



**Pipeline and Hazardous  
Materials Safety Administration**

**APPROVAL CA2006030022**

**(TENTH REVISION)**

**ISSUED BY THE COMPETENT AUTHORITY OF THE UNITED STATES**

**EXPIRATION DATE: NOVEMBER 30, 2016**

1. **APPROVAL HOLDER:** **Ten-E Packaging Services, Inc.**  
1666 County Road 74  
Newport, MN  
United States
2. **REGULATORY AUTHORITY:** 49 C.F.R. § 107.403 Designation of Approval Agency - UN Third-Party Certification Agency.
3. **SYNOPSIS:** Ten-E Packaging Services Inc. is designated as an Approval Agency for the Department of Transportation to conduct testing and certify packagings as meeting the performance requirements of certain UN standard and DOT specification packagings. The most recent revision supersedes all previous revisions.
4. **BASIS:** This approval is issued in response to Ten-E Packaging Services, Inc.'s renewal application dated September 10, 2013 and additional information dated December 27, 2013.
5. **PERIOD OF VALIDITY AND CONDITIONS OF APPROVAL:** This approval does not grant any additional authority or impose additional requirements except as expressly stated herein. This approval shall remain valid as long as the following conditions are met:
  - All operations are conducted prior to the posted expiration date;
  - The approval has not been terminated by the Associate Administrator for Hazardous Materials Safety (AAHMS);
  - The approval holder maintains technical personnel, test equipment, and any other technical capabilities necessary to conduct testing and certification of UN standard or DOT specification packagings;

- There has been no change in the certifying official that has not been approved in writing by the AAHMS;
- In order to continue operations authorized under this approval, the approval holder must provide packaging testing services at least once per calendar year, unless otherwise authorized by the AAHMS. If the approval holder does not currently meet the conditions of this provision, the AAHMS may grant conditional approval for up to one year to meet this provision. To request conditional approval, an application must be submitted in conformance with § 107.402.; and
- All requirements of this approval and its Appendices are met along with the record retention requirements of 49 C.F.R. Part 178.

a. **UN Third-Party Certification Agency:** The holder of this approval is hereby issued the identification code and symbol:

**"+AA"**

This code and symbol constitutes an approval designating the approval holder's company and location as a UN Third-Party Certification Agency. This approval grants the holder authority to certify packagings as meeting UN standard and DOT specification criteria for packagings listed in Paragraph 5.c.

b. **Certifying Official(s):** Only the people listed below may certify packagings listed in the tables in Paragraph 5.c. of this approval and sign certifications on behalf of the holder of this approval.

| Certifying Official(s) |
|------------------------|
| Larry Anderson         |
| Steve Brion            |
| Patricia Garin         |
| Jon Godfrey            |
| Jim Loth               |
| Kevin Maier            |
| Paul Mathson           |
| John Sternquist        |
| Eric Stiljes           |
| Robert Ten Eyck        |
| Carter Xiong           |

If a certification official leaves the company or is no longer serving in the capacity of a certifying official, the approval holder must notify the AAHMS in writing within 20 days of the change. The AAHMS must authorize all certifying officials, in writing, before they may certify any packagings under the authority of this approval.

c. **Packaging testing authorized:** The holder of this approval may only test and certify the following packaging design types:

| Non-Bulk               |  | Authorized<br>Yes - No |
|------------------------|--|------------------------|
| Drums                  |  |                        |
| Metal                  |  | Yes                    |
| Plastic                |  | Yes                    |
| Plywood                |  | Yes                    |
| Fiber                  |  | Yes                    |
| Jerricans              |  |                        |
| Metal                  |  | Yes                    |
| Plastic                |  | Yes                    |
| Boxes                  |  |                        |
| Wood (All types)       |  | Yes                    |
| Plastic                |  | Yes                    |
| Metal                  |  | Yes                    |
| Fiberboard             |  | Yes                    |
| Bags                   |  |                        |
| Plastic (All types)    |  | Yes                    |
| Textile                |  | Yes                    |
| Paper                  |  | Yes                    |
| Composite Packagings   |  |                        |
| All types              |  | Yes                    |
| Wooden Barrels         |  | Yes                    |
| Infectious Substances* |  | Yes                    |

| Bulk             |  | Authorized<br>Yes - No |
|------------------|--|------------------------|
| IBCs             |  |                        |
| Metal            |  | Yes                    |
| Plastic          |  | Yes                    |
| Composite        |  | Yes                    |
| Fiberboard       |  | Yes                    |
| Wooden           |  | Yes                    |
| Flexible         |  | Yes                    |
| Large Packagings |  |                        |
| Metal            |  | Yes                    |
| Plastic          |  | Yes                    |
| Fiberboard       |  | Yes                    |
| Wooden           |  | Yes                    |
| Flexible         |  | Yes                    |

\*Infectious substances packagings must be tested in accordance with § 178.609.

Only the packaging design types authorized in this Paragraph 5.c. may be tested and certified under the authority of this approval. New packaging design types may only be tested and certified after being approved in

writing by the AAHMS. To add a new packaging design type, the approval holder must submit a complete application for modification of the approval including test plans and procedures, required equipment and a sample test report along with all other required information to the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD) and receive written approval prior to testing. A site visit may be required for the addition of a new packaging design type.

Testing may be conducted by one DOT approved UN Third-Party Certification Agency on behalf of another, or by other testing facilities determined to be qualified through the contracting laboratories' written internal procedures. These procedures must be made available upon request of a DOT official. The majority of the testing must be conducted by the holder of this approval. Having a test performed by a person other than the approval holder does not relieve the approval holder from any responsibility for that packaging meeting all the requirements of the Hazardous Materials Regulations.

6. **SPECIAL PROVISIONS:**

a. Each testing certificate issued by the holder of this approval must be prepared in accordance with § 107.404 and include the identification symbol provided in Paragraph 5.a. The identification symbol is to be followed by a number (four-digit minimum) which will refer to the specific packaging being certified as set forth in §§ 178.503(a)(8), 178.703(a)(1)(vi), and 178.910(a)(1)(vi), as applicable. As an example, the first certification issued would be marked "...USA/+XX0001" where XX is the approval holder's identification symbol. All certifications must have a unique sequence number.

b. In addition to the requirements in Paragraph 6.a., each approval certificate must be prepared in accordance with the format provided in Appendix A of this approval, and must contain as a minimum the information presented in Appendix B for the applicable packaging design standard tested.

c. Activity reports must be submitted to the OHMSAPD by April 30 and October 31 of each year for each previous 6-month period of testing. The reports must be inclusive of the activity conducted for the time period October 1, 20XX

through March 31, 20XX and April 1, 20XX through September 30, 20XX (where the "XX"'s denote the year), respectively. No testing may be certified after April 30 or October 31 of the respective reporting period until an activity report has been submitted to the OHMSAPD. Activity reports must contain the following information:

- Reporting period (e.g., from October 1, 2010 through March 31, 2011);
- Symbol issued;
- Certification Agency symbol;
- Name and physical address of the Approval Agency;
- Name and physical address of the party to whom the symbol is issued;
- The complete UN/DOT certification string of each package tested or "None" if a previously certified packaging fails retesting and the cause of the failure cannot be resolved (see Paragraph 6.i.);
- Whether the test is a design qualification or a periodic retest;
- Date certification was issued, or date of failed retesting (a previously certified packaging that fails retesting and the cause of the failure cannot be resolved must be identified in the activity report [see Paragraph 6.i.]); and
- Whether the tested packaging is an alternative packaging or tested alternatively under a special permit or an approval.
- Reports must be presented in the form of an unprotected, electronic spreadsheet and submitted in accordance with § 107.705. If reports are sent via e-mail, the title of the e-mail must contain "UN Third-Party Certification Agency" and the approval number. Appendix C provides a representation of the format addressed below:

The spreadsheet must conform to the following format for column headings and data element entry in the examples below:

Report Heading - reporting period

Column 1

Heading - Symbol Issued

Format for Data Entry - XX0001, XX0002, etc.

Column 2

Heading - Certification Agency Symbol

Format for Data Entry - +XX

Column 3

Heading - Name of the Approval Agency

Format for Data Entry - Package Test Lab, The

Column 4

Heading - Street Address of the Approval Agency

Format for Data Entry - 123 East Street

Column 5

Heading - City of the Approval Agency

Format for Data Entry - New York

Column 6

Heading - State of the Approval Agency

Format for Data Entry - NY (USPS abbreviation)

Column 7

Heading - Zip Code of the Approval Agency

Format for Data Entry - 12345 (USPS ZIP code)

Column 8

Heading - Name of Party to Whom the Symbol is Issued

Format for Data Entry - Chemical Blenders, LLC., The

Column 9

Heading - Street Address of Party to Whom the Symbol is Issued

Format for Data Entry - 981 West Street

Column 10

Heading - City of Party to Whom the Symbol is Issued

Format for Data Entry - East Harbortown

Column 11

Heading - State of Party to Whom the Symbol is Issued

Format for Data Entry - IN (USPS abbreviation)

Column 12

Heading - Zip Code of Party to Whom the Symbol is Issued

Format for Data Entry - 54321 (USPS abbreviation)

Column 13  
Heading - Report Date  
Format for Data Entry - 01/01/2011

Column 14  
Heading - UN Code  
Format for Data Entry - 4G, 1A1, 31HA1, as appropriate

Column 15  
Heading - Full Performance Certification  
Format for Data Entry - 1A1/Y1.2/100/10/USA/XX0001  
- "None" if a previously certified packaging fails retesting and the cause of the failure cannot be resolved (see Paragraph 6.i.)

Column 16  
Heading - DQ  
Format for Data Entry - "X" (to indicate Design Qualification versus Periodic Retest)

Column 17  
Heading - DOT-SP or CAA Number (Alternative Packaging or Alternative Testing)  
Format for Data Entry - CA2009010101 (for an approval) or SP15300 (for a Special Permit), as applicable (to indicate whether tested packaging is an alternative packaging or tested alternatively under a special permit or approval)

d. To remain a valid UN Third-Party Certification Agency, a statement of inactivity must be submitted in lieu of the spreadsheet if no testing was performed. A statement of inactivity must be submitted in accordance with § 107.705. If a statement of inactivity is sent via e-mail, the title of the e-mail must contain "UN Third-Party Certification Agency" and the approval number.

e. In addition to the reports required in Paragraph 6.c., one representative certification report of each design type tested during the reporting period must be submitted to the AAHMS with the activity report submission.

f. If the approval holder is a UN Third-Party Certification Agency and also the physical manufacturer of any component of a UN-certified design, or the approval holder has components produced for testing and certification as part of a UN-certified design, then self-certification using this approval (+ identification symbol) is prohibited for that packaging design type. However, the approval holder may self-certify with the approval holder name and address or M-number.

g. For equipment used for the certification of packagings, each UN Third-Party Certification Agency must have a traceable calibration system that can be verified upon request by PHMSA. Instruments to be calibrated must include precision measurements such as torque wrenches, scales, temperature apparatus, pressure sensors, etc. Equipment must be calibrated at a minimum according to the manufacturer's recommendations or to the approval holder's internal quality system. The approval holder's internal quality system must be made available upon request of a DOT official.

h. Failure of one of the required performance tests does not constitute a failure of the entire packaging design provided the approval holder can justify not repeating all performance tests (e.g., conducting a stacking test on an empty outer packaging of a combination packaging if the issue pertains to the inner packaging(s)). The approval holder must assess the cause of the failure and determine if testing may continue. Required performance test failures due to an inadequate design must be halted and modified samples must be submitted for retesting.

i. If a previously certified packaging fails retesting and the cause of the failure cannot be resolved, the failure must be included in the semi-annual activity report required by Paragraph 6.c.

j. The required number of test samples must be used for each test sequence. Test samples may be reused from one test sequence to another if the results of the tests are not compromised. If test samples are reused from one test sequence to another, the approval holder must indicate this in the test report. This Paragraph 6.j. serves as an approval under § 178.601(k)(2).



k. Each test specimen used in a test project must be assigned a unique sequential number and identified in the test report by number.

l. When the approval holder receives the packaging preassembled and closed for testing by the packaging manufacturer, the approval holder must obtain from the packaging manufacturer, and include in the test report, packaging assembly and closing instructions for the packaging as prepared. When the approval holder assembles and closes packaging for testing, the approval holder must document in the test report the closure method used.

m. Reports that are revised after issuance must identify in detail the reason(s) for the revision(s), the revision version and revision date. Reports issued under the terms of prior approval terms that are revised while the report is current must be reissued in accordance with the terms of the current approval.

n. All test report pages must be consecutively numbered to reflect the total number of pages in the test report. Pages may be manually numbered. Items required as part of the terms of this approval must be included in the test report.

o. The approval holder may not certify a project unless all approval requirements are satisfied.

p. Failure to notify the AAHMS as required by any terms of this approval may be considered grounds for suspension or termination of this approval.

7. **GENERAL PROVISIONS:**

a. A current copy of this approval must be posted where testing is being conducted.

b. The approval application package and all supporting documents and reports must be on kept on file and made available to DOT representatives upon request.

c. Failure by any person to comply with the terms and conditions of this approval and the HMR, 49 C.F.R Parts 171-180, may result in the suspension or revocation of that person's authority to use this approval. Failure to comply

may also subject that person to penalties prescribed by 49 U.S.C. §§ 5123 and 5124. This approval may be modified, suspended or terminated in its entirety if that action is justified in light of changes in circumstances, including additional information not available when this approval was issued. Unless immediate modification, suspension or termination is necessary to avoid imminent, material harm to persons or property, before action is taken, that person will be notified and provided with an opportunity to show cause why the proposed action should not be taken.

d. Each "Hazmat employee," as defined in § 171.8, who performs a function subject to this approval must receive training on the requirements and conditions of this approval in addition to the training required by §§ 172.700 through 172.704. A hazmat employee performs functions that may include, but are not limited to, preparation of packaging for testing, including assembly, filling, closure and conditioning, determination of calculations for testing, and testing and report preparation. All hazmat employees must receive function specific training and testing on the terms of this approval. Training and testing on the terms of the approval must be certified and records maintained in accordance with § 172.704(d).

e. No person may represent or mark a container, package, or packaging (or component of a container, package, or packaging) for transportation of a hazardous material unless it meets the requirements of each applicable regulation prescribed in § 171.2(c).

f. Application for renewal must be submitted at least 60 days prior to the expiration date to [approvals@dot.gov](mailto:approvals@dot.gov). If a complete and conforming renewal application is filed in accordance with § 107.705 at least 60 days before the expiration date, the approval will not expire until final administrative action on the application for renewal has been taken.

g. Please indicate the approval number in any correspondence regarding this approval.

h. This approval is non-transferable, and therefore, any change of majority ownership of the approval holder

resulting in a new entity voids the CA approval unless submitted and acknowledged in writing by the AAHMS.

Issued in Washington, D.C.

Dated: 07/21/2014

A handwritten signature in blue ink, appearing to read 'Wanda By', is written over a faint circular stamp.

For Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

## **Appendix A - Detailed Test Report Requirements**

### **Section I**

- 1) Name and address of party to whom the symbol is issued
- 2) Testing laboratory's name and address
- 3) Full performance certification
- 4) Symbol assigned
- 5) The statement: "Ten-E Packaging Services Inc. is a current DOT UN Third-Party Certification Agency under § 107.403."
- 6) Date of the test report issuance
- 7) Manual or mechanical signature of certifier with printed name and title

### **Section II**

Packaging description (additional required design-specific information is provided in the appropriate packaging design standard in Appendix B.)

- 1) Packaging design standard (UN 1A1, UN 4G, UN 6HA1, UN 31HA1, etc.)
- 2) Dimensions, external - see appropriate design type for additional required information
- 3) Tare mass of complete packaging and each individual component
- 4) Filled mass of package as tested
- 5) Assembly and closure method as tested
  - a) Equipment used by the laboratory to close the package
  - b) The method the laboratory uses for assembling and closing the packaging for testing must be documented in the test report.

## Appendix A - Detailed Test Report Requirements

### Section III

#### Test Description and Results

##### 1) Test Series Details

- a) For drop tests, method used and exact orientation for each drop relative to identifiable design component such as manufacturer's joint for fiberboard box, side seam weld for steel drums, or discharge valve for IBCs with discharge valves. Photographs may be used to document the drop test orientation and must have a clearly visible and identifiable design component.
- b) For stack tests, when multiple non-bulk packaging stack tests are conducted with a single test load (static, guided, or dynamic), a geometric pattern that evenly distributes the load across all test samples must be used. The report must identify if multiple units have been tested simultaneously with a single load.
- c) For vibration tests for non-bulk packagings, large packagings, and IBCs intended for solids, the test must be conducted in accordance with ASTM D999-08. For vibration tests of IBCs intended for liquids, the test must be conducted in accordance with ASTM D7387-07. When more than one non-bulk packaging is subjected to the vibration test simultaneously, the test report must identify how many units were tested at the same time. The test report must document the motion of the test table (vertical linear or rotary motion) and the cycles to achieve liftoff.
- d) For hydrostatic pressure tests, the test must be conducted in accordance with ASTM D7660-10.
- e) For leakproofness tests, the test must be conducted in accordance with ASTM D7660-10 except that air pressure shall be used in lieu of hydrostatic pressure in accordance with §§ 178.604 or 178.813, as applicable.

##### 2) Conditioning (if required) -

- a) All packaging conditioned prior to drop testing must be fully assembled, filled and closed prior to the start of conditioning. No closures may be retightened during or after conditioning, prior to testing or

## Appendix A - Detailed Test Report Requirements

during testing. Fiberboard combination packaging must be fully assembled and closed as for testing for conditioning.

- b) For designs required to be subjected to cold temperature conditioning, the test samples are considered to be conditioned when the temperature of the test sample and its contents has been reduced to -18° C or lower before conducting the drop test. The laboratory must have procedures in place to verify conditioning has been conducted properly. This may be achieved by preparing and monitoring the temperature of an additional test sample, measuring and recording the temperature of the contents immediately after the drop test, or other suitable methods.
- c) Test contents, material used, viscosity and relative density for liquids (if other than water and antifreeze) and particle size for solids.

### 3) Pass/fail criteria

- a) A statement on the reason(s) for pass and fail determination must be provided for each test. Restating of HMR pass/fail criteria without additional input by the tester on the actual condition of the tested sample, damage, loss of contents, etc., is not satisfactory.
- b) All non-bulk packagings, including combination packagings, must be turned on their side to determine that the containers (and inner packaging, receptacles or articles) have not leaked. The outer packaging of combination packaging must be opened to make a final determination of performance.

### 4) Results for each test series.

## Section IV

Mathematical Calculations performed to conduct and document testing. Calculations must be accurate to the nearest 0.1 kilogram or liter.

- 1) Packaging filling limits to determine 98% or 95% full for testing

## **Appendix A - Detailed Test Report Requirements**

- 2) Drop height for high specific gravity liquids
- 3) Stacking test load
- 4) Other calculations as required

For calculations that are included on the package test reports the following tolerances are authorized:

- 1) Mass in kilograms (kg)  $\pm 2\%$
- 2) Pressure in kilopascals (kPa)  $\pm 3\%$
- 3) Distance/length/thickness in millimeters (mm)  $\pm 2\%$
- 4) Temperature in degrees Celsius ( $^{\circ}\text{C}$ )  $\pm 2^{\circ}\text{C}$
- 5) Humidity in percentage (%) tolerances are specified in the test methods
- 6) Time in minutes (min)  $\pm 3\%$
- 7) Torque in Newton meters (Nm)  $\pm 3\text{Nm}$  or foot pounds (ft-lb.)  $\pm 2.2 \text{ ft-lb}$

*Note: Where maximum or minimum values are specified in the regulations, the tolerances must be one sided, e.g., minimum test pressure.*

### **Section V**

Test reports must include:

- 1) Drawings of each packaging component or photographs of each component of the packaging with dimensional distances displayed including tape measure or ruler in each photograph. All distance measurements must be recognizable without magnification. A combination of drawings and photographs may be used to satisfy the requirements in this section.
- 2) If photographs are used in lieu of design drawings, photographs of the following must be included:

## Appendix A - Detailed Test Report Requirements

- a) All outside surfaces of outer packaging must be included in the test report so that all markings and labels are visible. All markings and labels must be visible and recognizable without magnification.
- b) All surfaces of inner components, pads, partitions, liners, ties, bottles, caps, dunnege, absorbent material. All packaging and component markings and labels must be visible and recognizable without magnification.
- c) The assembled and closed inner packagings, parts and pieces in the outer packaging in the orientations for testing, before the outer packaging is sealed. For tested packagings with multiple layers of inner containers or articles, each layer must be photographed.
- d) All sealed surfaces of the fully assembled packaging with closure (tape, staples, glue, tuck-in flaps, etc.) fully visible.
- e) All photographs must be inserted electronically in test reports.



## Appendix B - Detailed Requirements by Package Type

### Section I

#### Identification and Description of Component Parts

For all components of all packaging designs tested and certified with the symbol of the approval holder, a robust description must be provided that allows for identification of all parts of the packaging design tested.

The specifications and description of all component parts of the tested design must include, but are not limited, to the following:

1) Name, city, and state of each component manufacturer

For component parts sourced from suppliers that are not the manufacturer of the part, the supplier name and address must be provided if the supplier will not disclose the manufacturer. Every effort must be made to identify component manufacturer(s).

2) Part number, name, SKU number or other information to readily identify and track component parts to the manufacturer or supplier (when component manufacturer information is not disclosed by supplier).

3) Specifications for each part, including materials of construction, external dimensions, thickness and tare mass, etc.

4) Photographs or drawings of each component part for illustration.

## **Appendix B - Detailed Requirements by Package Type**

### Section II

#### Specifications and Descriptions for the Design-Type

Each design-type tested and certified with the symbol of the approval holder must include the following description, as applicable to the design-type -

#### **Non-Bulk Packaging**

- 1) **Drums, Jerricans, and Wooden Barrels** - Sections 178.504 - 178.511
  - a) Material specifications (e.g., steel type, alloy, resin melt-index and density)
  - b) Thicknesses of heads and bodies for steel and plastic single packaging nominal drums (or minimum as provided in HMR)
  - c) Heads - supplier if not produced by drum manufacturer
  - d) Rolling hoops on drums
    - i) Number, location, height and type
  - e) Side seam weld
    - i) Type on steel drums
    - ii) End seam or chime type (e.g., double, triple)
  - f) Closure component design details
  - g) Thread style for screw caps (e.g., NPT, Buttress), dimensions
  - h) Closure ring specifications for drums
    - i) Material of construction
    - ii) Dimensions

## Appendix B - Detailed Requirements by Package Type

iii) Style

iv) Closure component style

### 2) **Boxes** - Sections 178.512 - 178.517

a) Material of construction

b) Number of walls and flute styles Caliper, basis weights, combined board weights, method for joining panels.

c) Indication if box flaps (inner and outer) meet or do not. If gap between flaps, distance between or overlap of flaps.

d) Location of handles, partitions and pad and divider specifications, numbers and location.

e) Method of joining panels - (e.g., glue, staples, nails) with details on specifications for joining.

f) Closures (e.g., latches), number, type, position and materials

g) Liner or lining

h) Partitions and pads (see above for box specs)

### 3) **Bags** - Sections 178.518 - 178.521

a) Material of construction

i) Fabric (warp/weft), tapes per 100 mm

ii) Material type and grade

iii) Number of plies

iv) Basis weight of plies

b) Material strength elongation

c) Style of bag (e.g., gusseted, flat)

## **Appendix B - Detailed Requirements by Package Type**

- i) Dimensions - flat unopened
- d) Fill (e.g., full width of top; through ear)
- e) Sewing Style and density of stitches and type of thread and minimum breaking load
- f) Perforations
- g) Adhesive, type
- h) Coating or liner
  - i) Material type and grade
  - ii) Number of liner(s)
  - iii) Thickness
  - iv) Type of film grade
  - v) Grammage of plies

### **6) Composite packagings - Sections 178.522 and 178.523 and Packagings containing inner packagings**

The outer packaging and inner receptacles must be described based on the materials of construction for the outer and inner components in-keeping with the minimum requirements provided for each different design-type identified in this approval.

### **Intermediate Bulk Containers (IBCs)**

#### **Metal, Rigid plastic, and Composite IBCs - Sections 178.705 - 178.707**

- 1) Material specifications for all components of the receptacle (e.g., outer bodies, inner bodies, cages) (e.g., steel specifications, resin melt-index and density,)
- 2) Thickness nominal for metal; minimum for plastic

## **Appendix B - Detailed Requirements by Package Type**

- 3) Method of construction for plastic - (e.g., rotationally molded, injection molded, blow-molded)
- 4) Dimensions, external
- 5) Description of lifting devices, including dimensions and materials of
- 6) Closure(s) description including material, number, location, diameter, thread style (e.g., NPT, Buttress) and gasket material
  - a) Inner liner, lining or coating material and thickness
- 7) Service equipment description and location
- 8) Pallet material description (type of material - steel, plastic, composite, solid wood and plywood (the species of wood described and documented), or reconstituted wood (the wood grade described and documented)); dimensions; method of joining to body (if detachable); and, pan material, if present

### **Fiberboard and Wooden IBCs - Sections 178.708 and 178.709**

- 1) Material of construction
  - a) Type and grade, Number of walls, flute type, Board caliper, Basis weight of each liner and medium and Combined board weight
  - b) Gasket material description including type of material, thickness of gasket and configuration
- 2) Method of joining panels - (e.g., glue, staples, nails) with details on specifications for joining; manufacturer's joint flap size and location
- 3) Inner liner dimensions, minimum thickness and closure description
- 4) Service equipment description and location
- 5) Pallet material description (type of material - steel, plastic, composite, solid wood and plywood (the species of wood described and documented), or reconstituted wood (the wood grade described and documented)); dimensions;

## **Appendix B - Detailed Requirements by Package Type**

method of joining to body (if detachable); and, pan material, if present

6) Lifting devices material, number and location

### **Flexible IBCs - Section 178.710**

1) Material of construction

a) Fabric (warp/weft), tapes per 100 mm

b) Material type and grade

c) Number of plies

d) Basis weight of plies

2) Coating

a) Material

b) Thickness or weight

3) Material strength elongation

4) Style of bag (e.g., gusseted, flat)

5) Dimensions - assembled but not filled

6) Fill and discharge openings - description, location, dimensions

7) Sewing Style and density of stitches and type of thread and minimum breaking load

8) Perforations

9) Adhesive, type

10) Coating or liner

a) Material type and grade

b) Number of liner(s)

c) Thickness

## **Appendix B - Detailed Requirements by Package Type**

- d) Type of film grade
- 11) Grammage of plies
- 12) Lifting devices - material, number and location
- 13) Closure method for fill and discharge openings

### **Large Packaging - Sections 178.920 - 178.940**

The outer packaging of a Large Packaging must be described based on the IBC provisions for metal, rigid plastic, fiberboard, flexible and wooden IBCs listed above. Describe the outer packaging based on the material of construction.

The inner packaging or articles for large packaging must be described based on the non-bulk provisions for drums, jerricans, bags, boxes and combination or composite packaging provided in Appendix B to this approval. All components of inner packaging and receptacles of large packaging must be fully described, including assembly and closure.

**Appendix C - Example Semi-Annual Activity Report Spreadsheet**

Reporting Period (e.g., from October 1, 2010 through March 31, 2011):

| Symbol Issued | Certification Agency Symbol | Name of the Approval Agency | Street Address of the Approval Agency | City of the Approval Agency | State of the Approval Agency | Zip code of the Approval Agency | Name of Party to Whom the Symbol is Issued | Street Address of Party to Whom the Symbol is Issued | City of Party to Whom the Symbol is Issued | State of Party to Whom the Symbol is Issued | Zip Code of Party to Whom the Symbol is Issued | Report Date | UN Code | Full Performance Certification   | DQ | SP or CA Number (Alternative Packaging or Alternative Testing) |
|---------------|-----------------------------|-----------------------------|---------------------------------------|-----------------------------|------------------------------|---------------------------------|--|--|--|---|--|-------------|---------|--|----|--|
| XX0001        | +XX                         | Package Test Lab, The       | 123 East Street                       | New York                    | NY                           | 12345                           | Chemical Blenders, LLC, The                | 981 West Street                                      | East Harbortown                            | IN  | 54321  | 1/01/2001   | 4G      | 1A1/Y1.2/100/10/USA/+XX0001  | X  | CA2009010101   |
| None          | +XX                         | Package Test Lab, The       | 123 East Street                       | New York                    | NY                           | 12345                           | Smith Manufacturing Inc.                   | 567 North Street                                     | Milwaukee                                  | WI  | 54321  | 1/10/2001   |         | None (If a previously certified packaging fails retesting and the cause of the failure cannot be resolved) |    | SP15300  |

Notes: The first row denotes a tested and certified packaging (i.e., the packaging passes all tests and is certified).

The second row denotes a previously certified packaging that fails retesting and the cause of the failure cannot be resolved (see Paragraph 6.i.).