



**RIPA Survey of U.S. and Canadian
Industrial Container Reconditioning
Industries - 2012**

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Introduction

This report on industrial container reconditioning in the U.S. and Canada presents summary data on the recent annual production of reconditioned industrial containers such as drums and “intermediate bulk containers” (IBCs). It also profiles the container reconditioning industry in terms of industry practices, processes used, equipment used, employee training, markets served, customer service and regulatory compliance. The association last conducted a similar survey in 2009.

The Reusable Industrial Packaging Association (RIPA) is a U.S.-based trade association comprised of businesses that recondition and/or manufacture industrial containers such as steel drums, plastic drums and IBCs. RIPA also includes among its members businesses that provide supplies and/or services to container reconditioners and manufacturers.

RIPA conducted this survey of its members in early March 2012. Data reported is for calendar year 2011. Taken together, the 38 U.S. surveys returned and the 3 Canadian surveys returned constitute a significant sampling of the U.S. and Canadian reconditioning industrial packaging industries. The data were aggregated and average production for respondents’ locations (plants) was calculated. The average production was then extrapolated to the estimated totals of U.S. and Canadian businesses largely or exclusively in commercial reconditioning. The results are estimates for total commercial reconditioning. An unknown amount of “captive”, non-commercial reconditioning is presumed to take place.

In addition, data on the kinds of materials shipped in industrial containers, as well as information on how reconditioning facilities operate was collected. For instance, respondents were asked if they operate a drum furnace or a caustic wash line. RIPA’s survey collected much of this information, in addition to information on markets served by reconditioners and regulatory compliance with health, safety and environmental rules.

A significant percentage of industrial containers are used and reused for the shipment of hazardous materials (referred to as “dangerous goods” outside the U.S.). As such, these containers must be qualified through testing to perform safely in shipping hazardous products.

Different hazardous materials require containers with different performance capabilities. Containers can be rated to different levels of performance through the qualifying tests. Markings on the container will indicate the levels of performance to which the container has been certified.

In U.S. hazmat regulations, UN recommendations and international transportation codes, industrial “containers” are more accurately referred to as industrial “packagings”. Further, a “packaging” is a container **unfilled**; a “package” is a

container **filled**. Finally, “recycling” is the conversion of a used container into raw material (e.g., scrap steel or plastic) for production of a wholly different product: “reconditioning” is the preparation of a used container for reuse **as** a container.

Background

Surveys sent to RIPA Member Companies:	64 U.S.
	7 Canada
	1 Mexico

Surveys Received by Member Companies:	38 U.S.
	3 Canada

Reconditioning Plants / Locations Represented:	64 U.S.
	6 Canada

Note: Levels for total U.S. and Canadian steel drum, plastic drum and composite IBCs are extrapolated estimates and are for units sold. Levels for scrapped units are only as reported by survey respondents. All data reported is calendar year 2011.

Reconditioned Steel Drums Estimated Total U.S

Total U.S. Tight Head	7,577,000
Total U.S. Open Head	<u>16,510,000</u>
Total U.S Steel Drum	24,087,000

Reported Scrapped Tight Head (47 locations)	2,022,000
Reported Scrapped Open Head (47 locations)	1,407,000

Reconditioned Plastic Drums Estimated Total U.S

Total U.S Plastic Drum	4,316,000
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Reported Scrapped Tight Head (45 locations)	911,000
Reported Scrapped Open Head (45 locations)	214,000

Composite Intermediate Bulk Containers (IBCs) Estimated Totals U.S.

275-Gallon IBCs

Washed IBCs	1,138,000
Re-Bottled IBCs	258,000
“Cross Bottled” IBCs	<u>393,000</u>

1,789,000

330-Gallon IBCs

Washed IBCs	178,500
Re-Bottled IBCs	105,000
“Cross Bottled” IBCs	<u>95,000</u>

378,500

Reported Scrapped Bottles 275 gal (50 locations)	254,000
Reported Scrapped Bottles 330 gal (50 locations)	19,375

Fiber Drums

35 U.S locations reported 588,000 reconditioned, 411,500 scrapped.

<u>Canada</u>	Steel Tight Head	1,038,000
	Steel Open Head	<i>To Be Announced</i>
	Plastic Tight Head	978,500
	Plastic Open Head	< 5,000
	Composite IBCs	171,300

Percentage Packaging Sold for Hazmat

Steel drums:	51 %
Plastic drums:	60 %
Fiber drums:	3 %
Composite IBCs:	53 %

Markets Sold To (Number of Respondents)

	<u>Steel Drum</u>	<u>Plastic Drum</u>	<u>IBCs</u>	<u>Fiber Drum</u>
Acid / Base	5	25	22	0
Adhesives	20	8	17	3
Detergents	12	22	20	3
Food	9	1	6	1
Fuels	24	11	7	0
Haz Waste	28	16	20	4
Oil / Lubricants	29	17	27	0
Paints / Coatings	26	5	13	1
Pesticides	5	5	11	0
Pharmaceuticals	6	4	6	4
Solvents	26	5	5	0
Other	5	7	2	5

Reconditioning Processes (41 respondents)

Caustic wash	30
Acid flush	7
Furnace	9
Chaining	12
Shot blasting	16

Transportation (averages of data reported)

Tractors	4
Trailers	129
Drivers	5
Hazmat endorsement	2
Lease tractors	17
Percentage leased	22%

Wastewater treatment

Facilities with treatment	28
Average gal per day	8,200
Sewer discharge	25 Yes
Discharge water tested	25 Yes

Pollutants tested: Heavy Metals, COD, BOD, TSS, pH, TTO, Suspended Solids, Oil/Grease, Volatiles Organics., Ammonia, Phosphorus

Collect Stormwater Runoff?

6 Yes

Operate Paint Booth(s)?

17 Yes

Avg Number of Booths

2

HAP-free

5 respondents

Low HAP

7 respondents

Solvent-based

9 respondents

VOC Emissions Permit(s)?

26 Yes

Operate Furnace(s)?

9 Yes *(U.S. Total Number by Separate Survey: 30)*

Test furnace ash?

8 Yes

How often?

Yearly, each dumpster

Monitor stack emissions for:

Opacity, Temperature, NOx, SOx, CO, PM,
VOCs, Metals, Chlorinated Compounds

Hazardous Waste Testing?

33 Yes

Test Results Hazardous?

19 Yes

Incoming Containers

Use Empty Certification Forms

32 Yes

Return "Heavy" Containers?

35 Yes

Use RIPA rejection stickers?

26 Yes

Workplace Safety

OSHA Reportable Injuries?

20 Yes

Average Number Injuries

4

Injury Types

Chemical Burns, Sprains, Strains, Cuts
Contusions, Broken Hand, Back,
"Pinch Point" Injuries

**Use RIPA Hazmat Employee
Training Module?**

30 Yes

Useful to the Company in Spanish?

20 Yes

Total Customer Audits (all respondents) 232

Average Number Customer Audits 10

Regulatory Audits Among Those Surveyed

Federal DOT 10

Federal EPA 3

Federal OSHA 4

State DOT 11

State EPA 15

State OSHA 5

Ontario MOE 1

U.S. Sales Into:

Canada 13 respondents

Mexico 4 respondents

Europe 0 respondents

Far East / Pacific 0 respondents

