

# Type IP-1 Packaging Compliance Checklist (Formerly CHPRC-01675, Rev 1)

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

Contractor for the U.S. Department of Energy  
under Contract 89303320DEM000030



**P.O. Box 1464**  
**Richland, Washington 99352**

# Type IP-1 Packaging Compliance Checklist (Formerly CHPRC-01675 Rev 1)

A. E. Bridges  
Central Plateau Cleanup Company LLC (CPCC)

S. D. McGaughey  
Central Plateau Cleanup Company LLC (CPCC)

Date Published  
March 2021

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

Contractor for the U.S. Department of Energy  
under Contract 89303320DEM000030

 **CPC** Co  
Central Plateau  
Cleanup Company  
**P.O. Box 1464**  
**Richland, Washington 99352**



**APPROVED**  
By Janis Aardal at 7:34 am, Mar 17, 2021

Release Approval

Date

Release Stamp

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

Total pages: 23

Central Plateau Cleanup Company  
**RECORD OF REVISION (ROR)**

1. Document Number:  
 CPCC-00070

2. Title:  
 Type IP-1 Packaging Compliance Checklist

**CHANGE CONTROL RECORD**

3. Revision	4. Description of Change - Replace, Add, and Delete Pages	Authorized for Release	
		5. DA/TA	Date
0 <b>RS</b>	Revision to document company name change from CHPRC (ECR-16-000653 / CHPRC-01675 Rev 1) to CPCC (ECR-21-000260 / CPCC-00070 Rev. 0).	DA	Mar 16, 2021 <small>Digitally signed by Stephen D. Mcgaughey, Stephen D. Mcgaughey, DN: cn=Stephen D. Mcgaughey, o=CPCC</small>

# INDUSTRIAL PACKAGING TYPE 1 (TYPE IP-1) COMPLIANCE CHECKLIST FOR: \_\_\_\_\_

## 1.0 PURPOSE AND SCOPE

The purpose of this compliance checklist is to ensure DOT Industrial Packaging Type 1 (Type IP-1) packages procured for use on the Hanford Site comply with the U.S. Department of Transportation (DOT) regulations provided in 49 CFR Subchapter C, "Hazardous Materials Regulations." This checklist identifies the applicable requirements from the regulations and provides the supplier an effective method to reference the necessary documentation for compliance.

This DOT Type IP-1 packaging compliance checklist does not include requirements for the following types of packaging options:

- Transportation by aircraft: 49 CFR §173.27
- Tank cars, or cargo tanks: 49 CFR §173.31, §173.32, §173.33, §173.35

## 2.0 AUTHORIZED CONTENTS

### 2.1 Radiological

The shipping container is authorized to contain radioactive material with low specific activity (LSA) or surface contaminated objects (SCO), in accordance with 49 CFR §173.427, or can be used for onsite shipments in accordance with DOE/RL-2001-36, *Hanford Sitewide Transportation Safety Document*.

### 2.2 Weight/Density

Identify the total weight in kilograms for the material in which the radioactivity is distributed.

Total weight of the contents \_\_\_\_\_ kilograms

Identify the density of the load and if any concentrated loads are acceptable.

Density of the contents \_\_\_\_\_ (kg/m<sup>3</sup>)

Density of authorized concentrated loads \_\_\_\_\_ (kg/m<sup>3</sup>)

Notes:

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

### **2.2.1 Payload Material Description**

Determine the physical form of the allowable contents. When solids are authorized, identify the acceptable form 1, 2, 3 or 4 as described below. For heavy, bulky materials (e.g., concrete chunks, motors, and pumps), equipment/materials with sharp corners or protrusions, or material/equipment geometries that could result in highly localized forces, ensure that the contents are securely fastened/positioned within the package to prevent damage to the packaging. Identify the density of the material. For liquids identify the specific gravity and viscosity.

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

Physical Form:

Allowable Contents	Representative Contents During Testing	Possible Package Contents as Authorized by Shipper After Analysis
<input type="checkbox"/>	Material Form No. 1 Solids—any particle size	Includes all solid particulate contamination. A packaging qualified for use with this material form is expected to contain radioactive contents of any representative particulate form (from the smallest physically possible particle size to the largest particle that will fit within the packaging).
<input type="checkbox"/>	Material Form No. 2 Solids—large particle size only (i.e., sand, concrete, debris, soil)	Contents of a corresponding particle size, such as soil or construction debris. As a cautionary note when loading the packaging, if the content has sharp edges the shipper/offeror should ensure the sharp edges are covered with cushioning material so as not to puncture the packaging [49 CFR 173.24a(a)]. Glass or plastic laboratory ware having fine particulates available for dispersion <b>would not</b> fit this category and would require a packaging qualified for fine particulate, Form No. 1.
<input type="checkbox"/>	Material Form No. 3 Solids—material with no removable or dispersible contamination (see 49 CFR 173.443)	(1) Metals with activation products; (2) forms of metals/alloys/compounds of uranium and thorium; (3) solid materials with the radioactive material firmly fixed in place, possibly by the application of a fixing medium such as paint; (4) solidified material.  As a cautionary note when loading the packaging, if the content has sharp edges the shipper/offeror should ensure the sharp edges are covered with cushioning material so as not to puncture the packaging [49 CFR 173.24a(a)].
<input type="checkbox"/>	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 contaminants associated with the material (e.g., steel plates, motors, valves, steel pipes, concrete blocks, etc.).	(1) Metals with activation products; (2) forms of metals/alloys/compounds of uranium and thorium; (3) solid materials with the radioactive material firmly fixed in place, possibly by the application of a fixing medium such as paint; (4) solidified material.  As a cautionary note when loading the packaging, if the content has sharp edges the shipper/offeror should ensure the sharp edges are covered with cushioning material so as not to puncture the packaging [49 CFR 173.24a(a)].
<input type="checkbox"/>	Liquids Specific Gravity: _____ Viscosity: _____	Identify the liquid(s) used during certification and testing.

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

Additional Description:

### 2.2.2 Thermal

If evaluated, provide the maximum decay heat and/or total heat load allowed in the container.

Total wattage from decay heat: \_\_\_\_\_ (watts/package)

Total wattage from other sources: \_\_\_\_\_ (watts/package)

Total wattage of contents: \_\_\_\_\_ (watts/package)

Notes:

### 2.2.3 Chemical

Identify any non-radioactive hazardous materials that have been evaluated for shipment in the container. This list of hazardous materials could include the identification of materials that are explosive, flammable, poisonous, combustible, dangerous when wet, oxidizers, corrosives, irritants, or another hazard. If no hazardous materials have been evaluated for acceptability, state that. If certain hazardous materials or other materials are known to be incompatible with the packaging, identify those materials.

#### Chemical Compatibility

List the chemical properties that may make the material being shipped incompatible with common packaging materials.

Hazardous Materials Acceptable for Shipment in Container:

Hazardous or Other Materials Known to be Incompatible with Container:

### 3.0 REGULATORY REQUIREMENTS

All regulations applicable to Type IP-1 packagings that are applicable to container manufacturers are listed below (excluding those items identified in Section 1.0). In the spaces provided, please indicate how each regulatory requirement is met for the container. If the requirement is met by reference to other tests, copies of those test reports, as well as a detailed evaluation that provides the basis for utilizing the conclusions of those other tests is required.

Many sections of these 49 CFR 173 sections only apply to the shippers, and these sections have been removed to reduce the size of this listing. However, some parts of the listed regulations may still not apply to manufacturers of specific items. In those instances, please indicate that these regulations are “not applicable” and justify that conclusion.

#### 3.1 49 CFR §173.24 General Requirements for Packagings and Packages

##### 3.1.1 173.24(a) Applicability

*(a) Applicability. Except as otherwise provided in this subchapter, the provisions of this section apply to--*

- (1) Bulk and non-bulk packagings;*
- (2) New packagings and packagings which are reused; and*
- (3) Specification and non-specification packagings.*

All Type IP-1 packagings fall into one or more of the identified categories. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

Addressed in:       Drawing                       Analysis Report  
                          Specification                       Test Report  
                          Operating Instruction               Other

Specify:

##### 3.1.2 173.24(b) Containment

*(b) Each package used for the shipment of hazardous materials under this subchapter shall be designed, constructed, maintained, filled, its contents so limited, and closed, so that under conditions normally incident to transportation--*

- (1) Except as otherwise provided in this subchapter, there will be no identifiable (without the use of instruments) release of hazardous materials to the environment;*

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

*(2) The effectiveness of the package will not be substantially reduced; for example, impact resistance, strength, packaging compatibility, etc. must be maintained for the minimum and maximum temperatures, changes in humidity and pressure, and shocks, loadings and vibrations, normally encountered during transportation;*

These requirements apply to Type IP-1 packagings. Documentation of the ability of the packaging to meet the more severe requirements of 49 CFR §173, Subpart I, can be used to document compliance. Indicate below the type of documentation that shows these requirements are met and where the documentation can be found.

Addressed in:       Drawing                       Analysis Report  
                          Specification                 Test Report  
                          Operating Instruction       Other

Specify:

**3.1.3 173.24(d) Specification Packagings and UN Standard Packagings Manufactured Outside the U.S.--**

*(d) Specification packagings and UN standard packagings manufactured outside the U.S.--*

*(1) Specification packagings. A specification packaging, including a UN standard packaging manufactured in the United States, must conform in all details to the applicable specification or standard in part 178 or part 179 of this subchapter.*

A Type IP-1 packaging is a specification packaging. Documentation of the ability of the package to meet the packaging requirements identified in 49 CFR §173.411 will document compliance with this requirement. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

Addressed in:       Drawing                       Analysis Report  
                          Specification                 Test Report  
                          Operating Instruction       Other

Specify:

*(2) UN standard packagings manufactured outside the United States. This is assumed to not apply. If a foreign-built packaging is utilized, this section must be completed.*

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

**3.1.4 173.24(f) Closures**

*(f) Closures.*

*(1) Closures on packagings shall be so designed and closed that under conditions (including the effects of temperature, pressure and vibration) normally incident to transportation--*

*(i) Except as provided in paragraph (g) of this section, there is no identifiable release of hazardous materials to the environment from the opening to which the closure is applied; and*

*(ii) The closure is leakproof and secured against loosening. For air transport, stoppers, corks or other such friction closures must be held in place by positive means.*

*(2) Except as otherwise provided in this subchapter, a closure (including gaskets or other closure components, if any) used on a specification packaging must conform to all applicable requirements of the specification and must be closed in accordance with information, as applicable, provided by the manufacturer's notification required by §178.2 of this subchapter.*

These requirements apply to Type IP-1 packagings. Indicate below the type of documentation that shows the requirements are met and where the documentation can be found.

Addressed in:       Drawing                       Analysis Report  
                          Specification                 Test Report  
                          Operating Instruction        Other

Specify:

**3.1.5 173.24(g) Venting**

*(g) Venting. Venting of packagings, to reduce internal pressure which may develop by the evolution of gas from the contents, is permitted only when--*

*(1) Except for shipments of cryogenic liquids as specified in § 173.320(c) and of carbon dioxide, solid (dry ice), transportation by aircraft is not involved;*

*(2) Except as otherwise provided in this subchapter, the evolved gases are not poisonous, likely to create a flammable mixture with air or be an asphyxiant under normal conditions of transportation;*

*(3) The packaging is designed so as to preclude an unintentional release of hazardous materials from the receptacle;*

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

*(4) For bulk packagings, other than IBCs, venting is authorized for the specific hazardous material by a special provision in the §172.101 table or by the applicable bulk packaging specification in part 178 of this subchapter; and*

*(5) Intermediate bulk packagings (IBCs) may be vented when required to reduce internal pressure that may develop by the evolution of gas subject to the requirements of paragraphs (g)(1) through (g)(3) of this section. The IBC must be of a type that has successfully passed (with the vent in place) the applicable design qualification tests with no release of hazardous material.*

These requirements apply to Type IP-1 packagings that are vented. The requirements are not applicable to nonvented Type IP-1 packagings. Based on the design, determine if the requirements apply or do not apply. If the requirements apply, indicate below the type of documentation that shows the requirements are met and where the documentation can be found.

- This requirement:     Does not apply.                       Applies; indicate the following.
- Addressed in:         Drawing     Analysis Report
- Specification                                       Test Report
- Operating Instruction                       Other

Specify:

### **3.2 49 CFR §173.24a Additional General Requirements for Non-bulk Packagings and Packages**

#### **3.2.1 173.24a(a) Packaging design**

*(a) Packaging design. Except as provided in §172.312 of this subchapter:*

*(1) Inner packaging closures. A combination packaging containing liquid hazardous materials must be packed so that closures on inner packagings are upright.*

This requirement applies to Type IP-1 packagings that meet the definition of a combination packaging and are used to ship liquids. The requirement does not apply to packagings used to ship nonliquids. Based on the packaging type and load, indicate if the requirement applies or does not apply. If the requirement applies, indicate below the type of documentation that shows the requirement is met and where the documentation can be found.

CPC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

- This requirement:     Does not apply.                       Applies; indicate the following.
- Addressed in:         Drawing                                       Analysis Report
- Specification                                 Test Report
- Operating Instruction                       Other

Specify:

*(2) Friction. The nature and thickness of the outer packaging must be such that friction during transportation is not likely to generate an amount of heat sufficient to alter dangerously the chemical stability of the contents.*

This requirement applies to non-bulk Type IP-1 packagings. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

- Addressed in:         Drawing                                       Analysis Report
- Specification                                 Test Report
- Operating Instruction                       Other

Specify:

*(3) Securing and cushioning. Inner packagings of combination packagings must be so packed, secured and cushioned to prevent their breakage or leakage and to control their shifting within the outer packaging under conditions normally incident to transportation. Cushioning material must not be capable of reacting dangerously with the contents of the inner packagings or having its protective properties significantly weakened in the event of leakage.*

This requirement applies to Type IP-1 packagings that meet the definition of a combination packaging. The requirement does not apply to non-combination packagings. Based on the packaging type, indicate if the requirement applies or does not apply. If the requirement applies, indicate below the type of documentation that shows the requirement is met and where the documentation can be found.

CPC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

- This requirement:     Does not apply.                       Applies; indicate the following.
- Addressed in:         Drawing                                       Analysis Report
- Specification                                 Test Report
- Operating Instruction                       Other

Specify:

*(4) Metallic devices. Nails, staples and other metallic devices shall not protrude into the interior of the outer packaging in such a manner as to be likely to damage inner packagings or receptacles.*

This requirement applies to Type IP-1 packagings that use devices that could protrude into the interior of the outer packaging. Based on the packaging design, indicate if the requirement applies or does not apply. If the requirement applies, indicate below the type of documentation that shows the requirement is met and where the documentation can be found.

- This requirement:     Does not apply.                       Applies; indicate the following.
- Addressed in:         Drawing                                       Analysis Report
- Specification                                 Test Report
- Operating Instruction                       Other

Specify:

*(5) Vibration. Each non-bulk package must be capable of withstanding, without rupture or leakage, the vibration test procedure specified in §178.608 of this subchapter.*

This requirement applies to non-bulk Type IP-1 packagings. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

- Addressed in:         Drawing                                       Analysis Report
- Specification                                 Test Report
- Operating Instruction                       Other

Specify:

### 3.3 49 CFR §173.24b Additional General Requirements for Bulk Packagings

#### 3.3.1 173.24b(c) Pressurized Loading

*(c) Air pressure in excess of ambient atmospheric pressure may not be used to load or unload any lading which may create an air-enriched mixture within the flammability range of the lading in the vapor space of the tank.*

This requirement applies to Type IP-1 packagings that meet the definition of bulk packaging. Based on the packaging design and load, indicate if the requirement applies or does not apply. If the requirement applies, indicate below the type of documentation that shows the requirement is met and where the documentation can be found.

This requirement:	<input type="checkbox"/> Does not apply.	<input type="checkbox"/> Applies; indicate the following.
Addressed in:	<input type="checkbox"/> Drawing	<input type="checkbox"/> Analysis Report
	<input type="checkbox"/> Specification	<input type="checkbox"/> Test Report
	<input type="checkbox"/> Operating Instruction	<input type="checkbox"/> Other

Specify:

#### 3.3.2 173.24b(e) Stacking of IBCs and Large Packagings

*(e) Stacking of IBCs and Large Packagings.*

*(1) IBCs and Large Packagings not designed and tested to be stacked. No packages or freight (hazardous or otherwise) may be stacked upon an IBC or a Large Packaging that was not designed and tested to be stacked upon.*

*(2) IBCs and Large Packagings designed and tested to be stacked. The superimposed weight placed upon an IBC or a Large Packaging designed to be stacked may not exceed the maximum permissible stacking test mass marked on the packaging.*

The requirements are intended to cover the use of Intermediate Bulk Containers and Large packagings, and are not necessarily intended for Type IP-1 packagings. Consideration of the above restrictions should be given.

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

- This requirement:     Does not apply.                       Applies; indicate the following.
- Addressed in:         Drawing                                       Analysis Report
- Specification                                 Test Report
- Operating Instruction                       Other

Specify:

### 3.4 49 CFR §173.410 General Design Requirements

#### 3.4.1 173.410(a) Handling and Securing

*In addition to the requirements of subparts A and B of this part, each package used for the shipment of Class 7 (radioactive) materials must be designed so that--*

*(a) The package can be easily handled and properly secured in or on a conveyance during transport.*

This requirement applies to Type IP-1 packagings. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

- Addressed in:         Drawing                                       Analysis Report
- Specification                                 Test Report
- Operating Instruction                       Other

Specify:

#### 3.4.2 173.410(b) Lifting Attachments

*(b) Each lifting attachment that is a structural part of the package must be designed with a minimum safety factor of three against yielding when used to lift the package in the intended manner, and it must be designed so that failure of any lifting attachment under excessive load would not impair the ability of the package to meet other requirements of this subpart. Any other structural part of the package which could be used to lift the package must be capable of being rendered inoperable for lifting the package during transport or must be designed with strength equivalent to that required for lifting attachments.*

These requirements apply to Type IP-1 packagings. Indicate below the type of documentation that shows these requirements are met and where the documentation can be found.

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

- Addressed in:       Drawing                               Analysis Report  
                          Specification                               Test Report  
                          Operating Instruction                               Other

Specify:

**3.4.3 173.410(c) External Surface Protrusions, Decontamination**

*(c) The external surface, as far as practicable, will be free from protruding features and will be easily decontaminated.*

These requirements apply to Type IP-1 packagings. Indicate below the type of documentation that shows these requirements are met and where the documentation can be found.

- Addressed in:       Drawing                               Analysis Report  
                          Specification                               Test Report  
                          Operating Instruction                               Other

Specify:

**3.4.4 173.410(d) Outer Layer - Pockets, Crevices (Water Collection)**

*(d) The outer layer of packaging will avoid, as far as practicable, pockets or crevices where water might collect.*

- Addressed in:       Drawing                               Analysis Report  
                          Specification                               Test Report  
                          Operating Instruction                               Other

Specify:

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

**3.4.5 173.410(e) Features Added at Time of Transport**

*(e) Each feature that is added to the package will not reduce the safety of the package.*

This requirement applies to Type IP-1 packagings that have features added at the time of shipment. Based on the packaging design, indicate below if the requirement applies or does not apply. If the requirement applies, indicate the type of documentation that shows this requirement is met and where the documentation can be found.

This requirement:     Does not apply.                       Applies; indicate the following.  
Addressed in:         Drawing     Analysis Report  
                              Specification     Test Report  
                              Operating Instruction     Other

Specify:

**3.4.6 173.410(f) Acceleration, Vibration**

*(f) The package will be capable of withstanding the effects of any acceleration, vibration or vibration resonance that may arise under normal conditions of transport without any deterioration in the effectiveness of the closing devices on the various receptacles or in the integrity of the package as a whole and without loosening or unintentionally releasing the nuts, bolts, or other securing devices even after repeated use (see §§173.24, 173.24a, and 173.24b).*

These requirements apply to Type IP-1 packagings. Indicate below the type of documentation that shows these requirements are met and where the documentation can be found.

Addressed in:         Drawing     Analysis Report  
                              Specification     Test Report  
                              Operating Instruction     Other

Specify:

**3.4.7 173.410(g) Physical/Chemical Compatibility, Irradiation**

*(g) The materials of construction of the packaging and any components or structure will be physically and chemically compatible with each other and with the package contents. The behavior of the packaging and the package contents under irradiation will be taken into account.*

This requirement applies to Type IP-1 packagings. The container manufacturer can only attest that the packaging and any components or structure are physically and chemically compatible

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

with each other. The shipper is responsible for ensuring compatibility with the package contents. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

Addressed in:       Drawing                               Analysis Report  
                          Specification                               Test Report  
                          Operating Instruction                               Other

Specify:

### 3.4.8 173.410(h) Valves - Protection, Enclosure

*(h) All valves through which the package contents could escape will be protected against unauthorized operation.*

This requirement applies to Type IP-1 packagings that have valves. Based on the packaging design, determine if the requirement applies or does not apply. If the requirement applies, identify the type of documentation that shows this requirement is met and where the documentation can be found.

This requirement:       Does not apply.                               Applies; indicate the following.  
Addressed in:               Drawing     Analysis Report  
                                  Specification     Test Report  
                                  Operating Instruction     Other

Specify:

## 3.5 49 CFR §173.411 Industrial Packagings

### 3.5.1 173.411(a) General

*(a) General. Each industrial packaging must comply with the requirements of this section which specifies packaging tests, and record retention applicable to Industrial Packaging Type 1 (Type IP-1), Industrial Packaging Type 2 (Type IP-2), and Industrial Packaging Type 3 (Type IP-3).*

This requirement applies to Type IP-1 packagings. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

Addressed in:       Drawing                       Analysis Report  
                          Specification                 Test Report  
                          Operating Instruction       Other

Specify:

### 3.5.2 173.411(b)(1) Type IP-1 Certification and Tests

*(1) Each Type IP-1 must meet the general design requirements prescribed in §173.410.*

This requirement applies to Type IP-1 packagings. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

Addressed in:       Drawing                       Analysis Report  
                          Specification                 Test Report  
                          Operating Instruction       Other

Specify:

## 3.6 49 CFR §178.2 Applicability and Responsibility

### 3.6.1 178.2(c) Notification

*(c) Notification.*

*(1) Except as specifically provided in §§ 178.337–18, 178.338-19, and 178.345–15 of this part, the manufacturer or other person certifying compliance with the requirements of this part, and each subsequent distributor of that packaging must:*

*(i) Notify each person to whom that packaging is transferred—*

*(A) Of all requirements in this part not met at the time of transfer, and*

*(B) With information specifying the type(s) and dimensions of the closures, including gaskets and any other components needed to ensure that the packaging is capable of successfully passing the applicable performance tests. This information must include any procedures to be followed, including closure instructions for inner packagings and receptacles, to effectively assemble and close the packaging for the purpose of preventing leakage in transportation. Closure instructions must provide for a consistent and repeatable means of closure that is sufficient to ensure the*

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

*packaging is closed in the same manner as it was tested. For packagings sold or represented as being in conformance with the requirements of this subchapter applicable to transportation by aircraft, this information must include relevant guidance to ensure that the packaging, as prepared for transportation, will withstand the pressure differential requirements in § 173.27 of this subchapter.*

*(ii) Retain copies of each written notification for at least one year from date of issuance; and*

*(iii) Make copies of all written notifications available for inspection by a representative of the Department.*

*(2) The notification required in accordance with this paragraph (c) may be in writing or by electronic means, including e-mailed transmission or transmission on a CD or similar device. If a manufacturer or subsequent distributor of the packaging utilizes electronic means to make the required notifications, the notification must be specific to the packaging in question and must be in a form that can be printed in hard copy by the person receiving the notification.*

This requirement applies to Type IP-1 packagings. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

Addressed in:       Drawing                               Analysis Report  
                          Specification                               Test Report  
                          Operating Instruction                       Other

Specify:

### 3.7 49 CFR §178.3 Marking of Packagings

#### 3.7.1 178.3(a) Marking Requirements

*(a) Each packaging represented as manufactured to a DOT specification or a UN standard must be marked on a non-removable component of the packaging with specification markings conforming to the applicable specification, and with the following:*

*(1) In an unobstructed area, with letters, and numerals identifying the standards or specification (e.g. UN 1A1, DOT 4B240ET, etc.).*

*(2) Unless otherwise specified in this part, the name and address or symbol of the packaging manufacturer or the person certifying compliance with a UN standard. Symbols, if used, must be registered with the Associate Administrator. Unless authorized in writing by the holder of the symbol, symbols must represent either the packaging manufacturer or the approval agency responsible for providing the most recent*

CPCC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

*certification for the packaging through design certification testing or periodic retesting, as applicable. Duplicative symbols are not authorized.*

*(3) The markings must be stamped, embossed, burned, printed or otherwise marked on the packaging to provide adequate accessibility, permanency, contrast, and legibility so as to be readily apparent and understood.*

*(4) Unless otherwise specified, letters and numerals must be at least 12.0 mm (0.47 inches) in height except that for packagings of less than or equal to 30 L (7.9 gallons) capacity for liquids or 30 kg (66 pounds) capacity for solids the height must be at least 6.0 mm (0.2 inches). For packagings having a capacity of 5 L (1 gallon) or 5 kg (11 pounds) or less, letters and numerals must be of an appropriate size.*

*(5) For packages with a gross mass of more than 30 kg (66 pounds), the markings or a duplicate thereof must appear on the top or on a side of the packaging.*

This requirement applies to Type IP-1 packagings. Indicate below the type of documentation that shows this requirement is met and where the documentation can be found.

- Addressed in:
- |  |  |
|--|--|
| <input type="checkbox"/> Drawing               | <input type="checkbox"/> Analysis Report |
| <input type="checkbox"/> Specification         | <input type="checkbox"/> Test Report     |
| <input type="checkbox"/> Operating Instruction | <input type="checkbox"/> Other           |

Specify:

### 3.7.2 178.3(c) Multiple Markings

*(c) Where a packaging conforms to more than one UN standard or DOT specification, the packaging may bear more than one marking, provided the packaging meets all the requirements of each standard or specification. Where more than one marking appears on a packaging, each marking must appear in its entirety.*

This requirement applies to Type IP-1 packagings that also meet the requirements of a UN standard or another DOT specification. Based on the design of the package, indicate below if the requirement applies or not. If the requirement applies, identify the type of documentation that shows this requirement is met and where the documentation can be found.

CPC-00070, Rev. 0  
Type IP-1 Packaging Compliance Checklist

- This requirement:     Does not apply.                       Applies; indicate the following.  
Addressed in:         Drawing                                       Analysis Report  
                             Specification                                 Test Report  
                             Operating Instruction                       Other

Specify:

**3.7.3 178.3(d) Marking Restrictions**

*(d) No person may mark or otherwise certify a packaging or container as meeting the requirements of a manufacturing special permit unless that person is the holder of or a party to that special permit, an agent of the holder or party for the purpose of marking or certification, or a third party tester.*

This requirement applies to Type IP-1 packagings that have a manufacturing special permit. Based on the status of the package, indicate below if the requirement applies or not. If the requirement applies, identify the type of documentation that shows this requirement is met and where the documentation can be found.

- This requirement:     Does not apply.                       Applies; indicate the following.  
Addressed in:         Drawing                                       Analysis Report  
                             Specification                                 Test Report  
                             Operating Instruction                       Other

Specify: