CHPRC-02975
Revision 0

# Procurement Specification for 6 ft x 3 ft x 3 ft DOT Specification 7A Type A Container with Grout Ports

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788

**P.O. Box 1600**
**Richland, Washington 99352**

Approved for Public Release;
Further Dissemination Unlimited

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# PROCUREMENT SPECIFICATION FOR 6 FT X 3 FT X 3 FT DOT SPECIFICATION 7A TYPE A CONTAINER WITH GROUT PORTS

## 1.0 DESIGN REQUIREMENTS

**1.1 Purpose –** This specification establishes Hanford Site Design Requirements for the procurement of U.S. Department of Transportation (DOT) compliant 6 ft x 3 ft x 3 ft containers for the transport and storage of solid radioactive contaminated materials.

**1.2 General Description –** DOT-7A Type A, carbon steel container having a minimum payload capacity of 1,361 kg (3,000 lb). The SUPPLIER shall identify the approved gross weight based on the provided design and the container tare weight. The lid shall include four (4) 4 in. grout ports. A top opening design having a gasketed bolted closure. The container bottom shall be equipped with skids and/or fork pockets to facilitate handling with a forklift.

**1.3 Container Design and Components:**

1.3.1 **Critical Dimensions –** The container shall have nominal internal dimensions of 6 ft long x 3 ft wide x 3 ft high with a clear opening of 5 ft 10 in. long x 2 ft 10 in. wide, ± ½ in.

1.3.2 **Grout Ports** – Four (4) grout ports shall be included in the lid of the container, one near each corner. The grout ports shall be located away from the edge of the lid to be protected from damage so that they are not less than 0.15 m (6 in.) or greater than 0.61 m (2 ft) from the edge of the lid. The grout ports shall be 4 in. 150 lb class (minimum) threaded pipe flanges or couplings welded or otherwise secured to the lid with a plug or blind flange installed to seal it for transport to the BUYER. The grout ports shall not negatively impact the integrity of the container and be part of the qualified configuration. The four grout ports specified for this container design require some type of contamination control feature that can be easily broken by grout flow (e.g., a plastic sheet taped to the underside of each grout port, foil rupture disk, etc.).

1.3.3 **Filter Ports –** The container shall be equipped with three filter ports; one on the side of the container and one on each end. The filter port shall be ¾ in. with ¾-14 National Pipe Straight Mechanical (NPSM) threads. The filter port shall not extend beyond or protrude past the closure flange or external stiffeners on the inside or outside of the container. The SUPPLIER shall supply three (3) Rieke Vise Grip II ¾ in. Plated Plugs with ethylene/propylene/terpolymer (EPT) Gaskets or Buyer approved alternate. They are to be placed in a bag and placed inside of the container along with the closure hardware and gasket.

1.3.4 **Gaskets –** All gaskets shall meet the requirements for a DOT Type A packaging as specified in 49 CFR §173.412. The gasket material shall be

flexible cellular Ethylene/Propylene/ Diene/Monomer (EPDM) or Neoprene type material and meet American Society for Testing and Materials (ASTM) D 1056 Type 2, Class A, Grade 2 or 3 or BUYER-approved alternative. At a minimum, the gasket shall retain its sealing abilities across a temperature range of -40 to 100 °C (-40 to 212 °F).

***NOTE*:** Refer to Section 3 – QA Requirements: *Identification of Age Control Items (Gasket Material Only)* for gasket material shelf life requirements.

1.3.5 **Bolted Closure –** There shall be a bolted closure to prevent loss or dispersal of the contents. Fasteners shall, first and foremost, provide ample clamping force during closure of the container. High-strength fasteners, a minimum of a Grade 5, are required. Fasteners shall exhibit grade marks and SUPPLIER's identification symbols (headmarks) as required by the Standard. Any fasteners supplied with headmarks matching those identified in Section 3.5, "Suspect/Counterfeit Fastener Headmark List," shall be deemed to be unacceptable under the terms of this purchase order (PO).

Washers shall be provided in accordance with good commercial practices. The closure system shall be reusable and resist atmospheric corrosion by electroplating per ASTM B 633, FE/Zn 5, Type 3 or BUYER-approved equivalent method. These closure devices shall not protrude so as to interfere with stacking of the container.

The design may include guide pins to facilitate bolt-hole lineup. In addition, the closure system shall include a feature that indicates whether or not the container has been opened in accordance with 49 CFR §173.412(a) (i.e., tamper indication).

1.3.6 **Forklift Compatibility Requirements –** The container bottom shall be designed to allow manipulation by a forklift. If forklift pockets are used, they shall be spaced appropriately beneath the bottom of the container. The pockets shall be designed such that forklift forks having a maximum spread of 2.1 m (7 ft) can be utilized. The internal width of the fork pockets shall be 35.5 cm ± 6.4 mm (14 in. ± 0.25 in.), and the internal height of the fork pockets shall be 11.4 cm ± 6.4 mm (4.5 in. ± 0.25 in.). In addition, the forklift pockets shall pass completely through the base structure of the container so that lifting may be achieved by use of devices being inserted from either side of the container (e.g., forklift forks or lifting straps/chains via use of a crane). This design must not interfere with stacking the container.

## 1.4 Exterior Coatings and Stenciling:

1.4.1 **Coating –** The exterior coating shall be gray, resistant to impacts, abrasions, scratches, and of a nature that ensures positive adhesion of a self-adhesive label such as a bar code or DOT label. The paint system may be alkyd enamel (melamine) or polyester based. The color shall be similar to Federal Standard 595 "Colors," color 16492 gloss, 26492 satin, or 36628 flat.

The interior coating shall be a corrosion-preventive primer at a minimum and any color is acceptable as long as it can be visually inspected for defects.

Paint coverage must be uniform and free of holidays, blisters, cracks, or de-lamination (e.g., peeling). Furthermore, the coatings shall expand, contract, and flex with the container without cracking. Preparation of the substrate and application of the coating shall be in accordance with the manufacturer's recommendations.

1.4.2 **Stenciling –** The SUPPLIER shall stencil the following markings on the upper left portion of all four (4) sides of the container. All characters shall be a minimum of 2.54 cm (1 in.) high and shall be permanent and in a contrasting color so as to be readily apparent and understood. Stencil paint to be similar to Federal Standard 595 FS 37100. Manufacturer's name and address may be 1.27 cm (½ in.) if approved by the BUYER.

| | |
|---|---|
| Max gross weight | (kg): XXXX |
| | (lb): XXXX |
| Tare weight (with lid) | (kg): XXXX |
| | (lb): XXXX |
| Lid weight | (kg): XXXX |
| | (lb): XXXX |

"USA DOT 7A Type A"
MANUFACTURER's name and address
MANUFACTURER's serial number
MM/YY (date of manufacture)
BUYER's PO # (BUYER to provide)

***NOTE:*** *XXXX weights to be determined by SUPPLIER and supplied as built. Container weights shall be accurate to ± 0.5%. The tare weight represents the assembled container including the lid and all closure hardware. The max gross weight equals the tare weight, of the container plus the payload.*

The SUPPLIER shall stencil “For Lifting Lid Only” on the lid next to each lifting attachment; if applicable. The size of the lettering and the colors shall be in accordance with the requirements previously listed in this subsection.

**1.5 Closure Instructions** (Closure Instructions Label) – Each container shall have a label with the closure instructions printed on it. The closure labels shall be applied next to the bolting flange on each of the containers long sides. The print shall be a minimum font size of 8 points. Labels shall be moisture resistant, suitable for outdoor use, and have a service temperature of -40 to 70 °C (-40 to 158 °F). The label shall be difficult to remove requiring the use of tools or solvents to do so. The label shall include the following information:

***NOTE:*** *Items in quotations shall be printed on the label verbatim.*

- Lid bolts and nuts torque value, tolerance, and torque sequence.
- “NucFil®-013 and NucFil®-019DS torque values: 15 ± 2 ft-lbs.”
- “¾-14 Rieke Plug 15 ± 2 ft-lbs.”
- “Remove the shipping plugs, normally plastic or metal with a hole drilled in them, and replace with plugs and/or filters as appropriate.”
- The following statement shall be included on the label ONLY when applied to containers with Grout Ports:

“Select compatible thread sealant for grout port fitting material type. Apply thread sealant to clean threads and tighten plug/cap hand tight. Using an appropriate tool, tighten plug/cap an additional ¼ to ¾ turn.”

## 2.0 REGULATORY REQUIREMENTS, TYPE A CONTAINER

**2.1 Purpose –** This specification establishes Hanford Site Regulatory Requirements for the procurement of DOT compliant Type A containers for the transport and storage of solid radioactive contaminated materials.

**2.2 Common Name**: Type A Container

**2.3 Codes, Standards, and Regulations**:

Unless otherwise approved or shown, the following codes, standards, and regulations of the latest issue at the time of the bid shall apply.

10 CFR §820, "Procedural Rules for DOE Nuclear Activities," Code of Federal Regulations, as amended.

10 CFR §830.122, "Quality Assurance Criteria." Code of Federal Regulations, as amended.

49 CFR 173, "Shippers—General Requirements for Shipments and Packaging's," Code of Federal Regulations, as amended.

49 CFR §173.24, "General Requirements for Packaging and Packages"

49 CFR §173.410, "General Design Requirements."

49 CFR §173.412, "Additional Design Requirements for Type A Packages."

49 CFR §173.461, "Demonstration of Compliance with Tests."

49 CFR §173.465, "Type A Packaging Tests."

49 CFR §178.350, "Specification 7A; General Packaging, Type A."

ASTM B 633-98e1, 1998 or later edition, "Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel", American Society of Testing and Materials, West Conshohocken, Pennsylvania.

ASTM D 1056, 2000 or later edition, "Standard Specification for Flexible Cellular Materials-Sponge or Expanded Rubber", American Society of Testing and Materials, West Conshohocken, Pennsylvania.

AWS D1.1, 2008 or later edition, "Structural Welding Code - Steel - 21st Edition", American Welding Society, Miami, FL.

AWS D1.3, 2008 or later edition, "Structural Welding Code - Sheet Steel - 5th Edition", American Welding Society, Miami, FL.

FED-STD-595, 1994 or later edition, "Colors Used in Government Procurement (STD and Color Samples)", Standardization Division, Federal Supply Service, General Services Administration, Washington, D.C.

2.3.1 **Material Form –** DOT-7A Type A, carbon steel container; the intended payload for transport and storage in this container is Material Form No. 4 and is described below:

- Material Form No. 1: Solids--any particle size
- Material Form No. 2: Solids--large particle size only (e.g., sand, concrete, debris, soil, etc.)
- Material Form No. 3: Solids--objects with insignificant, irremovable contamination. (For definition see 49 CFR 173.443, Contamination control.)
- Material Form No. 4: Solids as described in Form No. 3 above, including large, bulky, dense objects with sharp and obtrusive members or components, but having Form No. 1 and/or No. 2 as dispersible contaminates associated with the material (e.g., steel plates, motors, valves, steel pipes, concrete blocks, etc.).

2.3.2 **Welding –** All welds shall conform to American Welding Society (AWS) D1.1 and/or D1.3 as appropriate. Seal welds, whether internal or external shall be continuous and smooth (without ridges, peaks, and/or sharp points). All welding shall be performed and inspected in accordance with AWS Codes and Standards, 1996 editions or later.

2.3.3 **Lid and Lid Lifting Attachments –** The container lid shall include features that allow lifting by use of a forklift and a crane. The lid-lifting components shall be capable of being disabled during transport, or be designed with strength equivalent to that required for lifting attachments per 49 CFR §173.410(b), which requires a minimum safety factor of three against yielding for a fully loaded container. In addition, the lifting attachments must be designed so that failure of any lifting attachment under excessive load would not impair the ability of the package to meet the requirements as a Type A packaging. Forklift pockets (internal dimensions) must be a minimum of 9 in. wide and 4 in. high. These lifting attachments may be located on either the top or the four sides of the lid; however the lifting attachments shall not protrude so as to interfere with stacking of the container.

The lid shall have orientation marks or the SUPPLIER will certify that the lid can be installed in any orientation.

2.3.4 **Gaskets –** The gaskets shall meet the requirements for a DOT Type A packaging as specified in 49 CFR §173.412. The gasket material shall be flexible cellular Ethylene/Propylene/ Diene/Monomer (EPDM) or Neoprene type material and meet ASTM D 1056 Type 2, Class A, Grade 2 or 3 or BUYER-approved alternative. At a minimum, the gasket shall retain its sealing abilities across a temperature range of -40 to 100 °C (-40 to 212 °F).

2.3.5 **Container Testing –** The container must meet or exceed the requirements of a DOT-7A Type A packaging in accordance with 49 CFR §178.350. The results of the test specified in 49 CFR §173.465 shall be documented in a final test report that clearly identifies each requirement and how it is met, including a description of the simulated payload (see Section 4.4.3). Include description of any damage resulting from the testing. Use of analytical evaluations and the methodology shall be approved by the BUYER in writing.

## 3.0 QA REQUIREMENTS, QL-3

**3.1 Safety Class/Quality Level**: Safety Class – General Service (GS)/Quality Level - 3 (QL-3).

**3.2 Quality Assurance (QA) Clauses**: B16, B25, B52, B73, B76, B79, B82.

**3.3** Personnel involved with the design, fabrication, qualification, inspection, and/or handling of these containers or documentation associated with these containers shall be qualified, certified, and trained as required in accordance with the SUPPLIER's Quality Assurance Program.

**3.4** The SUPPLIER shall perform work safely, in a manner that ensures adequate protection for employees, the public, and the environment, and shall be accountable for the safe performance of work. The SUPPLIER shall comply with, and assist the BUYER in recognizing applicable laws, regulations and directives.

The SUPPLIER shall perform all work in accordance with his own safety procedures and in compliance with local, state, and federal requirements.

The SUPPLIER shall be responsible for performing quality workmanship and shall conduct the quality control measures necessary to ensure work conforms to requirements of this PO.

Equipment requiring calibration shall be periodically calibrated in accordance with SUPPLIER tolerances to assure reliable results. The standard used to calibrate the equipment shall be traceable to the National Institute of Standards and Technology or other nationally recognized standard. Material and Test Equipment (M&TE) shall be selected based on the type, range, accuracy, and tolerance needed to accomplish inspections and tests in conformance with the specified requirements of this PO. When calibrated M&TE is used to verify conformance to the requirements of this PO, the M&TE unique identifier, range, accuracy (increments) and calibration expiration date shall be recorded on the inspection and test reports.

When subcontracting any portion of this PO, the SUPPLIER is required to invoke the applicable quality assurance program requirements on the subcontractor as listed below:

The BUYER reserves the right to verify the quality of work at the SUPPLIER's facility, including any subcontractor's facility. Access to a subcontractor's facility shall be requested through the SUPPLIER and verification may be performed jointly with the SUPPLIER.

Where software is used for calculations or analysis the following requirements apply:

The SUPPLIER shall identify the software and version used or applied.

The SUPPLIER shall provide documented verification (performed by competent individual(s) or group(s)) that all computer software utilized in analysis activities produces correct solutions for the encoded mathematical models within defined limits for each parameter employed.

The SUPPLIER shall identify the process by which the data used in computer software applications is transferred into the software function and manipulated. The SUPPLIER shall also identify the propensity for data degradation in the gathering/transferring process to include all calibration calculations performed by the software (line loss calculations, etc.) to mitigate errors.

The SUPPLIER shall define the quality assurance methodology applied to software design, development, and/or procurement efforts, e.g. Nuclear Quality Assurance (NQA-1), Institute of Electrical and Electronics Engineers Standards Association (IEEE-SA), or International Organization for Standardization (ISO) commercial practices. The SUPPLIER shall also identify what industry standard or commercial practice methodology is followed for software lifecycle management to software testing (verification and validation), include reporting and documenting software errors, and version change control.

When subcontracting software functions necessary to meet the requirements of the PO, the SUPPLIER is required to invoke all applicable above mentioned software quality assurance requirements on the subcontractor. 10 CFR 830 Subpart A, "Ensuring Subcontractor and Supplier Quality."

**Procurement Quality Clauses**

**B-16 – Source Inspection** – All items are subject to inspection at the SUPPLIER's facility or SUPPLIER's subcontractor's facility by a BUYER's quality assurance/quality control representative. SUPPLIER shall notify BUYER at least 5 days in advance of the time items will reach any inspection hold point established by the BUYER in the procurement package.

**B-25 – Certified Weld Inspector (CWI) –** SUPPLIER personnel performing weld inspections shall be certified as a CWI in accordance with the requirements specified in AWS QC-1. The following documentation shall be submitted prior to the start of fabrication:

1. Current AWS CWI certificates
2. Current and valid visual acuity examination.
3. Visual weld inspection procedures.

Approval shall be obtained from the BUYER prior to the start of fabrication of the first container.

**B-52 – Inspection and Test Report** – The SUPPLIER shall submit legible, reproducible copies of Inspection/Test Reports. The report(s) shall include the following:

Identification of the applicable inspection and/or test procedure utilized.
Resulting data for all characteristics evaluated, as required by the governing inspection/test procedure.
Traceability to the item inspected/tested (i.e., serial number, part number, lot number, etc.).

Signature of the SUPPLIER's authorized representative or agency which performed the inspections/tests.
One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

**B-73 – Control of Graded Fasteners** – The provisions stated below are the minimum Department of Energy requirements for high strength graded fasteners produced in compliance with national consensus standards (e.g., Society of Automotive Engineers (SAE), ASTM, American Society of Mechanical Engineers (ASME)).

1. Fasteners shall exhibit grade marks and SUPPLIER's identification symbols (headmarks) as required in the specifications referenced in the PO.
2. Any fasteners supplied with headmarks matching those displayed on the attached Suspect/Counterfeit Fastener Headmark list, or facsimiles thereof, shall be deemed to be unacceptable under the terms of this PO.
3. The SUPPLIER shall provide a legible and reproducible copy of the SUPPLIER's Certified Material Test Reports (CMTR). These CMTRs shall report the values of the actual chemical and physical tests performed on the represented fastener lot/material heat. Fastener packaging/ labeling shall be traceable by lot number or other positive means to the CMTRs.
4. Fasteners shall be inspected to verify compliance with the PO requirements. Additionally, fasteners may also be subjected to destructive testing.
5. The SUPPLIER shall provide a Certificate of Conformance which must certify conformance and traceability of supplied materials to the subject PO. The document must be legible and reproducible.

**B-76 – Procurement of Potentially Suspect or Counterfeit Items -**
Notwithstanding any other provisions of this agreement, the SUPPLIER warrants that all items provided to the BUYER shall be genuine, new and unused unless otherwise specified in writing by the BUYER. SUPPLIER further warrants that all items used by the SUPPLIER during the performance of work for the Hanford Site, include all genuine, original, and new components, or are otherwise suitable for the intended purpose. Furthermore, the SUPPLIER shall indemnify the BUYER, its agents, and third parties for any financial loss, injury, or property damage resulting directly or indirectly from material, components, or parts that are not genuine, original, and

unused, or not otherwise suitable for the intended purpose. This includes, but is not limited to, materials that are defective, suspect, or counterfeit; materials that have been provided under false pretenses; and materials or items that are materially altered, damaged, deteriorated, degraded, or result in product failure.

Types of material, parts, and components known to have been misrepresented include (but are not limited to) fasteners; hoisting, shackles, turnbuckles, cable clamps, wire rope, rigging, and lifting equipment; cranes; hoists; valves; pipe and fittings; electrical equipment and devices; plate, bar, shapes, channel members, and other heat treated materials and structural items; welding rod and electrodes; and computer memory modules. The SUPPLIER's warranty also extends to labels and/or trademarks or logos affixed, or designed to be affixed, to items supplied or delivered to the BUYER. In addition, because falsification of information or documentation may constitute criminal conduct, the BUYER may reject and retain such information or items, at no cost, and identify, segregate, and report such information or activities to cognizant Department of Energy officials.

SUPPLIER shall provide a written statement that “all items furnished under this PO are genuine (i.e., not counterfeit) and match the quality, test reports, markings and/or fitness for use required by the PO. The statement shall be on SUPPLIER letterhead and signed by an authorized agent of the SUPPLIER.

Any materials furnished as part of this PO which have been previously found to be suspect/counterfeit by the Department of Energy shall not be accepted. For further information on suspect/counterfeit items, reference the Department of Energy (DOE) Guide DOE G 414.1-3.

**B-79 – Certificate of Conformance –** The Supplier shall provide a legible/reproducible Certification of Conformance (CoC). Supplier’s authorized representative responsible for quality shall sign the CoC.

This CoC shall, as a minimum:

1. Identify the appropriate PO number under which the material, equipment, item or service is being supplied.
2. Each Order/shipment shall include a CoC unique to that shipment.
3. The quantity of each Line Item shipped shall be identified on the CoC.
4. The CoC shall identify the specific procurement requirements to be met by the purchased item or service. The procurement requirements identified shall include any approved changes, waivers, or deviations applicable to the item or service.
5. For OCRWM-related items only, the CoC shall also identify any procurement document requirements that have not been met together with an explanation and the means for resolving the nonconformances.
6. The CoC shall be signed or otherwise authenticated by a supplier’s representative. For Quality Level 1 & 2 and OCRWM-related items, the

person signing the CoC shall be the one who is responsible for this QA function and whose responsibilities and position are described in the supplier's QA program.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item shipped. For subsequent shipments on this PO, reference may be made to documentation provided with earlier shipments, instead of duplicating such documentation.

**B-82 – Recommended Spare Parts Listing -** The SUPPLIER shall submit, with or prior to item shipment, a recommended spare parts list. The list shall provide the name and address of the original SUPPLIER of the replacement part, and the part's drawings, specification, or catalog identity including applicable change or revision information.

**Other Quality Clauses**

**Nonconformance Documentation and Reporting –** All nonconformances identified at the SUPPLIER's facility with a proposed disposition of "Accept" or "Repair" shall be approved by the BUYER before any corrective action is taken by the SUPPLIER on the nonconformance. All non-conformances shall be assigned a unique identifier.

Accept: A disposition that a nonconforming item will satisfactorily perform its intended function without repair or rework.

Repair: A disposition requiring the processing of a nonconforming item so that its characteristics meet the requirements listed in the disposition statement of the nonconformance report.

Non-conformances shall be documented by the SUPPLIER on the SUPPLIER's nonconformance form. After documenting the nonconformance, disposition and technical justification, the form shall be forwarded to the BUYER.

After the recommended disposition has been evaluated by the BUYER, the form shall be returned to the SUPPLIER with a disposition of approval or rejection. The SUPPLIER may take corrective action on the nonconformance only after the form is approved.

All applicable accept, and repair non-conformance's, shall be documented and submitted on the SUPPLIER's Certificate of Conformance.

The SUPPLIER's nonconformance form shall be shipped with the affected item.

**Identification of Age Control Items (Gasket Material Only) –** The gasket material provided under this PO shall have a minimum of one year of shelf life remaining at the time of shipment to the Buyer. The Supplier shall identify the gasket material,

having limited shelf life, with the cure date or date of manufacture and the expiration date. The Supplier shall specify any storage temperatures, humidity and environmental conditions which should be maintained for the gasket material.

**Welding Procedures and Qualifications** – Welding procedures and personnel shall be qualified in accordance with the applicable AWS or ASME specifications as specified in the PO. Prior to the start of fabrication of the first containers, the SUPPLIER shall submit for BUYER approval copies of all welding procedures, Procedure Qualification Records, and Welder Qualification Records to be employed in the performance of this PO.

Changes and revisions to welding documentation shall be submitted to the BUYER for review and approval prior to use. When subcontracting any portion of this PO, the SUPPLIER is required to invoke the applicable quality assurance program requirements on the subcontractor.

**Records shall be assembled in the following format**:

Section A – CoC
Section B – Material Certifications
Section C – Travelers (if required)
Section D – NCRs
Section E – As-Built Drawings
Section F – Receipt/Source Inspection Records (Vendor)
Section G – Test Equipment Certifications
Section H – Engineering Calculations, DOT Certification, and FEA
Section I – Inspection and Test Reports
Section J – Miscellaneous

### 3.5 Suspect/Counterfeit Fastener Headmark List

# Headmark List

**All Grade 5 and Grade 8 Fasteners of Foreign Origin Which Do Not Bear Any Manufacturers' Headmarks:**

Grade 5 Grade 8

**Grade 5 Fasteners with the Following Manufacturers' Headmarks:**

| MARK | MANUFACTURER | MARK | MANUFACTURER |
|---|---|---|---|
| J | Jinn Her (TW) | KS | Kosaka Kogyo (JP) |

**Grade 8 Fasteners with the Following Manufacturers' Headmarks:**

| MARK | MANUFACTURER | MARK | MANUFACTURER |
|---|---|---|---|
| A | Asahi Mfg (JP) | KS | Kosaka Kogyo (JP) |
| NF | Nippon Fasteners (JP) | RT | Takai Ltd (JP) |
| H | Hinomoto Metal (JP) | FM | Fastener Co of Japan (JP) |
| M | Minamida Sieybo (JP) | KY | Kyoei Mfg (JP) |
| MS | Minato Kogyo (JP) | J | Jinn Her (TW) |
| Hollow Triangle | Infasco (CA TW JP YU) (Greater than 1/2 inch dia) | | |
| E | Daiei (JP) | UNY | Unytite (JP) |

**Grade 8.2 Fasteners with the Following Manufacturers' Headmarks:**

| MARK | MANUFACTURER |
|---|---|
| KS | Kosaka Kogyo (JP) |

**Grade A325 Fasteners (Bennet Denver Target Only) with the Following Headmarks:**

| | MARK | MANUFACTURER |
|---|---|---|
| Type 1 | A325 KS | Kosaka Kogyo (JP) |
| Type 2 | | |
| Type 3 | | |

# 4.0 DELIVERABLES

Legible reproducible documentation is required in accordance with the applicable PO. A copy of the electronic media [e.g., Microsoft® (MS) Word®, Adobe® Acrobat® portable document format (PDF)] is preferred if available. If electronic media is not available, *two copies* of each of the following items shall be provided with the proposal:

***NOTE:*** *Submittals for Sections 4.1 and 4.2 that have been previously submitted and approved do not have to be resubmitted. A statement identifying the previous submittal shall be provided that verifies the submittals are still valid (e.g., continuity of service matrix).*

## 4.1 Proposal Data Submittal

Container design/assembly drawings that include but are not limited to approximate dimensions (internal and external), volume capacity, container tare weight, maximum payload weight, maximum gross weight, materials of construction, gauge thickness of carbon steel, and details of the closure system.

Supporting test reports and/or engineering evaluations and any necessary test documentation (i.e., Type A performance tests, structural, lifting attachments, vibration, stack test and closure procedures) to show compliance with 49 CFR §178.350. Engineering evaluations must be completed using conservative formulas from recognized standards. Examples of this documentation are acceptable if actual results are not available.

## 4.2 Prefabrication Submittal

4.2.1 The following shall be provided to the BUYER for approval prior to fabrication commencing. The BUYER may allow a deviation; however, all submittals under this section will be approved by the BUYER before acceptance of the first unit.

4.2.2 Gasket material specifications and a copy of the Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS) for the vendor recommended gasket adhesive.

4.2.3 Final design drawings: These drawings shall provide the necessary details to fabricate the containers which include sizes, dimensional tolerance block, AWS weld symbols, general notes, weld and weld material requirements, seal/gasket material, and surface finishes.

4.2.4 Fabrication and delivery schedule.

4.2.5 Weld procedures and welder qualification records for review and approval.

4.2.6 Documentation for the certification of the SUPPLIER's CWI for review and approval.

4.2.7 Draft of closure instruction label for approval (See Section 1 – Design Requirements: *Attachment 1-1: Closure Instructions Label*).

4.2.8 Identification of paint system to be used, copy of technical bulletin regarding the paint system, and the applicable MSDS or SDS.

**4.3 Shipment Data Submittal**

Legible reproducible documentation is required. A copy of the electronic media (e.g., MS Word, Adobe Acrobat PDF) is preferred if available. If electronic media is not available, two copies of each of the following items shall be provided with each order/shipment.

4.3.1 SUPPLIER's CoC showing the following:

4.3.1.1 BUYER's PO number.

4.3.1.2 Container serial number.

4.3.1.3 Quantity of containers provided.

4.3.1.4 Certifying statement that the container(s) meet(s) the PO requirements.

4.3.1.5 A written statement that items furnished under this PO are genuine (i.e., not counterfeit) and match the quality, test reports, markings, and/or fitness for use required by the PO (B76).

4.3.1.6 If no non-conformances are generated, state as such on the CoC, otherwise they must be listed on the CoC.

4.3.1.7 Statement documenting that each container was welded per AWS D1.1 and/or D1.3 as applicable and inspected as required to verify compliance.

4.3.1.8 Include any approved changes, waivers, or deviations applicable to the containers supplied.

4.3.1.9 Statement that each container "complies with the requirements of 49 CFR 178.350.

4.3.1.10 SUPPLIER's authorized representative responsible for quality shall sign the CoC.

4.3.2 The final as-built container drawings (8½ in. x 11 in. minimum).

4.3.3 The final test report and/or engineering evaluation and any other necessary test documentation (e.g., structural, lifting attachments, vibration, stack test and loading/closure procedure) to demonstrate that the design meets 49 CFR §178.350. The free drop and stack tests 49 CFR §173.465(c) and (d) shall be physically tested unless written BUYER approval is provided to use other methods; all other requirements may be tested or evaluated in accordance with 49 CFR §173.461.

4.3.4 Control of Graded Fasteners. The fastener SUPPLIER shall provide a CoC that certifies conformance and traceability of supplied materials to the subject PO.

4.3.5 Identify expiration date and environmental storage conditions of items having a limited shelf life, and that these items were maintained in accordance with the storage conditions while in possession of the SUPPLIER.

4.3.6 Gasket replacement instructions to include removal, surface preparation, and installation.

4.3.7 Container closure instructions, which shall include torque values and tightening sequence.

4.3.8 B52 Inspection and Test Report. The report shall be legible and reproducible and shall include the following:

- Identification of the applicable inspection, and/or test procedure utilized.
- Resulting data for all characteristics evaluated, as required by the governing inspection/test procedure.
- Traceability to items inspected or tested, (i.e., serial number, part number etc.).

Signature of the SUPPLIER's authorized representative or agency that performed the inspection or test is required.

4.3.9 B82 Recommended Spare Parts Listing. The SUPPLIER shall submit, with the item shipment, a recommended spare part list. The list shall provide the name and address of the original supplier of the replacement part and the part's drawing, specification, or catalog identity including applicable change or revision information.

**4.4** All of the requirements identified below shall be adhered to unless the BUYER indicates otherwise.

- The container shall be shipped with a minimum of 4 fasteners securing the lid to the body of the container.

- The gaskets shall not be installed, but shall be secured inside a weatherproof plastic bag along with the Rieke plugs and closure hardware that shall be placed inside the container and tied to a closure bolt.

- All closure hardware installed on the container shall be secured to prevent vibration-induced loosening during transportation.

- The container shall be protected from damage during handling and transportation activities, and secured to the transport vehicle in a manner that will not mar or damage the coating.

- Tiedown straps must not be allowed to come into direct contact with coated surfaces during transport.

- The container may be tarped to provide protection from inclement weather and road hazards encountered during transport to the BUYER's facility. If used, tarps shall be secured to prevent damage to the coating from tarp movement during transportation.

- Vent ports in the container shall be protected from ingress of debris prior to shipment.

- Container must be vented to allow barometric breathing.

***NOTE:*** *If shipping plugs are used, closure instructions must require that they be removed and that the provided plug(s) installed and/or appropriate filters installed.*

***NOTE:*** *Minor scratches and/or scuffs to the coating are acceptable as long as the substratum metal is not damaged.*

### 4.5 Submittal Summary DOT Specification 7A Type A Containers

| **Checklist for DOT Specification 7A Type A Containers** | **Review** | | | |
|---|---|---|---|---|
| | **Acc.** | **Rej.** | **Init.** | **Date** |
| **Proposal Data Submittal** (One time only) | | | | |
| Container design/assembly drawings that include but are not limited to approximate dimensions (internal and external), volume capacity, container tare weight, maximum payload weight, maximum gross weight, materials of construction, gauge thickness of carbon steel, and details of the closure system. | | | | |
| Supporting test reports and/or engineering evaluations and any necessary test documentation (i.e., Type A performance tests, structural, lifting attachments, vibration, stack test and closure procedures) to show compliance with 49 CFR §178.350. Engineering evaluations must be completed using conservative formulas from recognized standards. Examples of this documentation are acceptable if actual results are not available. | | | | |
| **Prefabrication Submittal** | | | | |
| Gasket material specifications and a copy of the MSDS or SDS for the SUPPLIER recommended gasket adhesive. | | | | |
| Final design drawings: These drawings shall provide the necessary details to fabricate the containers which include sizes, dimensional tolerance block, AWS weld symbols, general notes, weld and weld material requirements, seal/gasket material, and surface finishes. | | | | |
| Fabrication and delivery schedules. | | | | |
| Welder procedures and welder qualification reports for review and approval. | | | | |
| Documentation for the certification of the SUPPLIER'S Certified Weld Inspector (CWI) for review and approval. | | | | |
| Draft of closure instruction label for approval. | | | | |
| Identification of paint system to be used, copy of technical bulletin regarding the paint system, and the applicable MSDS or SDS. | | | | |
| **Fabrication Submittal** | | | | |
| Submittal of any nonconformance's requiring an accept-as-is or repair disposition for BUYER approval. | | | | |
| **Shipment Data Submittal** | | | | |
| Manufacturer's Certificate of Conformance (CoC) showing the following:<br>a. BUYER's Purchase Order (PO) number.<br>b. Container serial number(s).<br>c. Quantity of containers provided. | | | | |

| Checklist for DOT Specification 7A Type A Containers | Review | | | |
|---|---|---|---|---|
| | Acc. | Rej. | Init. | Date |
| d. Certifying statement that the container(s) meet(s) the PO requirements.<br>e. A written statement that items furnished under this PO are genuine (i.e., not counterfeit) and match the quality, test reports, markings (Appendix A), and/or fitness for use required by the PO (B76).<br>f. If no non-conformances are generated, state as such on the CoC, otherwise they must be listed on the CoC.<br>g. Statement documenting that each container was welded per AWS D1.1 and/or D1.3 as applicable and inspected as required to verify compliance.<br>h. Statement that storage conditions were maintained per the gasket manufacturer's recommendations.<br>i. Statement that each container "complies with the requirements of 49 CFR 178.350.<br>j. SUPPLIER's authorized representative responsible for quality shall sign the CoC.<br>NOTE: One CoC may contain multiple units/items. | | | | |
| The final as-built container drawings (8½ in. x 11 in. minimum). | | | | |
| The final test report and/or engineering evaluation and any other necessary test documentation (e.g., structural, lifting attachments, vibration, stack test and loading/closure procedure) to demonstrate that the design meets 49 CFR §178.350. The free drop and stack tests 49 CFR §173.465(c) and (d) shall be physically tested unless written BUYER approval is provided to use other methods; all other requirements may be tested or evaluated in accordance with 49 CFR §173.461. | | | | |
| B73 Control of Graded Fasteners. The fastener SUPPLIER shall provide a CoC that certifies conformance and traceability of supplied materials to the subject PO. | | | | |
| Identify expiration date and environmental storage conditions of items having a limited shelf life, and that these items were maintained in accordance with the storage conditions while in possession of the SUPPLIER. | | | | |
| Gasket replacement instructions to include removal, surface preparation, and installation. | | | | |
| Container closure instructions, which shall include torque values and tightening sequence. | | | | |

| **Checklist for DOT Specification 7A Type A Containers** | **Review** | | | |
|---|---|---|---|---|
| | **Acc.** | **Rej.** | **Init.** | **Date** |
| B43 Identify expiration date and environmental storage conditions for items having a limited shelf life. | | | | |
| B52 Inspection and Test Report. The report shall be legible and reproducible and shall include the following:<br>• Identification of the applicable inspection, and/or test procedure utilized (leak test procedure results are the only required test and inspections).<br>• Resulting data for all characteristics evaluated, as required by the governing inspection/test procedure.<br>• Traceability to items inspected or tested, (i.e., serial number, part number etc). | | | | |
| B82 Recommended Spare Parts Listing. The SUPPLIER shall submit, with the item shipment, a recommended spare part list. The list shall provide the name and address of the original SUPPLIER of the replacement part and the part's drawing, specification, or catalog identity including applicable change or revision information.<br>NOTE: Only needed once. | | | | |