

# ENVIRONMENTAL CHOICE<sup>M</sup> PROGRAM

## Reusable Utility Bags (CCD-100)

### ACCEPTANCE TEST PROCEDURE

SUBJECT: Reusable Shopping Bags

PROCEDURE NUMBER: ATP001

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**ENVIRONMENTAL CHOICE<sup>M</sup> PROGRAM  
REUSABLE UTILITY BAGS (CCD-100)  
ACCEPTANCE TEST PROCEDURE**

**SUBJECT:** Reusable Shopping Bags

ATP001

**1.0 PURPOSE**

1.1 The purpose of this Acceptance Test Procedure is to describe the method used by the Environmental Choice<sup>M</sup> Program (ECP) or its representative, to verify that Reusable Shopping Bags (RSB) meet the requirements of the ECP criteria *Reusable Utility Bags* (CCD-100).

**2.0 SCOPE**

2.1 This document applies to RSBs made of natural or synthetic materials intended for consumer use.

**3.0 RSB SPECIFICATIONS: GENERAL PROPERTIES**

3.1 The RSB shall be new, clean, and free from blemishes, holes, tears, cuts, broken strands, or other imperfections that may impair serviceability. All cut edges shall be properly finished to prevent unravelling. All rivets or similar devices shall be free from sharp edges.

3.2 The RSB shall be open mouthed with the mouth facing up in the carrying position.

3.3 The RSB shall be equipped with two carrying handles, one on each side of the opening.

**4.0 TEST EQUIPMENT AND MATERIALS**

4.1 A cycling apparatus with a minimum stroke length of 20cm, capable of lifting and lowering a load of 10kg at the rate of  $17 \pm 2$ cm/s.

4.2 A smooth soft faced hook of half-elliptical cross-section with a base dimension of 9cm, a half-height dimension of 2.3cm, and a width of 4cm. A soft face shall be a single layer of 3mm to 4mm foam tape applied to the handle surface.

- 4.3 A block of concrete (dimensions: 50cm long, 40cm wide, 20cm high) having a smooth, flat and horizontal impact surface, covered with smooth patterned non-cushioned vinyl floor tile (Solarium or equivalent). A smooth concrete floor of equivalent or greater mass resistance may be used in lieu of the concrete block.
- 4.4 Twenty-one (21) 1/2 pint paint cans with friction fit lids, filled with water to a total mass of 312g per can, including the lid. Can dimensions shall be a height of 8.0cm and a diameter of 7.5cm.
- 4.5 Twenty-two (22) hardwood blocks (dimensions: 5cm x 5cm x 10cm) with a smooth corner radius of not more than 2mm, and having a density not less than 0.62g/cm<sup>3</sup>.
- 4.6 A quantity (15kg) of granular material such as sand, lead shot or abrasive grit with a apparent density of not less than 1.2g/cm<sup>3</sup>.
- 4.7 Granular or powdered material such as sawdust or absorbent with an apparent density of not more than 0.30g/cm<sup>3</sup>.
- 4.8 A container graduated in litres.
- 4.9 Lining (as required). Note that for certain RSBs, such as the "net" or "mesh" types, a lining in the shape of a bag will be required to contain the material. This lining should be sufficiently large and flexible to assume the shape of the RSB, when filled.

## **5.0 TEST CONDITIONS**

### **5.1 TEST SAMPLES**

- 5.1.1 A different RSB must be used for each test procedure.

### **5.2 ASSESSMENT CRITERIA**

- 5.2.1 When a specific test states "Assess the RSB for damage", it shall be taken to mean:

Examine the RSB for tears; holes; broken stitches; seam failures; localized distortion; disfigurement of markings; and any other damage. Record the approximate size, location, and type of damage. The RSB fails the assessment if:

- (a) any portion of the RSB becomes detached;
- (b) any hole, separation, localized distortion, or other damage exceeds 5mm in its largest dimension;
- or

- (c) weave distortion ("grinning" effect) in excess of 25mm in any direction when measured either from the seam to a point of undisturbed, or between two points of undisturbed fabric, as applicable.

### 5.3 CAPACITY TEST

- 5.3.1 Fill the RSB to its rim with granular or powdered material (4.7).
- 5.3.2 Using the graduated container (4.8) measure the volume of material in the RSB in cm<sup>3</sup>. A capacity of less than 15,000±100cm<sup>3</sup> is cause for rejection.
- 5.3.3 Alternate Capacity Test: Fill a large graduated container with material and pour it into the RSB until full, recording the amount of material poured out as the capacity.

### 5.4 STATIC LOAD TEST

- 5.4.1 Immerse RSB in a container of tap water (at approximately ambient temperature) for 5 minutes. Remove RSB from container and allow excess water to drain for 2 minutes. Ensure that no water is trapped within the RSB.
- 5.4.2 Fill RSB with 15kg net of the granular mixture (4.6). If required, use a lining (4.9) in the RSB. Suspend the RSB in a free swinging manner by one handle from the test hook (4.2). After one minute measure and record the distance from the hook to the bottom of the RSB. Let the RSB stand for 30 minutes.
- 5.4.3 After 30 minutes, measure and record the distance again and calculate the RSB stretch as a percentage (%) of the first measurement (5.4.2). Stretch shall not exceed 10%.
- 5.4.4 Remove RSB, empty contents and assess the RSB for damage.

### 5.5 DYNAMIC TEST

- 5.5.1 Immerse the RSB in a container of tap water for 5 minutes. Remove the RSB from the container and allow excess water to drain for 2 minutes. Ensure that no water is trapped within the RSB.
- 5.5.2 Toss wood blocks (4.5) and cans (4.4) alternately one at a time into the RSB and allow them to come to rest in random order. Add granular material (4.6) to achieve a mass of 10kg net. If there is not enough space for all blocks and cans substitute additional cans for blocks.

- 5.5.3 Place the RSB on the concrete test surface (4.3) and attach the RSB handles to the cycling apparatus (4.1) using the hook (4.2).
- 5.5.4 With the RSB hanging freely from the hook by both handles, measure and record the distance from the hook to the lowest extremity of the RSB. Measure and record the width and thickness of the RSB.
- 5.5.5 Adjust the stroke length so that the RSB sits upright on the test block (lowest point of stroke length) with only a slight slack in the handles.
- 5.5.6 Raise and lower the RSB through 300 cycles or until damage (5.2.1) occurs, at a rate of about 15 cycles/min, raising the RSB  $20 \pm 2$ cm at an average speed of  $17 \pm 2$ cm/s and lowering it at an average speed of  $40 \pm 4$ cm/s.
- 5.5.7 Remove the RSB from the test hook, empty the contents and assess for damage.
- 5.5.8 Repeat steps in sections 5.5.2 through 5.5.7 for a total of 2,700 cycles, or until damage occurs. Dimensional measurements shall not exceed 10% of the initial measurements.

**6.0 FORMS**

<u>Form Number</u>	<u>Title</u>
ATP001-1	Test Result Sheet

<b>SUBJECT: REUSABLE SHOPPING BAGS</b> Test Results Sheet: ATP001-1	
File No:	Test Lab:
Guideline No: CCD-100	P.O. No:

Manufacturer	Type	Model	Test Technician	Pass/Fail	Date
			Name:		
			Signature:		

TEST REFERENCE (Section)	SPECIFICATION	TOLERANCE	RESULT	ERROR
<b>3.0</b>	<b>RSB SPECIFICATIONS: GENERAL PROPERTIES</b>			
3.1	No damage, finished to prevent ravelling, no sharp edges	N/A		
3.2	Open mouthed at top when in carrying position	N/A		
3.3	1 handle each side of opening	N/A		
<b>5.3</b>	<b>CAPACITY TEST</b>			
5.3.2 or 5.3.3	Record volume	> 15,000cm <sup>3</sup> ± 100cm <sup>3</sup>		
<b>5.4</b>	<b>STATIC LOAD TEST</b>			
5.4.2	Record RSB length afer 1 minute	N/A		
5.4.3	Record RSB length after 30 minutes	< 10% stretch		
	Damage	Section 5.2.1	* (see below)	
<b>5.5</b>	<b>DYNAMIC TEST</b>			
5.5.4	Initial height measurement (cm)	N/A		
	Initial width measurement (cm)	N/A		
	Initial thickness measurement (cm)	N/A		

* If applicable, sufficiently describe damage to RSB.

TEST REFERENCE (Section)	SPECIFICATION		TOLERANCE	RESULT	ERROR
5.5.4 and 5.5.7	300 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	600 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	900 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	1200 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	1500 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	1800 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	2100 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	2400 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
	2700 cycles	damage	Section 5.2.1	* (see below)	
		length (cm)	< 10% stretch		
5.5.8	Final width measurement (cm)		< 10% stretch		
	Final thickness measurement (cm)		< 10% stretch		

\* If applicable, sufficiently describe damage to RSB.