style	Color
9140	1	30	female	pink
9141	1	40	female	green
9142	1	50	female	red
9143	1	60	female	yellow
9144	1	30	male	pink
9145	1	60	male	yellow
9146	1	80	male	black
9147	1	100	male	blue
9148	1	30	bent	pink
9149	1	40	bent	green
9150	1	50	bent	red
9151	1	60	bent	yellow
9152	1	70	bent	brown



ATO® FUSES

The basic components of a blade type fuse are a plastic housing and two blade terminals with a fuse element fabricated from a single piece of metal.

Part #	Pkg Qty	Prefix/AMP Rating	Color
9100	5	ATO 3	violet
9101	5	ATO 4	pink
9102	5	ATO 5	tan
9103	5	ATO 7½	brown
9104	5	ATO 10	red
9105	5	ATO 15	blue
9106	5	ATO 20	yellow
9107	5	ATO 25	clear
9108	5	ATO 30	green



MINI® FUSES

MiniFuses are replacing the ATO because the MiniFuse permits more fuses in the same amount of space • The fuse has a heat-resistant plastic housing to permit location in high temperature environments, such as those in the engine compartment

Part #	Pkg Qty	AMP Rating	Color
91020	5	2	gray
91030	5	3	violet
91040	5	4	pink
91050	5	5	tan
91070	5	7.5	brown
91100	5	10	red
91150	5	15	blue
91200	5	20	yellow
91250	5	25	clear
91300	5	30	green



MAXI™ FUSES

MaxiFuses are what many newer model domestic automobiles will be using to protect wiring systems from damage • Made from the latest technologically advanced materials • MaxiFuses are designed to be installed in multiple quantities in a separate fuse block or blocks on the firewall

Part #	Pkg Qty	AMP Rating	Color
9120	1	20	yellow
9123	1	30	green
9124	1	40	orange
9125	1	50	red
9126	1	60	blue



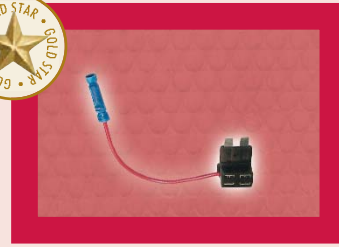
ATO, MINI & MAXI FUSE ASSORTMENTS

Mini Kit - NSPA-9201 • Starter Assortment - NSPA-5201 • Maintenance Assortments - NSPA-1201

AUTOMOTIVE ADD-A-CIRCUITS

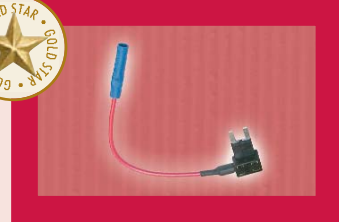
Part #	Pkg Qty	Description
9210	5	ATO® ADD-A-CIRCUIT

- Plugs into an existing fuse holder
- Still protects original circuit, but provides an additional wire lead
- Comes with a butt connector installed to wire lead



Part #	Pkg Qty	Description
9211	5	MINI® ADD-A-CIRCUIT

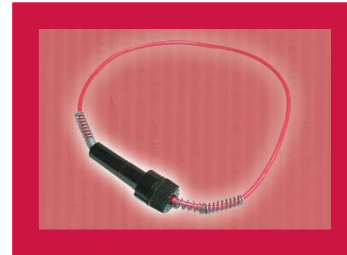
- For use with MINI® Fuses
- Still protects original circuit, but provides an additional wire lead
- Comes with a butt connector installed to wire lead



AUTOMOTIVE IN-LINE FUSEHOLDERS

Part #	Pkg Qty	Description
9200	5	UNIVERSAL IN-LINE FUSEHOLDER

- For all 1/4" diameter fuses 5/8" to 1-1/4" long
- With 15" loop of 14 gauge wire staked & soldered to terminals
- Supplied with 3 springs to accommodate SFE, AGA, AGC & AGX fuses
- Fuse not included



Part #	Pkg Qty	Description
9201	5	HEAVY DUTY 30 AMP IN-LINE FUSEHOLDER

- Supplied with two 4" leads of 12 gauge wire for air conditioner & heater blower motors, including G.M.
- Supplied with 3 springs to accommodate SFE, AGA, AGC & AGX fuses
- 30 AMP fuse included



Part #	Pkg Qty	Description
9202	5	ATO® IN-LINE FUSEHOLDER FOR USE WITH 3, 5, 7-1/2, 10, 15 & 20 AMP FUSES

- Supplied with two 4" leads of 16 gauge black wire
- Fuse not included



AUTOMOTIVE IN-LINE FUSEHOLDERS

Part #	Pkg Qty	Description
9203	5	ATO® IN-LINE/PANEL-MOUNT FUSEHOLDER

- For use with 3, 4, 7-1/2, 10, 15 & 20 AMP Fuses
- In-Line or snap-mount panel applications with interlock body design allowing fuseholder to be snapped together for mounting multiple fuses
- Supplied with 8" loop of 14 gauge black wire
- Fuse not included



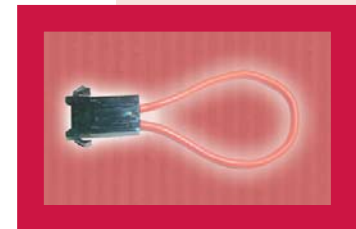
Part #	Pkg Qty	Description
9204	5	ATO® IN-LINE PANEL MOUNT FUSEHOLDER

- Same as above but used with 25 & 30 AMP fuses
- Supplied with 8" loop of 10 gauge orange wire
- Fuse not included



Part #	Pkg Qty	Description
9205	5	HARSH ENVIRONMENT MINI® FUSE IN-LINE FUSEHOLDER

- Use with MIN fuses up to 20 amps
- Supplied with two 4" wire leads of 14 gauge black wire
- Protective cover for harsh environments
- Fuse not included



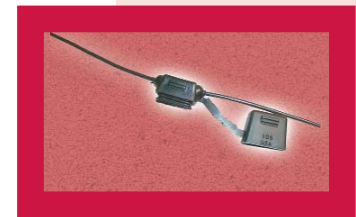
Part #	Pkg Qty	Description
9206	5	HARSH ENVIRONMENT MINI® FUSE HEAVY DUTY IN-LINE FUSEHOLDER

- Use with MIN 25 and MIN 30 amp fuses
- Supplied with two 4" wire leads of 12 gauge orange wire
- Protective cover for harsh environment
- Fuse not included



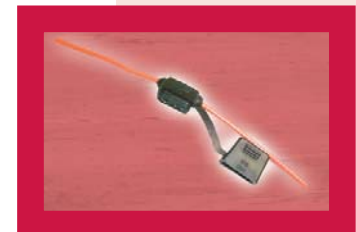
Part #	Pkg Qty	Description
9207	5	HARSH ENVIRONMENT ATO® FUSE IN-LINE FUSEHOLDER

- Use with ATO fuses up to 20 amps
- Supplied with two 4" wire leads of 14 gauge black wire
- Protective cover for harsh environment
- Fuse not included



Part #	Pkg Qty	Description
9208	5	HARSH ENVIRONMENT ATO® FUSE HEAVY DUTY IN-LINE FUSEHOLDER

- Use with ATO 25 and ATO 30 amp fuses
- Supplied with two 4" wire leads of 12 gauge orange wire
- Protective cover for harsh environment
- fuse not included



Part #	Pkg Qty	Description
9209	10	SELF STRIPPING SCOTCHLOK® FUSEHOLDER

- For use with ATO fuses
- Wire range: 18-14 gauge
- Blue Color
- Taps into an existing circuit without cutting the wire



CORROSION PREVENTATIVE COMPOUND

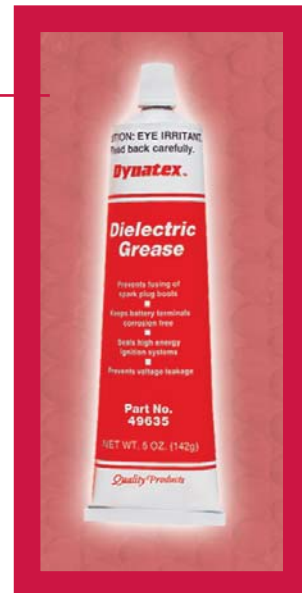
Part #	Pkg Qty	Description
PT-CPC	1	2 oz. Squeeze Tube Non-Conductive Sealant and Corrosion Preventative Compound for Conatacts and Switches



DYNATEX® DIELECTRIC GREASE

PREVENTS BOOT TEARS, CORROSION, ARCING AND THE FUSING OF SPARK WIRES TO SPARK PLUGS. MAINTAINS ITS CONSISTENCY IN EXTREME TEMPERATURES FROM -40°F TO 400°F. RESISTS MOISTURE, ACIDS AND ALKALINES. MOISTURE PROOF SEAL FOR AUTOMOTIVE, MARINE AND OTHER IGNITION AND ELECTRICAL SYSTEMS. FOR DISTRIBUTOR CAPS, BATTERY CABLES, POSTS AND TERMINALS, LIGHT BULB SOCKETS, TRAILER HITCH AND ALL OTHER TYPES OF ELECTRICAL CONNECTORS. COMPLIES WITH FDA REGULATION 21 CFR 178.3570.

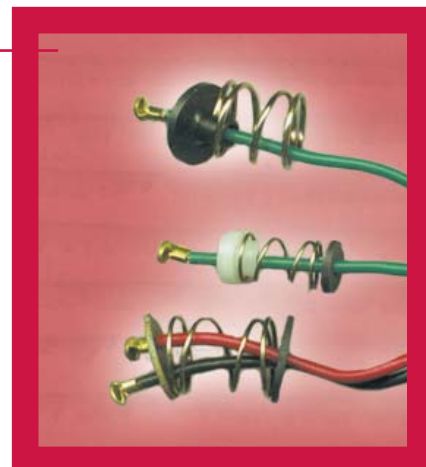
Part #	Pkg Qty	Description
PT-DEG	1	5 oz. tube



OTHER PIGTAILS

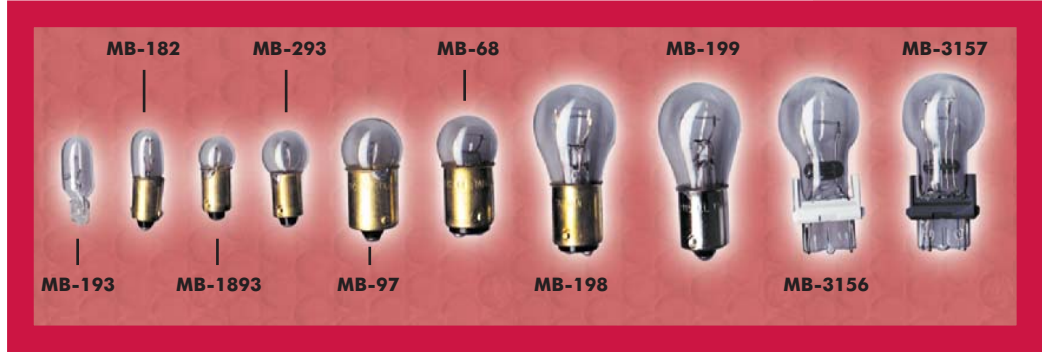
ASSURE POSITIVE BULB CONTACT IN ALL TYPES OF WEATHER • EXCEED ALL EXISTING AUTOMOTIVE REQUIREMENTS • HEAVY GAUGE THERMOPLASTIC WIRE

Part #	Pkg Qty	Description
PT-100	1	Single Contact 9-1/2" Length (E)
PT-101	1	Single Contact 9-1/2" Length (F)
PT-102	1	Double Contact 7-1/2" Length (B)



MINIATURE BULBS

Part #	Pkg Qty	Description	Uses	Industry Crossovers
MB-193	10	T-3/14 Wedge Base	Auto, Instrument	193, 194, 194LL, 168
MB-182	10	G-3-1/2 Min. Bay Base	Auto	182, 1445
MB-1893	10	T-3-1/4 Min. Bay Base	Auto, Radio	1893, 1889, 1891
MB-293	10	G-4-1/2 Min. Bay Base	Auto, Instrument	293, 57, 1895
MB-97	10	G-6 S.C. Bay Base	Auto	97, 67, 1155
MB-68	10	G-6 D.C. Bay Base	Auto	68
MB-198	10	S-8 D.C. Index Base	Truck, Stop, Signal	198, 1034, 1157, 1157LL
MB-199	10	S-8 S.C. Bay Base	Truck, Signal	199, 1073, 1156, 1156LL
MB-3156	10	S-8 S.F. Wedge Base	Auto, Backup, Stop	3156, 3156LL, 2356, 2456
MB-3157	10	S-8 D.F. Wedge base	Auto, Stop, Signal	3157, 3157LL, 2359, 2458



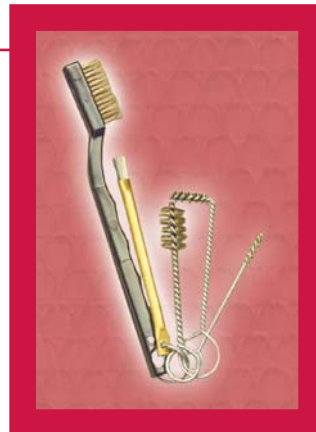
CIRCUIT TESTERS

Part #	Pkg Qty	Description
T-LCT	1	Lamp Circuit Tester
T-7SCT	1	7-Way Socket Circuit Tester
T-7PCT	1	7-Way Plug Circuit Tester



BRUSHES

Part #	Pkg Qty	Description
T-ECBK	1	Electrical Connection Brush Kit
T-7PSB	1	7-Way Plug & Socket Brush





INSTALLATION TOOLS



BUTANE POWERED MICROTORCH

Part #	Pkg Qty	Description
T-MT-11	1	<ul style="list-style-type: none"> • Compact palm size • Produces an adjustable, wind resistant flame with temperatures up to 2500°F/1300°C • Built-in Safety Lock with improved easy to use self-ignition system • Meets Consumer Products Safety Commission (CPSC) Requirements • Powered by refillable "fuel cell" (included) with flame adjustment lever • Built-in fuel level viewing window • Use with Master Ultratane® Butane for best performance • Pinpoint flame is perfect for soldering, desoldering, heat shrinking & terminating, heating, lighting and many other applications



SELF-IGNITING ULTRATORCH

Part #	Pkg Qty	Description
T-UT-100SI	1	<ul style="list-style-type: none"> • Self-igniting butane torch • The 28ml gas tank is easily refilled with standard butane canisters • Comes standard with a soldering tip, pinpoint attachment, heat deflector, maintenance tools, and a sturdy plastic protective cover • The flame is contained within the barrel of the torch so that only heat is emitted at tip • Features an adjustable temperature mechanism • Soldering tip temperatures range from 482° to 932°F • Heat tip temperature is 1202°F maximum • UL listed



BUTANE GAS CANISTER

- Triple-refined formula reduces clogging of filters
- Special vapor pressure promotes consistent ignition
- Contains no CFC's, canister with single-piece universal filling tip
- Recommended refill for all Ultratorch® & Master Butane-powered products
- Two convenient sizes: 5-1/8 oz. (145 gm) and 15/16 oz. (26.5 gm) canister
- Use to fuel all Master butane-powered products

Part #	Pkg Qty	Weight
T-BUTANE	12	5-1/8 oz.
T-BUTANE-MINI*	12	15/16 oz.

*Mini Butane is shipped without HMED/Hazardous Material charges.



SELF-IGNITING MICRO BLASTER TORCH

Part #	Pkg Qty	Description
T-MT-4E	1	<ul style="list-style-type: none"> • Butane powered micro torch • Includes a refillable gas lighter • Produces flame temperatures up to 2400°F • Hundreds of uses ranging from heat shrinking to soldering • A must for every tool kit • Self-igniting mechanism



T-MT-51 SELF-IGNITING SUPER BLASTER TORCH

THIS TORCH OFFERS THE FOLLOWING FEATURES:

- State of the art Piezo Electronic Ignition System
- Simply turn on the gas and press the ignition button to light
- The days of using a match or lighter to ignite your torch are over
- A flame that may be adjusted to deliver variable temperatures up to an incredibly hot 2400°F/1300°C
- A large gas chamber that holds 64ml of butane gas for a long 60-70 minute burn time. This chamber is easily refillable. (Use part #T-BUTANE)
- A stand that allows the user to operate the torch with both hands free.

THE APPLICATIONS FOR THIS TORCH ARE SEEMINGLY ENDLESS:

Electronic Soldering • Automotive • Jewelry • Dental • Hobbies • Welding • Tile laying
 Bending Tubing • Softening window putty • Removing old paint • Thawing frozen locks
 Outdoor camping • And more!

And don't forget the best use of all ... use this torch to install:
 Krimpa-Seal • Nyla-Seal • HydraLink • ElektraLink • MultiLink • Heat Shrink Tubing Product Lines



T-MTC-55 HEAT TORCH

- Brass canister torch
- Self-Igniting, Piezo Electronic Ignition System
- 2500°F/1300 °C
- 220 minutes of continuous use
- Refillable
- Windproof flame
- Removable base - hand held or table top



T-MTC-58 HEAT TORCH

- Large flame, similar to propane torch
- Self-Igniting, Piezo Electronic Ignition System
- 2600°F/1350 °C
- 120 minutes of continuous use
- Refillable
- Windproof flame
- Hand held or table top





PROHEAT VARITEMP HEAT GUN

Compact, with Varitemp Temperature Control

This easy-to-use heat gun, T-PH-1200 has a variable temperature control that allows the user to dial in any temperature from ambient to 1050°F/ 565°C. The airflow rating is 15 CFM at 3650 FPM. Its thermostatic control maintains the pre-selected temperature and prevents heat back-up or overheating when airflow is restricted. The Supervisor Temperature Lock-in feature allows presetting of temperature and sealing of access opening to assure compliance with pre-set temperature.

The Proheat Varitemp is suited to applications such as activating adhesive and potting compounds, curing and setting adhesives and epoxy resins. It is ideal for use in confined spaces or for applications where its lightweight construction can prevent operator fatigue.



- Variable temperature electric hot air heat gun
- Allows the user to dial in any temperature from ambient to 1050°F
- Rated at 120 volts, 12 amps maximum, and 1500 watts maximum
- UL listed & CSA Certified
- Ideal for heat shrink and heat shrink terminals, activating adhesive, shrink wrapping, and many other applications

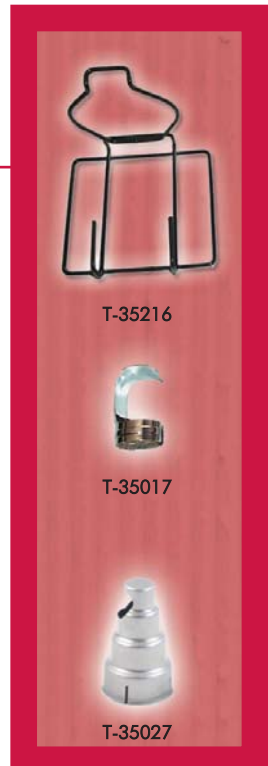
PROHEAT VARITEMP HEAT GUN

Part #	Pkg Qty	Description
T-PH-1200	1	<ul style="list-style-type: none"> • Variable Temperature Electric Hot Air Heat Gun • Overall Dimensions: 8.25" L x 3.0" W x 7.3" H • Nozzle Opening Diameter: 1.3 " • Net Weight: 1lb-10oz • Cord Length: 6 ft



PROHEAT VARITEMP ACCESSORIES

Part #	Pkg Qty	Description
T-35216	1	<ul style="list-style-type: none"> • Wire Rack for the T-PH-1200 • Allows operator to work with both hands free
T-35017	1	<ul style="list-style-type: none"> • Heat Deflector for the T-PH-1200 • For use in heat shrink and heat shrink terminal applications
T-35027	1	<ul style="list-style-type: none"> • Pinpoint attachment for T-PH-1200 • For use in applications where heat needs to be concentrated in a certain area



HOT AIR HEAT GUN

Part #	Pkg Qty	Description
T-EC-100	1	<ul style="list-style-type: none"> Economical electric hot air heat gun Two heat settings: 500°F and 1000°F Lightweight construction UL listed at 120 volts Ideal for heat shrink terminals, paint stripping and thawing



HOT AIR GUN DEFLECTOR

Part #	Pkg Qty	Description
T-EC-100-1	1	<ul style="list-style-type: none"> Heat deflector for the T-EC-100 heat gun For use in heat shrink and heat shrink terminal applications

STEINEL TEMPERATURE CONTROL AIR HEAT GUNS

Part #	Pkg Qty	Description
T-HG3000LCD	1	<ul style="list-style-type: none"> Top-of-the-line hot air heat gun featuring variable air flow control, variable temperature control, and LED temperature display Variable temperature from 120°F to 1100°F UL and CSA listed at 120 volts and 1500 watts The perfect gun for any variety of applications



STEINEL HEAT GUN ACCESSORIES

Part #	Pkg Qty	Description
T-07051	1	<ul style="list-style-type: none"> Heat Deflector for the T-HG3000LCD or T-HG2000E Good for heat shrink applications
T-07461	1	<ul style="list-style-type: none"> Reducer Nozzle with built-in reflector Perfect for Krimpa-Seal or ElektraLink wire connectors For T-HG3000SLE or T-HG2000E
T-07061	1	<ul style="list-style-type: none"> Reducer with separate reflector shield Pinpoint heat applications Can be used with or without the reflector shield For T-HG3000SLE or T-HG2000E
T-01450	1	<ul style="list-style-type: none"> Stand for the T-HG3000SLE



MULTI-PURPOSE HAND TOOL FEATURES

Multi-Purpose Hand Tool that Crimps, Cuts and Strips Wire
Perhaps the most versatile multi-purpose hand tool you've ever seen...

TWO PRECISION-GROUND WIRE CUTTERS

Convenient up-front anvil-type cutter, perfect for work in close quarters. Scissor type cutter logically located behind the pivot point for use with the wire stripper. No more jumping back and forth. Cutter and stripper are next to each other.

FOUR VERSATILE CRIMPING DIES

Confined crimping die for 26-14 AWG insulated terminals and another for 12-10 AWG insulated terminals. Separate crimping dies for non-insulated terminals & ignition terminals.

FIVE COMMON SIZE BOLT CUTTERS

Cuts 4-40, 6-32, 8-32, 10-24 and 10-32 bolts and screws. Threaded slots to firmly grip the bolts when cutting can also be used for rethreading the bolts.

PRECISION-GROUND WIRE STRIPPER

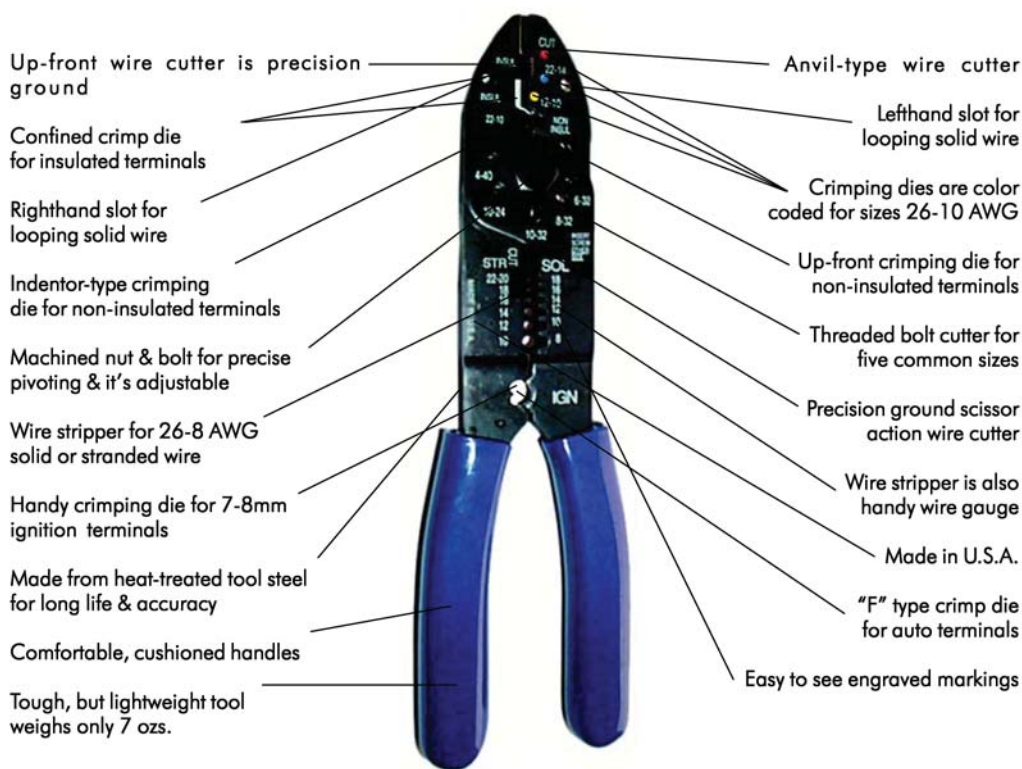
Scissor action wire stripper is precision ground for accuracy and clean, neat stripping. Strips stranded wire in 26 to 10 AWG sizes and solid wire in 18 to 8 AWG sizes. Wire stripper can also be used as a wire gauge.

TWO WIRE LOOPING SLOTS

A right and left hand slot for looping solid wire, conveniently located up front for close quarters work - no more nipped or nicked fingers.

ALSO...

- Cushioned handles for user comfort
- Made of heat-treated tool steel for long life, reliability and accuracy
- Machined nut and bolt for precise pivoting and it's adjustable - allows user to adjust the closing tension, as well as compensating for any possible tool wear
- Tough, but lightweight



MULTI-PURPOSE HAND TOOL

Part #	Pkg Qty	Description
T-R-15	1	<ul style="list-style-type: none"> • Crimping, cutting, stripping and rethreading tool • Heat treated steel with padded vinyl handles • Wire cutter is located at tip for easy access • Wire stripper makes a complete cut of wire insulation with one stroke • Cuts, crimps and strips 26 to 10 gauge wire and crimps ignition terminals • Cuts and rethreads 4-40, 6-32, 8-32, 10-24 and 10-32 machine screws



WIRE TERMINAL INSTALLING TOOLS

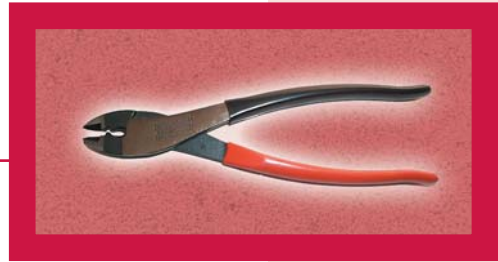
Part #	Pkg Qty	Description
T-WT-2000	1	<p>All purpose precision hand tool with color-coded compression guide which visually indicates when correct crimp has been made</p> <ul style="list-style-type: none"> • For insulated or non-insulated terminals, disconnects, splices and wire joints from 22 to 10 AWG • Cuts wire and bolts, cleans and reshapes threads • Has scissor-action wire stripper with spring loaded handles for convenience and ease of use



Part #	Pkg Qty	Description
T-WT-111M	1	<p>Plier type hand tool for installing non-insulated terminals, splices and twist on wire joints from 22 to 10 AWG</p> <ul style="list-style-type: none"> • Equipped with wire cutters



Part #	Pkg Qty	Description
T-WT-112M	1	<p>Plier type hand tool for installing both insulated and non-insulated terminals, disconnects, splices from 22 to 10 AWG</p> <ul style="list-style-type: none"> • Wire cutters are located in the nose of the tool for tight spaces



COMBO WIRE STRIPPER & CUTTERS

Part #	Pkg Qty	Description
T-R-35	1	<p>Durable wire stripper for 22 to 10 AWG wire</p> <ul style="list-style-type: none"> • Self-adjusting strip mechanism with spring action



Part #	Pkg Qty	Description
T-R-55	1	<p>Self-adjusting strip mechanism (with spring action)</p> <ul style="list-style-type: none"> • Combo wire stripper and cutter



RATCHETING CRIMPING TOOL

Part #	Pkg Qty	Description
T-R-50	1	4 dies, 8-20 AWG



RATCHETING CRIMPING TOOL

Part #	Pkg Qty	Description
T-R-53	1	4 Dies, 10-24 AWG



OTHER RATCHETING CRIMPING TOOLS

3M

3M Crimp Tool		
Part #	Pkg Qty	Description
T-R-47	1	Ratcheting crimping tool for installing 3M fully insulated Krimpa-Seal couplers. <ul style="list-style-type: none"> • The ONLY tool UL approved for installing these connectors • Assures that the proper crimp force will be applied



Sure-Crimp Tool		
Part #	Pkg Qty	Description
T-R-48	1	Ratcheting crimping tool for installing Sure-Crimp fully insulated Krimpa-Seal couplers and female bullet receptacles. <ul style="list-style-type: none"> • The ONLY tool UL approved for installing these connectors • Assures that the proper crimp force will be applied



RATCHETING WIRE TERMINAL CRIMPING TOOL

Part #	Pkg Qty	Description
T-R-25	1	<p>Ratcheting crimping tool for installing insulated wire connectors from 22 to 10 AWG</p> <ul style="list-style-type: none"> • Installs vinyl and nylon connectors • Color coded nests allow for easy match up of terminal size to nest • Assures that the proper crimp force will be applied to the connector every time



KRIMPA-SEAL RATCHETING CRIMPING TOOLS

The T-R-45 was developed specifically for the Krimpa-Seal product line. This is certified by Underwriters Laboratories for installing the vast majority of Krimpa-Seal connectors. Each cavity is designed to deliver the crimping force that ensures a solid connection without causing damage to the heat shrink tubing.

Each T-R-45 tool features:

- Crimp cavities that conform to industry standards
 - Longevity of operation assured by a time tested design
 - A trouble free full-cycle mechanism that assures consistent terminations
 - Precision calibration for Krimpa-Seal installations
 - Heat treated crimp cavities machined from high carbon steel
 - This is approved by UL for installing most Krimpa-Seal connectors
 - Four color-coded nests for installing 24-10 AWG Krimpa-Seal terminals
 - Ratcheting mechanism delivers the proper amount of force to each connector
- For a perfect Krimpa-Seal every time, use the T-R-45 tool!

Part #	Pkg Qty	Description
T-R-45	1	Ratcheting Krimpa-Seal crimping tool



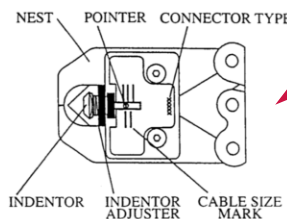


ALL-PURPOSE BATTERY CRIMPERS

OUR NEW CRIMPING TOOLS

T-BTC100 and T-BTC200 feature a unique, 21st century triangular crimp. This innovative, patented design exerts equal pressure at all contact points, centers the cable and produces a homogeneous mass of copper ... on any battery terminal or lug.

- 50 different crimp settings • Setting changes are a simple two finger adjustment
- No flashing • No dies to replace or misalign • Compression crimp (not indent) • Made in the U.S.A.
- These crimp tools will crimp AWG & Metric battery terminals, lugs and conventional stamped terminals of any thickness quickly, and accurately - one tool does it all!
- Unique patented heads - the head distributes equal force on all sides eliminating pinching or fracturing problems often associated with traditional types of crimping tools.
- Crimping range is 8 AWG through 250 MCM. (10-185mm Metric) - One tool covers a full range of cable sizes. Can be adjusted in 0.010" increments for approximately fifty different settings. Conventional rotating die crimping tools have only seven or eight die settings.
- Heavy duty design - the rugged construction consists of tool steel crimping jaws that will withstand continuous use without problems.



LONG HANDLE CRIMP TOOL

Part #	Pkg Qty	Description
T-BTC100	1	<ul style="list-style-type: none"> • 25" "long handle" crimping tool for 8 AWG through 250 MCM connectors. • Hefty handles have comfortable, cushioned grips. • Weighs only 5 pounds. • Compact design - reaches the most restricted areas with ease.

BENCH MOUNT CRIMP TOOL

Part #	Pkg Qty	Description
T-BTC200	1	<ul style="list-style-type: none"> • Table mount crimping tool for 8 AWG through 250 MCM connectors. • Reversed head ensures perfect visibility for the operator - perfect crimp location every time. The crimping nest is in the direct line of vision. • Heavy duty construction - solid angle iron mounting brackets, not a thin stamped hood. • Less back strain! The design of the crimping tool is such that the work piece is in front of the operator and therefore requires less reaching. The increased leverage action of the crimping tool will require less force. • Increased production. This bench tool has increased visibility, requires less force, and changes between cable sizes are quicker and easier to do. • A uniquely designed "BENCH" crimping tool. Its designed to be the best bench crimping tool, not a long handled crimping tool made for a bench!



BATTERY TERMINAL CRIMPING TOOL WITH COLOR-KEYED DIES

FOR 8 AWG TO 4/0 AWG BATTERY CONNECTORS - FEATURES THE SHURE STAKE® MECHANISM

Part # Pkg Qty
T-TBM-5SV 1

REPLACEMENT DIES

FOR TBM-5SV CRIMPING TOOL (ABOVE)

Part #	Pkg Qty	Wire Gauge	Color Codes
T-13454	1	8 - 3 AWG	red, blue, grey, brown
T-13455	1	2 - 2/0 AWG	green, pink, black, orange
T-13456	1	3/0 - 4/0 AWG	purple, yellow



CABLE CUTTERS

Part #	Pkg Qty	Description
T-CC100	1	Long Handles
T-CC200	1	Bench Mount





EXTRA THICK FLAT WASHER FEATURES

THE EXTRA-THICK USS & SAE FLAT WASHER ADVANTAGE

Our extra thick flat washers are designed for high performance in the most rugged environments. Use these washers with Grade 8 bolts and lower in critical applications.

- Through hardened carbon steel
- Yellow dichromate finish protects against rust and corrosion
- Extra thickness helps to prevent splitting, bellying, and dishing

Great for off-road applications and other extreme conditions



EXTRA THICK HIGH ALLOY SAE FLAT WASHERS

ZINC PLATED • YELLOW DICHROMATE FINISH • MULTIPLE HEAT TREATED & BAKED • ELIMINATES BOLT FAILURE CAUSED BY ORDINARY FLAT WASHERS "DISHING OUT" AND ALLOWING ASSEMBLY TO VIBRATE LOOSE

Part #	Bolt Size	O.D.	Thickness	Pkg Qty
ETFW-6501	1/4"	5/8"	.098"	100
ETFW-6502	5/16"	11/16"	.098"	100
ETFW-6503	3/8"	13/16"	.118"	100
ETFW-6504	7/16"	15/16"	.118"	100
ETFW-6505	1/2"	1-1/16"	.199"	100
ETFW-6506	9/16"	1-3/16"	.199"	100
ETFW-6507	5/8"	1-5/16"	.250"	100
ETFW-6508	3/4"	1-1/2"	.250"	100
ETFW-6509	7/8"	1-3/4"	.250"	50
ETFW-6510	1"	2"	.250"	50



EXTRA THICK HIGH ALLOY SAE FLAT WASHER ASSORTMENTS

Starter Assortment - NSPA-5048 • Maintenance Assortments - NSPA-1048

EXTRA THICK HIGH ALLOY USS FLAT WASHERS

ZINC PLATED • YELLOW DICHROMATE FINISH • MULTIPLE HEAT TREATED & BAKED • ELIMINATES BOLT FAILURE CAUSED BY ORDINARY FLAT WASHERS "DISHING OUT" AND ALLOWING ASSEMBLY TO VIBRATE LOOSE

Part #	Bolt Size	O.D.	Thickness	Pkg Qty
ETFW-6601	1/4"	3/4"	.098"	100
ETFW-6602	5/16"	7/8"	.098"	100
ETFW-6603	3/8"	1"	.118"	100
ETFW-6604	7/16"	1-1/4"	.118"	100
ETFW-6605	1/2"	1-3/8"	.199"	100
ETFW-6606	9/16"	1-1/2"	.199"	100
ETFW-6607	5/8"	1-3/4"	.250"	50
ETFW-6608	3/4"	2"	.250"	50
ETFW-6609	7/8"	2-1/4"	.250"	50
ETFW-6610	1"	2-1/2"	.250"	50



EXTRA THICK HIGH ALLOY USS SAE FLAT WASHER ASSORTMENTS

Starter Assortment - NSPA-5148 • Maintenance Assortments - NSPA-1148



EXTRA THICK FENDER WASHER FEATURES

VERSATILE EXTRA THICK FENDER WASHERS

- Zinc plated for excellent corrosion resistance
- Use to repair sloppy holes
- Extra thickness allows for higher bolt torque without washer deformation

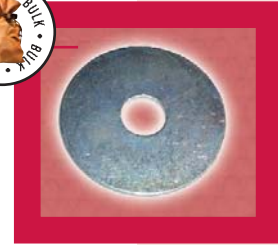
Regular washers just don't stack up!!



EXTRA THICK FENDER WASHERS

STEEL • ZINC PLATED

Part #	Pkg Qty	Bolt Size	O.D.	Thickness
ETFD-1970	100	1/4"	1"	.120"
ETFD-1972	100	1/4"	1-1/2"	.120"
ETFD-1975	100	5/16"	1-1/4"	.120"
ETFD-1983	100	5/16"	1-3/4"	.120"
ETFD-1978	100	3/8"	1-1/4"	.120"
ETFD-1984	100	3/8"	1-3/4"	.120"
ETFD-1982	100	1/2"	2"	.120"



EXTRA THICK FENDER WASHER ASSORTMENTS

Starter Assortment - NSPA-5049-HD • Maintenance Assortments - NSPA-1049-HD

CHARTS & REFERENCE

STUD SIZE CHART

STANDARD STUD SIZE	SCREW DIA.	HOLE DIA. INCH/mm	DIN.	
#0	.060"			●
#1	.073"	.094 (2,39)	M1,7-2,2	●
#2	.086"			●
#3	.099"			●
#4	.112"	.120 (3,025)	M2,6	●
#5	.125"			●
#6	.138"	.146 (3,71)	M3-3,5	●
#8	.164"	.173 (4,39)	M4	●
#10	.190"	.198 (5,03)	M5	●
#12	.216"			●
#14	.242"	17/64 (6,75)	M6	●
1/4"	.25"			●
5/16"	.312"	21/64 (8,33)	M8	●
3/8"	.375"	25/64 (9,92)	M9-10	●
7/16"	.437"	29/64 (11,51)	M11	●
1/2"	.50"	33/64 (13,10)	M12	●

WIRE GAUGE CHART

GAUGE	mm ²	STANDARD WIRE mm ²	DIA. INCH
26 - 22 GA	0,1-0,4	0,14; 0,20; 0,25; 0,35	.0159-.0253"
22 - 18 GA	0,25-1,6	0,25; 0,35; 0,50; 0,75; 1,0; 1,5	.0253-.040"
16 - 14 GA	1,0-2,6	1,01,52,5	.051-.064"
12 - 10 GA	2,7-6,6	4,06,0	.081-.102"
8 GA	6,6-10,5	10	.128"
6 GA	10,5-16,8	16	.162"
4 GA	16,8-26,6	2,5	.204"
2 GA	26,6-42,4	35	.258"
1/0 GA	42,4-60,5	50	.325"
2/0 GA	60,5-76,2	70	.365"
3/0 GA	76,2-96,3	95	.410"
4/0 GA	96,3-117,0	120	.460"

U.S. TO METRIC CONVERSION CHARTS

Inch Fraction	Inch Decimal	Millimeters	Inch Fraction	Inch Decimal	Millimeters
1/64"	.0156"	0,397mm	33/64"	.5156"	13,097mm
1/32"	.0312"	0,794mm	17/32"	.5312"	13,494mm
3/64"	.0468"	1,191mm	35/64"	.5468"	13,891mm
1/16"	.0625"	1,588mm	9/16"	.5625"	14,288mm
5/64"	.0781"	1,984mm	37/64"	.5781"	14,684mm
3/32"	.0937"	2,381mm	19/32"	.5937"	15,081mm
7/64"	.1093"	2,778mm	39/64"	.6093"	15,478mm
1/8"	.125"	3,175mm	5/8"	.625"	15,875mm
9/64"	.1406"	3,572mm	41/64"	.6406"	16,272mm
5/32"	.1562"	3,969mm	21/32"	.6562"	16,669mm
11/64"	.1718"	4,366mm	43/64"	.6718"	17,066mm
3/16"	.1875"	4,763mm	11/16"	.6875"	17,463mm
13/64"	.2031"	5,159mm	45/64"	.7031"	17,859mm
7/32"	.2187"	5,556mm	23/32"	.7187"	18,256mm
15/64"	.2343"	5,954mm	47/64"	.7343"	18,653mm
1/4"	.25"	6,350mm	3/4"	.750"	19,050mm
17/64"	.2656"	6,747mm	49/64"	.7656"	19,447mm
9/32"	.2812"	7,144mm	25/32"	.7812"	19,884mm
19/64"	.2968"	7,541mm	51/64"	.7968"	20,241mm
5/16"	.3125"	7,938mm	13/16"	.8125"	20,638mm
21/64"	.3281"	8,334mm	53/64"	.8281"	21,034mm
11/32"	.3437"	8,731mm	27/32"	.8437"	21,431mm
23/64"	.3593"	9,128mm	55/64"	.8593"	21,828mm
3/8"	.375"	9,525mm	7/8"	.875"	22,225mm
25/64"	.3906"	9,922mm	57/64"	.8906"	22,622mm
13/32"	.4062"	10,319mm	29/32"	.9062"	23,019mm
27/64"	.4218"	10,716mm	59/64"	.9218"	23,416mm
7/16"	.4375"	11,113mm	15/16"	.9375"	23,813mm
29/64"	.4531"	11,509mm	61/64"	.9531"	24,209mm
15/32"	.4687"	11,906mm	31/32"	.9687"	24,606mm
31/64"	.4843"	12,303mm	63/64"	.9843"	25,003mm
1/2"	.50"	12,700mm	1"	1.00"	25,400mm

- centimeters = 0.3397 inches
- centimeters = 0.01 meters
- centimeters = 393.7 mils
- centimeters = 10 millimeters
- millimeters = .0394 inches
- inches = 2.54 centimeters
- inches = 10³ mils
- inches = 25.4 millimeters
- meters = 39.37 inches
- meters = 10³ millimeters

°C = (°F - 32°F) x 5/9. To convert Fahrenheit degrees into Celsius, subtract 32, multiply by 5, and divide by 9.

°F = (°C) x 9/5 + 32°F. To convert Celsius into Fahrenheit, multiply by 9, divide by 5, add 32.

MAINTENANCE ASSORTMENT KITS

NSPA-1000	WIRE TERMINAL ASSORTMENT	32 ITEMS	640 PCS	EQDL-32
NSPA-1000-B	WIRE TERMINAL ASSORTMENT	24 ITEMS	345 PCS	EQDL-24
NSPA-1000-HD	HD WIRE TERM ASSORTMENT	16 ITEMS	160 PCS	EQDL-16
NSPA-1000-R	WIRE TERMINAL ASSORTMENT	20 ITEMS	285 PCS	EQDL-20
NSPA-1000-Y	WIRE TERMINAL ASSORTMENT	19 ITEMS	270 PCS	EQDL-20
NSPA-1002	KRIMPA-SEAL ASSORTMENT	31 ITEMS	320 PCS	EQDL-32
NSPA-1003	KRIMPA-SEAL ASSORTMENT W/TORCH	29 ITEMS	286 PCS	EQDL-21
NSPA-1003-T	KRIMPA-SEAL W/T-R5 & TORCH	30 ITEMS	287 PCS	EQDL-21
NSPA-1003-UL	KRIMPA-SEAL W/T-R-45 & TORCH	30 ITEMS	287 PCS	EQDL-21
NSPA-1005	WIRE LOOM CLIP ASSORTMENT (DIPPED)	10 ITEMS	80 PCS	EQDL-12
NSPA-1006	CABLE TIE ASSORTMENT	15 ITEMS	180 PCS	EQDL-ADH
NSPA-1018	GLASS TUBE & CERAMIC FUSES	30 ITEMS	265 PCS	EQDL-32
NSPA-1048	HD SAE FLAT WASHER ASSORTMENT	10 ITEMS	200 PCS	EQDL-12
NSPA-1049-HD	HD FENDER WASHER ASSORTMENT	7 ITEMS	350 PCS	EQDL-ADL
NSPA-1083	BATTERY TERMINAL ASSORTMENT	25 ITEMS	63 PCS	EQDL-24
NSPA-1084	BATTERY TERMINAL ASSORTMENT	24 ITEMS	63 PCS	EQDL-20
NSPA-1086	STARTER LUG ASSORTMENT	24 ITEMS	46 PCS	EQDL-24
NSPA-1112-L	LARGE ELEKTRALINK ASSORTMENT	30 ITEMS	379 PCS	EQDL-21
NSPA-1112-LT	LARGE ELA ASSORTMENT W/TORCH	31 ITEMS	380 PCS	EQDL-21
NSPA-1112-S	SMALL ELEKTRALINK ASSORTMENT	30 ITEMS	259 PCS	EQDL-21
NSPA-1112-ST	SMALL ELA ASSORTMENT W/TORCH	31 ITEMS	260 PCS	EQDL-21
NSPA-1114	POWER EXTRACTOR ASSORTMENT	1/4, 5/16, 3/8, & 1/2		
NSPA-1130	WIRE HARNESS REPAIR KIT	17 ITEMS	306 PCS	EQDL-ADH
NSPA-1140	ALL PLASTIC CABLE TIE ASSORTMENT	19 ITEMS	210 PCS	EQDL-ADH
NSPA-1145	HIGH-TEMP TERMINAL ASSORTMENT	16 ITEMS	350 PCS	EQDL-16
NSPA-1148	HD USS FLAT WASHER ASSORTMENT	10 ITEMS	200 PCS	EQDL-12
NSPA-1150	SPLIT BOLT CONNECTOR ASSORTMENT	9 ITEMS	41 PCS	EQDL-12
NSPA-1184	GOLF CART REPAIR KIT	37 ITEMS	418 PCS	EQDL-21
NSPA-1184-WTN	GOLF CART REPAIR KIT	37 ITEMS	643 PCS	EQDL-21
NSPA-1185	FORK LIFT REPAIR KIT	70 ITEMS	656 PCS	EQDL-21&32
NSPA-1185-WTN	FORK LIFT REPAIR KIT	70 ITEMS	1081 PCS	EQDL-21&32
NSPA-1186	CABLELINK & TERMINAL ASSORTMENT	24 ITEMS	98 PCS	EQDL-21
NSPA-1187	ASSORTED HEAT SHRINK TUBING	25 ITEMS	191 PCS	EQDL-ADH
NSPA-1188	THIN WALL HST ASSORTMENT	9 ITEMS	125 PCS	EQDL-ADH
NSPA-1189	FLEX ADHESIVE-LINED HST ASSORTMENT	18 ITEMS	120 PCS	EQDL-ADH
NSPA-1190	SEMI-RIGID ADHES.-LINED HST	14 ITEMS	94 PCS	EQDL-ADH
NSPA-1191	COLORED SEMI-RIGID LINED HST	6 ITEMS	82 PCS	EQDL-ADH
NSPA-1192	HEAVY WALL ADHES.-LINED HST	6 ITEMS	30 PCS	EQDL-ADL
NSPA-1193	TERMINALS/CABLE TIES/T-R5	28 ITEMS	601 PCS	EQDL-ADH
NSPA-1194	WIRE NUTS & OTHER TERMINALS	20 ITEMS	525 PCS	EQDL-20
NSPA-1195	WIRE NUTS & CABLE TIES	20 ITEMS	450 PCS	EQDL-ADH
NSPA-1196	CABLELINK LUGS & HST	19 ITEMS	211 PCS	EQDL-20
NSPA-1197	CL LUGS, TERMINALS & HST	28 ITEMS	97 PCS	EQDL-24
NSPA-1198	T&B LUGS, TERMINALS & HST	21 ITEMS	93 PCS	EQDL-20
NSPA-1200	WIRE LOOM CLIP ASSORTMENT (PADDED)	9 ITEMS	75 PCS	EQDL-12
NSPA-1201	ATO FUSE ASSORTMENT	24 ITEMS	145 PCS	EQDL-24
NSPA-1202	FLEET LIGHTING & WIRING KIT	58 ITEMS	852 PCS	EQTPC
NSPA-1203	MULTILINK ASSORTMENT	24 ITEMS	285 PCS	EQDL-24
NSPA-1204	MULTILINK ASSORTMENT	28 ITEMS	284 PCS	EQDL-21
NSPA-1204-T	MULTILINK ASSORTMENT W/TOOL	29 ITEMS	285 PCS	EQDL-21
NSPA-1206	MULTILINK RETAIL DISPLAY	25 ITEMS	113 PACKAGES	
NSPA-1207	ELEKTRALINK RETAIL DISPLAY	24 ITEMS	110 PACKAGES	
NSPA-1208	KRIMPA-SEAL RETAIL DISPLAY	25 ITEMS	113 PACKAGES	
NSPA-1209	SES RETAIL DISPLAY	8 ITEMS	18 PACKAGES	
NSPA-1220	NYLA-SEAL ASSORTMENT	31 ITEMS	320 PCS	
NSPA-1221	NYLA-SEAL ASSORTMENT	29 ITEMS	286 PCS	W/TORCH
NSPA-1221-T	NYLA-SEAL ASSORTMENT	30 ITEMS	287 PCS	
W/TORCH&TOOL				

STARTER ASSORTMENT KITS

NSPA-5000	WIRE TERMINAL ASSORTMENT	18 ITEMS	200 PCS	EQSP18
NSPA-5000-B	14-16 AWG NYLON TERM. ASSORTMENT	18 ITEMS	175 PCS	EQSP18
NSPA-5000-R	18-22 AWG NYLON TERM. ASSORTMENT	18 ITEMS	175 PCS	EQSP18
NSPA-5000-Y	10-12 AWG NYLON TERM. ASSORTMENT	18 ITEMS	175 PCS	EQSP18
NSPA-5002	KRIMPA-SEAL ASSORTMENT	20 ITEMS	115 PCS	EQSP18
NSPA-5003	KRIMPA-SEAL ASSORTMENT W/ HEAT GUN	13 ITEMS	121 PCS	EQSP13
NSPA-5003-T	KRIMPA-SEAL ASSORTMENT W/T-R-15	14 ITEMS	122 PCS	EQSP13
NSPA-5003-UL	KRIMPA-SEAL ASSORTMENT W/T-R-45	14 ITEMS	122 PCS	EQSP13
NSPA-5006	T&B CABLE TIE ASSORTMENT	7 ITEMS	160 PCS	EQSPADJ
NSPA-5018	GLASS TUBE & CERAMIC FUSES	17 ITEMS	PCS	EQSP18
NSPA-5048	EXTRA-THICK HI-ALLOY SAE FW	10 ITEMS	140 PCS	EQSP12
NSPA-5049-HD	HD FENDER WASHER ASSORTMENT	7 ITEMS	70 PCS.	EQSP6
NSPA-5111	SOLDER SLUG ASSORTMENT	15 ITEMS	53 PCS	EQSP12-OFF
NSPA-5112	ELEKTRALINK ASSORTMENT	25 ITEMS	135 PCS	EQSP18
NSPA-5114	ELEKTRALINK ASSORTMENT W/ HEATGUN	13 ITEMS	121 PCS	EQSP13
NSPA-5117	MULTILINK ASSORTMENT W/ HEAT GUN	4 ITEMS	61 PCS	EQSP13
NSPA-5117-T	MULTILINK ASSORTMENT W/T-R-15	5 ITEMS	62 PCS	EQSP13
NSPA-5140	ALL PLASTIC CABLE TIE ASSORTMENT	7 ITEMS	360 PCS	EQSPADJ
NSPA-5145	HIGH-TEMP TERMINAL ASSORTMENT	16 ITEMS	175 PCS	EQSP18
NSPA-5148	EXTRA-THICK HI-ALLOY USS FW	8 ITEMS	123 PCS	EQSP12
NSPA-5150	SPLIT BOLT CONNECTOR ASSORTMENT	9 ITEMS	16 PCS	EQSP12
NSPA-5181	PLASTIC AUTOMOTIVE RETAINERS	11 ITEMS	139 PCS	EQSP-12
NSPA-5188	THIN WALL HST ASSORTMENT	9 ITEMS	103 PCS	EQSP6
NSPA-5189	FLEXIBLE, LINED HST ASSORTMENT	18 ITEMS	48 PCS	EQSP6
NSPA-5190	SEMI-RIGID, LINED HST ASSORTMENT	10 ITEMS	48 PCS	EQSP6
NSPA-5191	COLOR SEMI-RIGID, LINED HST	6 ITEMS	32 PCS	EQSP6
NSPA-5192	HEAVY WALL, LINED HST ASSORTMENT	6 ITEMS	12 PCS	EQSP6
NSPA-5193	TERMINAL/CABLE TIE/TOOL ASSORTMENT	19 ITEMS	156 PCS	EQSP13
NSPA-5194	WIRE NUT & CONECTOR ASSORTMENT	19 ITEMS	190 PCS	EQSP18
NSPA-5195	WIRE NUT & CABLE TIE ASSORTMENT	10 ITEMS	235 PCS	EQSP6
NSPA-5201	ATO FUSE ASSORTMENT	18 ITEMS	70 PCS	EQSP18
NSPA-5203	MULTILINK ASSORTMENT	20 ITEMS	120 PCS	EQSP18
NSPA-5204	MULTILINK ASSORTMENT	15 ITEMS	91 PCS	EQSP13
NSPA-5204-T	MULTILINK ASSORTMENT W/TOOL	16 ITEMS	92 PCS	EQSP13
NSPA-5211	KRIMPA-SEAL ASSORTMENT	12 ITEMS	115 PCS	EQSP12 BOX
NSPA-5212	ELEKTRALINK ASSORTMENT	12 ITEMS	72 PCS	EQSP12 BOX
NSPA-5213	MULTILINK ASSORTMENT	12 ITEMS	56 PCS	EQSP12 BOX
NSPA-5214	CABLELINK ASSORTMENT	10 ITEMS	113 PCS	EQSP12-OFF BOX
NSPA-5215	FLEX DUAL WALL HST ASSORTMENT	12 ITEMS	68 PCS	EQSP6 BOX
NSPA-5216	HYDRALINK ASSORTMENT	6 ITEMS	55 PCS	EQSP6 BOX
NSPA-5220	NYLA-SEAL ASSORTMENT	20 ITEMS	115 PCS	
NSPA-5221	NYLA-SEAL ASSORTMENT	13 ITEMS	121 PCS	W/TORCH
NSPA-5221-T	NYLA-SEAL ASSORTMENT	14 ITEMS	122 PCS	W/TOOL&TORCH

MINI ASSORTMENT KITS

NSPA-9000	NYLON WIRE TERMINAL ASSORTMENT	12 ITEMS	140 PCS	EQT-12 BOX
NSPA-9002	KRIMPA-SEAL BUTT CONN. ASSORTMENT	3 ITEMS	60 PCS	EQT-3 BOX
NSPA-9018	GLASS TUBE FUSE ASSORTMENT	12 ITEMS	60 PCS	EQT-3 BOX
NSPA-9112	ELEKTRALINK BUTT CONN. ASSORTMENT	4 ITEMS	65 PCS	EQT-3 BOX
NSPA-9113	ELEKTRALINK/HEAT SHRINK ASSORTMENT	8 ITEMS	48 PCS	EQT-9 BOX
NSPA-9117	MULTILINK BUTT CONN. ASSORTMENT	3 ITEMS	60 PCS	EQT-3 BOX
NSPA-9145	HI-TEMP WIRE TERMINAL ASSORTMENT	12 ITEMS	150 PCS	EQT-12 BOX
NSPA-9177	PLASTIC CONICAL ANCHOR ASSORTMENT	8 ITEMS	190 PCS	EQT-4 BOX
NSPA-9188	THIN WALL HST ASSORTMENT	9 ITEMS	39 PCS	EQT-1
NSPA-9189	FLEX ADHESIVE-LINED HST ASSORTMENT	6 ITEMS	24 PCS	EQT-1
NSPA-9190	SEMI-RIGID ADHES.-LINED HST	9 ITEMS	39 PCS	EQT-1
NSPA-9195	WIRE NUT ASSORTMENT	6 ITEMS	82 PCS	EQT-6 BOX
NSPA-9201	ATO FUSE ASSORTMENT	9 ITEMS	45 PCS	EQT-3 BOX
NSPA-9211	KRIMPA-SEAL ASSORTMENT	12 ITEMS	71 PCS	EQT-12 BOX
NSPA-9212	ELEKTRALINK ASSORTMENT	12 ITEMS	42 PCS	EQT-12 BOX
NSPA-9213	MULTILINK ASSORTMENT	12 ITEMS	31 PCS	EQT-12 BOX
NSPA-9216	HYDRALINK ASSORTMENT	6 ITEMS	28 PCS	EQT-6 BOX
NSPA-9220	NYLA-SEAL ASSORTMENT	3 ITEMS	60 PCS	

**STOP WIRE
CORROSION**



**MAKE PERMANENT
REPAIRS**

DO IT ONCE. DO IT RIGHT!

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