

**T-13A**  
**NORTHROP GRUMMAN CORPORATION**

**PURCHASE ORDER TERMS AND CONDITIONS**  
**PACKAGING FOR HARDWARE AND SMALL ELECTRICAL PRODUCTS**

1. SCOPE. This Addendum covers the preservation, packaging, packing, and marking of hardware and small electrical Products such as bearings, bolts, brackets, connectors, nuts, resistors, rivets, washers, etc.
2. GENERAL PACKAGING REQUIREMENTS.
  - A. Hardware and small electrical Products shall be prepared for shipment in accordance with the requirements of this specification unless specific packaging instructions are contained within procurement specifications. When specific packaging instructions do exist, the most restrictive packaging requirements take precedence. Related products not specifically addressed herein shall be prepared in accordance with instructions provided for similar Products.
  - B. Each package shall provide adequate physical, chemical, and cleanliness protection for the Product.
  - C. The packaging must meet or exceed the requirements specified herein.
  - D. Packaging materials, procedures, and workmanship shall be of good commercial quality and practice. Materials must be compatible with the Product to eliminate the possibility of deterioration.
  - E. If the total purchase order quantity does not lend itself to the quantity specified for the unit or intermediate container, the odd quantity shall be packaged and marked separately.
  - F. Natural or synthetic Products shall be enclosed in an opaque material to protect from light sources.
  - G. Products susceptible to Electrostatic Discharge must be packaged in accordance with the Supplier Requirements Document as specified within the Order.
3. UNIT PACKAGING.
  - A. Cleaning, drying, and preservation shall be adequately performed to ensure Product integrity and prevent corrosion. Selection of the proper preservation materials shall be based on the ease of removal and compatibility with the Product.
  - B. The quantity per unit package shall not exceed the quantities specified in Table 1. In addition, the quantity per unit package limits shall be decreased whenever the weight, size, or fragility of a Product warrants better protection.
  - C. Only one part number may be contained within a unit package.
  - D. Products with sharp points or protrusions shall be adequately padded or wrapped to prevent rupture of the bag.
  - E. The unit closure must be adequately accomplished by means of sealing, taping, or stapling to prevent accidental opening.
4. INTERMEDIATE PACKAGING.
  - A. The intermediate package shall be of a corrugated or solid fiberboard construction with an adequate closure to retain its contents.
  - B. The number of unit packages per intermediate package shall not exceed the quantities specified in Table 1. In addition, the quantity per intermediate package limits shall be decreased whenever the weight, size, or fragility of a Product dictates.
  - C. Only one part number may be contained within an intermediate package.
  - D. Intermediate packages that comply with the minimum requirements of the carrier may be used as the shipping container.
  - E. Intermediate packages shall not exceed a weight of 30 pounds.
5. SHIPPING CONTAINERS.
  - A. Shipping containers can be used to consolidate intermediate packages.
  - B. Shipping containers must satisfy applicable carrier regulations.
  - C. Container fabrication must be of good quality and be designed and sealed to hold its contents during transport.
  - D. Provisions for material handling features shall be provided as required.
6. MARKING/LABELING.
  - A. Unit, intermediate, and shipping containers shall be marked/labeled in accordance with Table 2 and the bar coding requirements contained within purchase order terms and conditions T-13, section 14. An "x" indicates that the marking/labeling requirement is required for that particular type of package.
  - B. Markings that are readable through transparent unit packaging need not be repeated on the outside of the unit container.
  - C. Markings and labeling shall be arranged so that the opening of the package does not destroy the marking/labeling.

Table 1

Description	Sample Reference Part No.	Max Qty Per Unit Package	Unit Package Type	Max Qty of Unit Pkg. Per Intermediate Pkg.
Backshells	MS85052	1	Bag	100
Bearings	MS14104	1	Bag	100
Bolts, Blind	MS90354	100	Bag	50
Bolts, Sleeve (3/16" Dia or Less)	M85667	50	Bag	10
Bolts, Sleeve (Between 3/16" & 3/8" Dia)	M85667	10	Sleeve & Bag	25
Bolts, Sleeve (3/8" Dia or Greater)	M85667	1	Sleeve & Bag	100
Bolts (3/16" Dia or Less)	NAS6303	500	Bag	10
Bolts (Between 3/16" & 3/8" Dia)	NAS6305	100	Sleeve & Bag	10
Bolts (3/8" Dia or Greater)	NAS6316	50	Sleeve & Bag	10
Brackets	BACB25	10	Bag	50
Bushings	MS14238	10	Bag	10
Caps	D3899/33	10	Bag	10
Clamps	M8505211	10	Bag	10
Collars	NAS1080, BACC30X	500	Bag	10
Connectors	D38999/26	1	Bag	100
Contacts	M39029/26	100	Bag	10
Cotter Pins	MS24665	100	Bag	10
Couplings	NAS520	10	Bag	10
Decals		100	Bag	10
Diodes	JANTXVIN	100	Bag	10
Ducts	NAS1377	1	Bag	10
Elbows	MS21907	10	Bag	10
Feed Thrus		1	Bag	100
Ferrules	AN3053	100	Bag	10
Fillers	BACF3T	100	Bag	50
Fittings	MS33657	10	Bag	10
Flanges	AS1895	10	Bag	50
Gaskets	MS27196	1	Bag	100
Grommets	MS21266	10	Bag	50
Handles		10	Bag	10
Hinges	MS20001	10	Bag	10
Hoses	MS8005	1	Bag	10
Jumpers	MS25083	100	Bag	10
Latches		10	Bag	10
Nameplates	MS27253	10	Bag	50
Nutplates	NAS1791	100	Bag	50
Nuts	MS21042	2500	Bag	50
Nuts, High Strength (>180 ksi)	MS21133	25	Bag	50

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Table 1 (Continued)

Description	Sample Reference Part No.	Max Qty Per Unit Package	Unit Package Type	Max Qty of Unit Pkg. Per Intermediate Pkg.
Nuts, Spindle Pkg		*	Bag	25
O-Rings	M25988	10	Bag	50
Oversized Hardware		1	Sleeve & Bag	10
Packings	M29513	1	Bag	100
Pins (3/16" Dia or Less)	BACB30VT5	1000	Bag	10
Pins (Between 3/16" & 3/8" Dia)	BACB30VT7	500	Sleeve & Bag	10
Pins (3/8" Dia or Greater)	BACB30VT12	100	Sleeve & Bag	10
Reducers	AN919	10	Bag	10
Relays	M6106/27	1	Bag	50
Resistors	RCR07	100	Bag	10
Rivets, Solid (U/M In. Lbs.)	MS20426	1 Lb.	Bag & Box	10
Rivets Solid & Blind (U/M In. Each)	NAS1399	100	Bag	50
Screws	NAS600	100	Bag	50
Seals		1	Bag	100
Shield Socks		1	Bag	100
Shims	NAS1195	100	Bag	50
Sleeves	M83519	100	Bag	50
Spacers	NAS1057	100	Bag	50
Strain Gages		10	Bag	10
Switches	M8805/80	1	Bag	50
Tees	MS21912	10	Bag	10
Terminals	MS21260	100	Bag	10
Transistors		1	Bag	50
Unions	MS21924	10	Bag	10
Washers	AN960	500	Bag	50

\* As required based on size of nut.

Table 2

Unit	Intermediate	Shipping	Marking and Labeling Requirements
x	x	x	Part Number (as shown on purchase order)
x	x	x	Nomenclature
x	x		Manufacturer's Part Number (if different from above)
x	x		Manufacturer's Name
x	x	x	Quantity and Unit of Measure
x			Cure Date (if applicable)
x			Lot or Batch Number
		x	Seller's Name and Address
		x	Buyer's Name and Address

x	x	x	Purchase Order Number
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