APPENDIX I

Agreement Between IBC Reconditioners and Emptiers

In consideration of mutual benefits of proper container disposition and reuse of valuable industrial packaging, _____ ("Reconditioner"), a company engaged in routine maintenance, repair, and remanufacturing of intermediate bulk containers (IBCs), and _____, an emptier of IBCs ("Emptier"), agree as follows:

1. IBCs that will be offered by Emptier to Reconditioner shall have been thoroughly emptied, not damaged beyond a serviceable condition, and shall meet the quantitative definition of an empty container in the Environmental Protection Agency's definition of that term in title 40 of the Code of Federal Regulations, Section 261.7. This requirement and definition shall apply to all former contents, not just those regulated by the Environmental Protection Agency.

2. The IBCs shall contain only residue of their former original contents, and shall not contain other materials, contaminants, or excessive external residues. All IBCs shall continue to bear original product markings and labels, and all closures shall be in place and tight.

3. Reconditioner shall accept properly emptied IBCs and shall manage the IBCs and former contents in accordance with applicable laws and regulations.

4. It is agreed that any IBC sent by Emptier and received by Reconditioner, that has not been emptied in complete satisfaction of Paragraphs 1 and 2, above, shall be returned to Emptier as if it were still full of its original product contents. When not rejected upon arrival, and sent back with the same shipping papers, an appropriate signed shipping paper for the return of the IBC shall be provided to the Reconditioner by the Emptier or a designated third party. The Emptier agrees to accept the returned IBC and its contents, shall reimburse Reconditioner for the costs of initial transportation of the non-empty IBC to Reconditioner and its return to Emptier. All liabilities associated with the handling and transportation of a non-empty IBC shall be the responsibility of Emptier.

Agreed:

_____ _____

For Reconditioner For Emptier

Date _____

APPENDIX III

Reusable Industrial Packaging Association

Quality Assurance Guideline for Reprocessing Intermediate Bulk Containers
Intended for Use in the Transportation of Hazardous Materials

VERSION 6.0 April 17, 2012 DRAFT

1.0 Introduction

The Reusable Industrial Packaging Association (RIPA) is a North American association representing private companies that manufacture, remanufacture, repair, and routinely maintain reusable industrial packagings, including intermediate bulk containers.

This Guideline was prepared by RIPA for use by its members that reprocess intermediate bulk containers intended for use in the transportation of hazardous materials.

This document is not a definitive guide to all processes and procedures necessary to reprocess intermediate bulk containers. It is meant to provide managers and other personnel who are responsible for ensuring compliance with DOT IBC regulations with the basic tools necessary to create and maintain a quality assurance system that best fits the needs of their company and its customers.

2.0 Scope

This guideline specifies the quality assurance elements for intermediate bulk containers that are reprocessed for use with hazardous materials, sufficient to enable companies to comply with the U.S. Department of Transportation's Hazardous Materials Regulations (HMR).

3.0 Terms and Definitions

For purposes of this QA guideline, the terms and definitions shown below apply. These definitions track, but do not replicate exactly, existing DOT definitions in 49 CFR.

3.1 Competent Authority. The Pipeline and Hazardous Materials Safety Administration's Office of Hazardous Materials Safety.

3.2 Composite IBC. A rigid IBC designed for mechanical handling, comprised of a plastic inner receptacle surrounded by a metal frame that holds the inner receptacle in place, and is affixed to a pallet.

3.3 Cross-bottled IBC. A remanufactured composite IBC in which an inner receptacle from one manufacturer is placed into an IBC frame produced by another manufacturer. (See also Remanufactured IBC).

3.4 Design Qualification Tests. The tests specified in 49 CFR 178.803, which apply to composite intermediate bulk containers.

3.5 HazMat Employee Training. Training conducted in accordance with 49 CFR Subpart H – Training, which includes, as applicable, general awareness, function-specific, safety, and security training.

3.6 Intermediate Bulk Container or IBC. A rigid or flexible portable packaging, other than a cylinder or portable tank, which is designed for mechanical handling. The capacity of the container ranges from 450 L to 3000 L.

3.7 Quality Assurance Guidelines. The guidelines set forth in this document.

3.8 Re-bottled IBC. A repaired composite IBC in which an inner receptacle from one manufacturer is replaced by an inner receptacle of the same design type from the original manufacturer or remanufacturer. (See also Repaired IBC.)

3.9 Remanufactured IBC. A metal, rigid plastic or composite IBC produced as a UN type from a non-UN type, or converted from one UN design type to another UN design type.

3.10 Repaired IBC. A metal, rigid plastic or composite IBC that is restored so as to conform to the design type and is able to withstand the design type tests. The inner receptacle of a repaired IBC may be replaced with another inner receptacle of the same design from the original manufacturer. The bodies and inner receptacles of composite IBCs are not repairable.

3.11 Reprocessing. The steps outlined in Section 5.0 of Appendix 3, Code of Operating Practice: Reprocessing Intermediate Bulk Containers, "Responsible Packaging Management." Steps include cleaning, inspection, and the use of proper reprocessing equipment. Reprocessing includes repair and routine maintenance activities. (See also Responsible Packaging Management.)

3.12 Responsible Packaging Management. Guidelines for reprocessing IBCs published by the Reusable Industrial Packaging Association.

3.13 Routinely Maintained IBC. A metal, rigid plastic or composite IBC that is cleaned, with body closures reinstalled or replaced in conformance with the original manufacturer's specifications, with structural equipment not performing a hazardous materials containment function (e.g. legs) restored as necessary to conform to the design type.

4.0 Management Responsibility

A management representative shall be assigned responsibility for oversight and implementation of this Quality Assurance program. Responsibilities include, but are not limited to:

- Training of personnel involved in IBC reprocessing activities.
- Oversight of testing and tools used for testing IBCs.
- Oversight of daily IBC production activities.
- Management of record keeping activities.
- Maintenance of QA Manual.

5.0 Responsible Packaging Management (RPM)

5.1 Members of RIPA are required to adhere to the association's "Principles of Responsible Packaging Management (RPM)." A copy of the RPM provisions relating to reprocessing intermediate bulk containers shall be maintained in conjunction with the QA manual at each facility performing IBC reprocessing activities.

5.2 Members are required to have in their files a letter from each manufacturer from whom new IBC inner receptacles are purchased stating that the inner receptacles have been internally inspected and leakproofness tested by that manufacturer in accordance with 49 CFR 178.813.

6.0 Inspection Procedures – Incoming IBCs and new inner receptacles

6.1 Each incoming IBC must be visually inspected to determine its capability for reprocessing and to ensure that it meets the emptiness criteria in 40 CFR 261.7.

6.2 Each incoming new IBC inner receptacle must be visually inspected on all six sides to determine if any damage has occurred during transportation that would render the unit unusable.

6.3 Each incoming IBC should be visually inspected to determine if it meets the original design specification of the IBC.

6.4 The inspection procedures for selected IBCs shall include:

- Cage assessment, e.g., corrosion, broken welds, valve well, cross bars, etc.
- Pallet assessment, e.g., broken legs, corner supports, struts, capability for mechanical handling, etc.
- Bottle assessment, e.g., valve, top cap etc., and a visual inspection of all six sides to determine if any damage has occurred during transportation that would render the unit unusable.
- Other materials assessment, e.g., corner protectors, cushioning materials, etc.

6.5 IBCs that are assessed as not being capable for reuse with hazardous materials after reprocessing shall be segregated.

6.6 IBCs that are sold for reuse with non-hazardous materials may bear UN or DOT compliance marks, however, if the compliance marks are retained or applied, the IBC must be capable of meeting the marked performance levels.

7.0 Disassembly Procedures

Each IBC intended for reprocessing shall be disassembled in a manner that does not harm the structural integrity of the IBC and enables workers to reassemble the IBC in a safe and structurally sound manner. Companies should inspect the disassembled unit for structural defects and, where feasible, repair those defects in a manner that allows for successful reprocessing.

8.0 Assembly

Each IBC intended for reprocessing shall be assembled in a manner that assures its safety in transportation. Companies should:

Train personnel in reprocessing techniques and procedures, sufficient to ensure they are able to can carry out their duties.

Establish and maintain procedures to ensure reprocessed IBCs conform to approved designs.

Establish and maintain procedures for the inspection of assembled IBCs, including bottle and cage securement, mechanical operation of valves and other service equipment, etc.

9.0 Testing

9.1 Production

9.1.1 Each assembled reprocessed IBC must be tested for leaktightness or leakproofness, as appropriate. Equipment used for testing shall be operational and calibrated as per manufacturer's recommendations. New inner receptacles that have been leakproofness tested by the seller need not be re-tested by the reprocessor.

9.1.2 Employees responsible for performing tests on reprocessed IBCs must be trained functionally to execute these tasks. Records of such training shall be maintained by the employer together with other DOT compliance records, and made available to DOT upon request.

9.2 Design Qualification and Re-Qualification

9.2.1 All remanufactured IBC designs must be tested initially and re-tested annually thereafter. The person performing the tests shall perform the applicable tests in 49 CFR 178.800.

10.0 Marking

10.1 Each remanufactured IBC shall be marked –

a. In a durable and readily visible manner on the valve side of the unit.

b. In accordance with 178.703.

10.2 Each assembled repaired IBC shall be marked –

a. With the manufacturer's design type marking (See 178.703) in a durable and readily visible manner.

b. In accordance with 180.350(d)(1)(A) – (C), in a durable and readily visible manner on the valve side of the unit.

10.3 Each assembled routinely maintained IBC shall be marked –

a. With the manufacturer's design type marking (See 178.703) in a durable and readily visible manner.

b. In a durable and readily visible manner on the valve side of the unit.

c. In accordance with 180.350(e)(1) – (2).

11.0 Closure Instructions

Each person performing IBC reprocessing operations shall supply written closure instructions to every customer in accordance with 178.2(c). Copies of instruction must be retained for at least one year and shall be made available to DOT upon request. Copies can be e-mailed.

12.0 Recordkeeping

Each company that performs IBC reprocessing operations shall maintain appropriate records. These records include:

- HazMat Employee training, including function specific training for inspecting incoming IBCS and IBC inner receptacles, and performing the leakproofness and leaktightness tests.
- Updated copy of the company's quality assurance guideline.
- Copy of "RIPA Code of Operating Practice: Reprocessing of Intermediate Bulk Containers."
- Copies of test and inspection records, as well as other approval documents for repaired and remanufactured IBCs combinations.

APPENDIX IV

RIPA Empty Intermediate Bulk Container Management Policy

Summary of Empty IBC Management Policy

- Each IBC must be properly emptied by the filler, so that it meets U.S. EPA or California emptiness definitions, as appropriate.
- Each IBC should be properly prepared for transportation and reprocessing by a qualified IBC reconditioner. All original labels and markings must be retained and be legible. All closures must be secure to prevent leakage.
- No residues other than those remaining from the original lading should be in an IBC intended for reprocessing.
- IBCs containing highly hazardous residues (e.g., pesticides) must be triple-rinsed and handled in accordance with a written IBC acceptance policy.
- IBCs containing certain highly hazardous residues (e.g., radioactive) described in the written IBC acceptance policy will not be accepted for reprocessing.
- Personnel handling IBCs that previously contained hazardous materials are "hazmat employees" and must be trained in accordance with DOT regulations.
- Emptiers should sign an "Empty IBC Certification" form for each load of IBCs.
- All empty IBCs must be "serviceable" (i.e., meet applicable quality assurance requirements) in accordance with the written IBC acceptance policy.

Introduction

Every year, businesses throughout North America fill several million rigid intermediate bulk containers (IBCs) with food, chemicals and other products for distribution throughout the region and around the world. These containers, which range in size from 450 L (119 gallons) to 3000 L (793 gallons), usually are constructed from high density plastics, metal, or a combination thereof. The most common IBC is the composite design. Composite IBCs generally are comprised of a 275 – 330 gallon rigid plastic "bottle," encased in a cage made of steel tubes or wires. The bottle and cage are secured to a wood, metal or plastic pallet for ease of storage and handling.

Due to their size and value, IBCs often are reused following cleaning and refurbishing. In addition, empty IBCs, particularly those that previously contained hazardous materials, represent both a safety and an environmental liability for the emptier and the original shipper if not handled properly.

Over the years, IBC manufacturers, fillers, emptiers and reconditioners have collaborated informally to create collection systems to ensure that these containers, when properly emptied, are transported to qualified reconditioning facilities for reprocessing. Some IBC manufacturers developed their own collection systems, while others partnered with reconditioners to address customer collection needs.

Recently, the use of IBCs, particularly composite IBCs, has skyrocketed. Manufacturers and reconditioners recognize that existing collection programs, while useful, by themselves are not capable of satisfying the logistical, environmental safety and informational needs of all users and emptiers.

To address these concerns, the Reusable Industrial Packaging Association (RIPA) has partnered with companies that manufacture and reprocess IBCs to create this Empty IBC Management Policy ("Policy"). This Policy explains the key commercial and governmental rules that apply to companies that receive products in IBCs and help to manage the storage, transportation, and reprocessing of emptied units. Companies that follow the Policy will reduce potential liabilities substantially, avoid unnecessary costs associated with IBC collection and reprocessing, and help ensure that all emptied IBCs are stored, transported, reprocessed or scrapped in a safe, secure, environmentally sound and economic manner.

General Requirements

An empty intermediate bulk container that previously held U.S. DOT—or Canadian TDG—regulated hazardous material (i.e., dangerous goods) must be handled properly to ensure it does not become a safety or environmental liability for either the emptier or the original shipper. Companies that fill IBCs should ensure that firms to which product is shipped have clear empty packaging handling and environmental protection procedures in place. Emptiers should review their own empty packaging management practices to reduce potential liabilities.

Each reconditioner handling emptied IBCs should conform to the RIPA IBC Code of Operating Practice and

have a written IBC acceptance policy. The Code of Practice provides clear guidelines for safe and environmentally sound operating practices. The written IBC acceptance policy describes the packagings that will be accepted, those that will not be accepted, and the process for returning any unit found not to be in conformity with that acceptance policy. A copy of this policy and the Code of Practice should be given to each new customer seeking to have IBCs reprocessed.

Proper IBC Emptying and Transportation

Proper emptying of every IBC is the most important aspect of in-plant IBC management. This activity affects costs, regulatory compliance, and legal liability.

Costs – Avoidable residues of costly materials left in IBCs can represent enormous lost profits. Even IBCs that appear empty can contain nearly a gallon of product. This is valuable material that has been paid for and should not be discarded.

Regulatory compliance. For most IBCs being transported in the United States for reprocessing, that formerly contained hazardous products, only IBCs meeting the EPA "empty" definition (see below) escape classification as hazardous wastes. Used IBCs that are hazardous wastes face staggering costs of proper disposal—far more than the cost of proper management by container reconditioners and dealers.

Legal liability for environmental damage. Persons arranging for disposition of non-empty IBCs (i.e., hazardous wastes) may be considered to have "arranged for disposal or treatment…of hazardous substances," or to have engaged in "abandonment or discard" of unclean containers. Both of these terms are from the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 USC 9601), or "Superfund" and both activities establish strict, retroactive, joint–and–several liability for any subsequent contamination of the disposal site and related environmental response and remediation costs.

Legal liability for improper transportation. An emptied IBC that contains any residue of a U.S. DOT-regulated hazardous material, even if it meets the EPA "empty" definition, may be transported only if all closures are in place and secure, and the original labels and markings are visible, as if the IBC were full of that material. Trucks carrying empty IBCs containing residue should be properly placarded, including the 4-digit UN number.

Emptying personnel and their supervisors should know and understand the details of the EPA (or California) empty container definitions, which are summarized below. Transport Canada does not presently have such a definition but Canadian reconditioners are encouraged to include details on emptying in their written IBC acceptance policies. Full copies of applicable government rules are available from the association.

Federal and State Empty Container Regulations

EPA Empty Container Rule (40 CFR 261.7). The U.S. Environmental Protection Agency (EPA) regulates the status of IBCs that retain residues of hazardous materials. The general policy is that containers which retain any amount of hazardous material must be treated as hazardous waste unless the following standards are met *by the emptier*:

a. All residues have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating; **and**

b. No more than 2.5 centimeters (one inch) of residue remain on the bottom or inner container; **or**

c. No more than 0.3 per-cent by weight of the total capacity of the container remain in the container or inner liner if the container is greater than 110 gallons in size.

Note: Paragraph (c)has been interpreted to mean that for IBCs with capacities between 275 and 330 gallons, slightly less than one gallon of product may remain in an "empty" IBC.

This rule is often misinterpreted by emptiers who believe the rule permits one inch or 0.3 per-cent of the original material to remain in the container. In fact, EPA has issued the following interpretation of this rule (47 Fed. Reg. 36092, 36093):

…[A]pparently, many individuals are reading the "and" at the end of paragraph [(a)] as "or" and therefore believe that the practice of leaving one inch of residue in a container qualifies the container as being empty, whether or not the container has been emptied of all its contents by methods commonly employed to remove materials from that type of container…. EPA emphatically states that this is not the case. When the two paragraphs…are properly read together, it should be clear that one-inch of waste material

is an overriding constraint and may remain in an empty container only if it cannot be removed by normal means. The rationale for this provision is that there are certain tars and other extremely viscous materials that will remain in the container even after the container is emptied by normal means.

California Empty Container Regulation (Title 22 CCR 66261.7 et seq.). California has adopted more stringent requirements for empty packagings than has the U.S. Environmental Protection Agency. California requires emptiers to comply with federal empty container regulations in all respects, taking care to ensure that the packagings have been emptied as much as possible "using methods commonly employed to remove waste or material from packagings." In addition, if the contents are pourable, the [emptier] must empty the packaging "until no flow of waste or material can be poured from the packaging… when the packaging or inner liner is held in any orientation (e.g., tilted, inverted, etc.) and dripping has ceased…." If the waste or material is not pourable, the [emptier] must have emptied the packaging or inner liner "…until no visible material remains in the packaging or inner liner which can be removed by scraping, chipping, etc."

Preparing Empty IBCs for Collection and Reprocessing

A. Employee Training

Emptied IBCs containing residues of hazardous materials remain regulated by DOT. As such, persons who prepare these packagings for transportation must be trained in the proper performance of their functions as "hazmat employees" (49 CFR 172.704).

Note: RIPA offers an excellent employee training program to association members at no charge; non-members can purchase the program for a small fee (click "publications" on the Web page).

B. Labels, Markings and Closures

Emptied IBCs may not be transported to a reprocessor or dealer unless they meet the emptiness criteria, as well as all applicable DOT regulations. Labels and marks must be retained on all hazardous materials packaging. Closures, valves, covers, etc., must be properly closed in accordance with DOT requirements (49 CFR 173.29). This is required by regulation, because it is important to prevent leaks in transportation, which could result in environmental damage and/or worker exposure. These liabilities would be borne by the emptier.

C. Proper IBC Emptying Procedures

Emptiers are required to remove all the contents from an IBCs using "practices commonly employed" to empty such containers. For example, IBCs filled with liquids should be emptied by opening the bottom valve until such time as no more product flows from the unit. Emptiers seeking to optimize product usage should consider raising the side of the IBC opposite to the valve a few inches off the ground. Simple tools are available to emptiers to facilitate this practice. IBCs filled with viscous materials should follow the same emptying procedures, but should consider establishing a standard practice of elevating the side of the unit since these materials do not flow as easily as do liquids.

D. Control Procedures

No other products should be added to any IBC containing residue or its or original lading. Such packaging would contain a residue that is no longer described by the label, thereby imposing liability for improper transport of the IBC on the shipper/emptier. Moreover, mixing of residues can create serious safety hazards.

E. Empty IBC Certification

Empty IBC Certification is a written document, executed by the container emptier and the container reconditioner or dealer. It confirms that the IBCs being transferred are actually empty in accordance with the EPA definition of empty containers, and that they have been properly prepared for transportation. Some companies execute these on an annual basis, but many reprocessors print the certification on their receiving tickets so that one is signed every time there is an IBC pick-up.

Certification is vital because it is an IBC user's principal guarantee of compliance with two of the nation's most important environmental laws: The Resource Conservation and Recovery Act of 1976 (RCRA) 42 USC 6901; and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) 42 USC 9601. Also covered is the Hazardous Materials Transportation Act, 49 USC 5101.

APPENDIX IV *continued*

Empty IBC Certification is also a legal business record. It documents the fact that the IBCs were empty, and therefore are not subject to the complex and expensive EPA Hazardous Waste Regulations created by RCRA.

Following is a sample Empty IBC Certification Form

EMPTY IBC CERTIFICATION FORM

I hereby certify that these intermediate bulk containers are "empty" as that term is defined in Environmental Protection Agency regulations, 40 CFR 261.7*, and that they have been properly prepared for transportation under the regulations of the U.S. Department of Transportation, 49 CFR 173.29.**

Date: _____

Signature: _____

*With regard to most regulated residues, EPA's 40 CFR 261.7 says: "A packaging…is empty if:

i. All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating; and

ii. No more than 2.5 centimeters (one inch) of residue remain on the bottom or inner container; or,

A. ….

B. No more than 0.3 per-cent by weight of the total capacity of the container remain in the container or inner liner if the container is greater than 110 gallons in size.

Note: The total capacity of most IBCs ranges from 260 to about 330 gallons. Please check with your reconditioner for more precise figures. For residues of "P-list" products specifically listed by name in 40 CFR 261.33(e), EPA says the packaging is empty only "if the packaging…has been triple rinsed using a solvent capable of removing the product, or has been cleaned by another method show to achieve equivalent removal.

**DOT's 49 CFR 173.29 says that all openings on the empty packaging must be closed, and that all markings and labels must be in place and legible as if the packaging were full of its original contents.

Companies doing business in California should consider creating a form that specifically refers to the California Contaminated Container Regulations, Title 22 Section 66261.7. This provision states that a container which previously held hazardous materials is empty if:

1. no material can be poured or drained from the container when it is held in any orientation (e.g., tilted, inverted, etc.),
2. no material remains in or on the container that can feasibly be removed by physical methods which are commonly employed to remove such materials. The interior of the container should not contain crusted or a mass of solidified material.

NOTE: Companies doing business in California should consider creating a form that specifically refers to the California Contaminated Container Regulations, Title 22 Section 66261.7. This provision states that a container which previously held hazardous materials is empty if:
1. no material can be poured or drained from the container when it is held in any orientation (e.g., tilted, inverted, etc.),
2. no material remains in or on the container that can feasibly be removed by physical methods which are commonly employed to remove such materials. The interior of the container should not contain crusted or a mass of solidified material.

Residue Acceptance Criteria

Certain hazardous materials are regulated more stringently by governments because they are highly toxic or present severe environmental risks if improperly handled. Many reprocessing facilities will not accept IBCs that previously contained the products shown in the list below, even if the emptied IBC has been triple-rinsed. If you are uncertain about the acceptability of a specific product residue, contact your IBC supplier or reprocessor with whom you do business, or check the reconditioner's written IBC acceptance policy. Exceptions to the general rule must always be made in writing.

In situations where an emptied IBC must be discarded, you are urged to contact a local hazardous waste disposal company.

Some reprocessors will accept IBCs that contain residues of certain highly hazardous materials only if the IBC has been "triple-rinsed." Again, acceptance policies vary, so be sure to contact the IBC acceptance policy of the reprocessor with whom you do business before sending out an emptied IBC that previously contained residue from this list.

Examples of materials not accepted by many IBC reconditioners:

- Herbicides/some pesticides;
- Biological agents;
- Cyanides or Cyanide compounds;
- Radioactive materials;
- Dioxin;
- PCBs
- Packing Groups I and II poisons as well as Poison–Inhalation Hazards (PIH)

Emptied IBC Quality Issues (Serviceability)

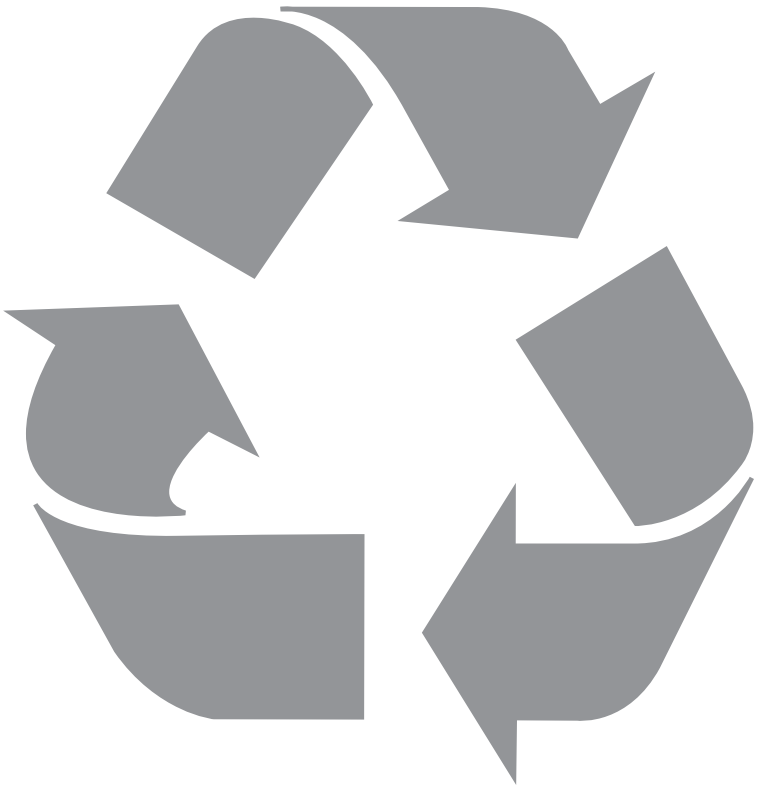
The value of an empty IBC to a reprocessor depends on a number of factors, including prior contents, exterior and interior cleanliness, proximity to a reprocessing facility, number of IBCs available for collection, and the units' physical condition.

To help emptiers obtain the greatest value for their empty IBCs, RIPA has created a "serviceability" check list. A high quality emptied IBC will exhibit the following traits:

- The cage should be free of excessive rust or stains.
- The cage should not be bowed, nor should there be any broken welds or bolts.
- Steel pallets should have all welds and bolts intact with no broken or bent corners.
- Wooden pallets should have no broken or missing boards.

Bottles in composite IBCs should be intact, free of punctures, cuts or cracks. Caps and closures should be intact.

- Residue should meet EPA (of California) emptiness criteria, and no foreign residue should have been placed in the bottle.
- All plastic IBCs should be free of excessive stains.
- The outside of IBCs should not be contaminated with product residue.
- Emptiers should sign or otherwise execute an "Empty IBC Certification Form" for each load of empty IBCs.



Empty IBC Collection

Reconditioners throughout the U.S. and Canada collect and reprocess emptied IBCs in a cost effective and environmentally sound manner. Each reconditioner has their own acceptance criteria that may vary somewhat from the general guidelines provided in this document. Emptiers are advised to contact reconditioners to arrange for emptied IBC collection, and be prepared with the following information:

- How many IBCs are available for collection?
- What kind of IBCs will be collected (e.g., composite, all metal, all plastic)?
- What is the capacity of the IBCs (e.g., 275 gallon)?
- Did the IBC previously contain a hazardous material? If so, what material?
- Is the IBC UN marked for hazardous materials transportation? If so, what is the mark?
- Does the IBC meet the application empty container definition?
- What is the quality of the IBC (e.g., almost new, rusty and dirty, etc.)?
- Is this a one-time event, or should a long-term collection agreement be developed?
- Your name and your company's name, address and phone number.

Conclusion

Companies that follow these simple empty IBC collection guidelines will enjoy a good working relationship with their reconditioner. They will always be in compliance with applicable regulations and, as such, enjoy protection from exposure to the harsh state and federal penalties associated with improper handling, transportation and disposition of IBCs.

SAMPLE CLOSURE INSTRUCTIONS III

GREIF

GREIF INDUSTRIAL PACKAGING & SERVICES LLC
DOT REQUIRED NOTIFICATION STATEMENT
INTERMEDIATE BULK CONTAINERS

The below listed statement is printed on the bottom of each packing list copy of the customer order that is shipped from Greif, Inc. Lavonia, Georgia Intermediate Bulk Container plant.

The recent general revisions of the **DOT's Hazardous Materials Regulations** requires that manufacturers of the packaging for hazardous materials notify their customers in writing of:

1. Any packaging specification requirements that are not met when the empty packages are shipped, and
2. Information on closures needed to satisfy the performance test requirements.

The following **NOTIFICATION STATEMENT** is intended to comply with that regulatory requirement.

UN IBC'S

- **TOP OPENINGS IN GREIF UN-IBC's MUST BE FITTED WITH 6" COVERS AND GASKETS SUPPLIED BY GREIF INC. 6" COVERS MUST BE TIGHTENED ½ TURN AFTER GASKET CONTACT WITH THE TOP OF THE BOTTLE AND TO AT LEAST 45 FT. LBS TORQUE. FITTINGS IN THE COVER MUST BE TIGHTENED TO A TORQUE OF 20 FT-LBS FOR 2"NPT FITTINGS AND 9 FT-LBS FOR ¾" BUNGS, IF INSTALLED.**

IBC NORTH AMERICA

Per 49 CFR § 178.2 (c)(ii), the below listed closures and gaskets were used to qualify IBC north America's Passport IBC. You must use the approved gasket and closure tightened to the appropriate torque specification to meet DOT requirements.

49 CFR § 178.2 (c)(II) Regulatory Notice	Material	Gasket Type	Outlet Type	Torque Specifications
6" Lid w/ or w/o 2" NPT bung or micropourous vent	HDPE	Santoprene,	N/A	40 foot pounds using compatible lubricant
6" Lid w/ or w/o 2" NPT bung or micropourous vent	HDPE	EPDM	N/A	55 foot pounds
9" Lid w/ or w/o NPT bung or micropourous vent	HDPE	Sponge Rubber	N/A	75 foot pounds
2" NPT plug located in 6" or 9" Lid	Polyethylene	Santoprene	N/A	30 inch pounds
2" Plunger Valve w/ Plastic Collar and red or green handle	HDPE	Santoprene	NPT or Camlock	45 foot pounds
2" Plunger Valve w/ Plastic Collar and blue or grey handle	HDPE	EPDM, Viton®	NPT or Camlock	45 foot pounds
2" Euro Valve w/ Plastic Collar and red handle	HDPE	Santoprene	NPT	45 foot pounds
1.5" or 2" IBCNA Ball Valve w/ Plastic Collar and red handle	Polypropylene with glass and carbon black	Santoprene	NPT or Camlock	45 foot pounds
1.5" or 2" IBCNA Ball Valve w/ Plastic Collar and grey handle	Polypropylene with glass and carbon black	Viton®	NPT or Camlock	55 foot pounds
1.5" or 2" IBCNA Ball Valve w/ Plastic Collar and blue handle	Polypropylene with glass and carbon black	EPDM	NPT or Camlock	55 foot pounds
2" Banjo™ Ball Valve w/ Plastic Collar and yellow handle	Polypropylene with glass and carbon black	Santoprene	NPT or Camlock	45 foot pounds
2" Banjo™ Ball Valve w/ Plastic Collar and yellow handle	Polypropylene with glass and carbon black	Viton®, EPDM	NPT or Camlock	55 foot pounds

The above torque specifications have been established at ambient temperatures. These specifications are based on present knowledge and do not free the user of the Passport IBC from their own testing.

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