paper enterprises, inc.

distribution to business

REVOLUTION BAG®

RESOURCE MANUAL

Paper Enterprises, Inc. | 770 East 132nd Street Bronx, NY 10454 | 718-402-1200 | www.paperenterprisesusa.com

"At Revolution Bag, we are a closed-loop recycling company that makes high-quality can liners that exceed environmentally preferred requirements, **without costing more**."

The Start of a Revolution

Revolution Bag starts with a supply of post-consumer agricultural plastics – a virtually endless quantity of consistent, high-quality raw materials for recycling provided by our sister company, Delta Plastics. This resource is coupled with patented washing and processing technology that enables us to take this post-consumer material, which would otherwise end up in a landfill, and produce a high-quality can liner at a competitive price.

1 **CROP IRRIGATION**

Revolution Bag's sister company, Delta Plastics in Little Rock, AR, is the leading manufacturer of polyethylene irrigation tubing.

2 **RECYCLING**

After one season of use, the agricultural plastic must be discarded. For 20 years, Delta Plastics has reclaimed and returned the tubing for recycling.

3 **RESIN PRODUCTION**

Used plastic is recycled at Delta Plastics' Stuttgart, AR, plant through a patented process that transforms the materials from tubing to SCS-certified PCR resin.

4 **BAG MANUFACTURING**

Resin is transferred to Revolution Bag in Little Rock, AR where it is converted to blown film and trash bags are produced.

5 **REVOLUTION**

The end result is a full line of EPA-compliant and Ecologo- and SCS-certified bags in a variety of gauges and sizes that are distributed nationwide.

THE REVOLUTIONARY DIFFERENCE

Closed recycling loop

- ✓ Production process in which the waste or by-product of one process or product is used in making another product
- ✓ Delta Plastics recycles its irrigation polytube into post-consumer resin, which is then used to manufacture Revolution Bag can liners

Quality

- ✓ Revolution Bag utilizes Delta Plastics PCRpro™, which is third-party certified as 100% post-consumer recycled LLDPE resin (PCR)
- ✓ Super Hexene LLDPE (the "best" when ranking good, better, best for LLDPE) is used when virgin resin is required for the blend
  - Many competitors use a lower cost Butene LLDPE resin, which is the "good"
- ✓ Sales tip: Focus on dry and wet load ratings - not film thickness - when determining the right mil/gauge

Sustainable supply stream

- ✓ Revolution Bag has an abundant and consistent supply of PCRpro™ from Delta Plastics

Third-party certifications for green claims

SCS (Scientific Certification Systems) - SCS Global Services is the certifier of choice for specific recycled content claims around the world

- ✓ Raw material (resin):
  - Delta Plastics PCRpro™ is certified by SCS as 100% post-consumer recycled resin (PCR)
- ✓ Finished goods (can liners):
  - HeRCules® Natural (N1 blend) can liners are certified by SCS as containing 94% PCR
  - HeRCules® Black (B1 blend) black can liners are certified by SCS as containing 91% PCR

THE REVOLUTIONARY DIFFERENCE

Third-party certifications for green claims (continued)

SCS (Scientific Certification Systems) continued

- ✓ Life Cycle Assessment (LCA):
  - LCA was commissioned to assess environmental impacts associated with all stages of a product's life, from cradle to grave (i.e., from raw material extraction through materials processing, manufacture, distribution, use, repair and maintenance, and disposal or recycling.)
  - Seven core impact areas identified in LCA:
    - Global climate change
    - Energy resource depletion
    - Fine particulate matter (soot)
    - Ground level ozone (smog)
    - Ocean acidification
    - Ocean warming
    - Regional acidification (acid rain)
  - LCA was performed to establish Revolution Bags':
    - Baseline environmental performance
    - Satisfy customer specifications
    - Build brand value backed by proven performance metrics
    - Create basis for an environmental impact calculator
    - To set Revolution Bag apart from other can liner manufacturers

Ecologo Certification - A third-party certification process where products are voluntarily tested and audited for reduced environmental impact

- ✓ Ecologo was acquired by Underwriters Laboratory (UL) in 2010 and focused on certifying products with a reduced environmental impact
  - UL is an American worldwide safety consulting and certification (3rd party) company
- ✓ Can liners must meet the requirements of the UL 126 standard to be Ecologo certified
  - UL 126 is the Standard for Sustainability for Plastic Film Products
- ✓ Revolution Bag's entire stock offering and blends are Ecologo certified
  - All items and blends are listed on the UL website individually
  - A direct link to the listing is located on Revolution Bag's website
    - http://productguide.ulenvironment.com/SearchResults.aspx?CategoryID=72&SubCategoryID=445&BrandID=2285&perPage=96

THE REVOLUTIONARY DIFFERENCE

Third-party certifications for green claims (continued)

Ecologo Certification (continued)

- ✓ We are the first and, to date, the only US manufacturer with can liners that are Ecologo certified
- ✓ Ecologo label
  - Helps manufacturers and consumers easily identify environmentally preferred products
  - In use for more than 20 years

- ✓ Bid specification recommended wording
  - When assisting with writing bid specifications with a sustainable requirement at the end-user, we suggest the following wording be added to the bid request
    - "All can liners should be Ecologo certified to the UL 126 Standard for Sustainability for Plastic Film Products"

Compliance information

- ✓ ***EPA requirement*** - Minimum requirement is 10%-100% post-consumer recycled resin (PCR) content in can liners.
  - Every can liner that Revolution Bag manufactures exceeds the EPA Comprehensive Procurement Guideline requirement
    - Ecologo certification validates and exceeds this claim as the standard (UL 126) requires a minimum of 20% PCR
- ✓ ***LEED (USGBC) requirement*** - There are two ways to meet the minimum requirement.
  - Every can liner that Revolution Bag manufactures exceeds the requirements for LEED (existing building)
  - Can liners must meet the EPA requirement of 10% post-consumer recycled resin (PCR) content, or
  - Can liners must be .7mil or thinner with or without PCR

THE REVOLUTIONARY DIFFERENCE

Compliance information (continued)

- ✓ ***GSA (General Services Administration)*** - Otherwise known as federal government purchasing
  - Environmentally Preferred Products (EPP)
    - Products have a lesser or reduced negative effect on human health and the environment when compared with competing products or services that serve the same purpose.
    - All Revolution Bag items qualify as EPP because we meet all EPA requirements.
  - Key Sustainable Products Initiative
    - Targeted initiative that focuses on small can liner (24"x33" and smaller)for federal buildings
    - Requires minimum of 20% PCR or meeting the UL 126 standard
    - All Revolution Bag items qualify as each is Ecologo certified

Right sizing

- ✓ Because LLDPE allows for stretch, Revolution Bag liners are able to fit tight on a receptacle like a shower cap.
  - HDPE cannot do this because there is no "east-west" stretch
  - Many times we see HDPE liners "tied" off to tighten around a receptacle

Right gauging

- ✓ All Revolution Bag stock items have been load tested for performance evaluation
- ✓ By using PCRpro™ + Super Hexene, it creates a strong material that makes it possible to right gauge
  - Right gauging offers the greatest impact as it is a total source removal of plastic vs. a partial diversion
    - Every 13 pounds of virgin plastic can liners uses a little over ½ lb. of oil and natural gas to produce
    - By eliminating the plastic through gauge reduction, we multiply the positive impact of Revolution Bag
    - The landfill reduction also positively impacts landfill capacity issues

Consistent pricing

- ✓ Because Revolution Bag produces the majority of its raw materials through its recycling process, it is shielded from market fluctuations of virgin LLDPE resin compared to other can liner manufacturers

THE COMPETITION

Manufacturer	Product Line	Post-Consumer Recycled Resin content %	Resin Type	Stock Color Options	Gauge Range	3rd Party Certification
AEP Industries (Webster)	EarthSense Commercial	10%	LLDPE	Black	0.65-2.0 mil	SCS
AEP Industries (Webster)	EarthSense Commercial Clear	30%	LLDPE	Clear	1.25-1.5 mil	SCS
Aluf Plastics	COEX Supertuff CXP	9%	LLDPE	Black	1.25-2.0 mil (equivalents)	SCS
Berry Plastics	Big City	10%	LLDPE	Black	1.0-2.7 mil	None found
Berry Plastics	Rhino-X PCW	10%	HDPE	Natural	12-16 micron	None found
Heritage Bag (Novolex)	LEEDing Edge	10%	LLDPE	Black	1.3 mil	None found
Heritage Bag (Novolex)	LEEDing Edge	10%	HDPE	Natural	16 micron	None found
Inteplast (Pitt)	Eco-Strong Plus	10%	LLDPE	Black, Clear	0.90-1.35 mil	None found
Inteplast (Pitt)	Eco-Strong Plus	10%	HDPE	Natural	10-16 micron	None found
Petoskey Plastics	GreenCore	up to 70% (not item specific)	LLDPE	Black, Clear, Blue	0.40-1.25 mil	SCS (resin only)
Republic Bag (Sigma)	Enviro Bag 2.0	50%	LLDPE	Dark	.90-2.0 mil	None found
Revolution Bag	EcoMax	30%-70%	LLDPE	Black, Nat, Blue, Green, White	0.30-0.70 mil	ECOLOGO
Revolution Bag	HeRCules®- Natural	94%	LLDPE	Natural	.90-1.75 mil	SCS & ECOLOGO
Revolution Bag	HeRCules®- Black	91%	LLDPE	Black	.90-1.75 mil	SCS & ECOLOGO
Revolution Bag	LoadMaster- Natural	35%	LLDPE	Natural	0.85-1.10 mil	ECOLOGO
Revolution Bag	LoadMaster- Black	70%	LLDPE	Black	0.90-1.15 mil	ECOLOGO
Revolution Bag (Delta Plastics)	PCRpro™ (PCR resin used)	100%	LLDPE	Black, Natural, Mix	N/A	SCS
Spectrum Bags	Go Green	20%	LLDPE	Black	.35-2.0 mil	SCS

REVOLUTION BAG FAMILY

EcoMax

- Full-line utility grade can liners
- 0.30 mil to 0.70 mil gauge range
- Natural, black, white, blue, and green stock color options
- PCRpro™ 30%-70% + Super Hexene
  - ✓ LW – light waste
    - targets 6-10 micron bags or thin LD (*low density*)
  - ✓ MR – medium refuse
    - targets 10-14 micron bags
  - ✓ HR – heavy refuse
    - targets 14-17 micron bags
  - ✓ XH – extra heavy
    - targets 17 + micron bags

EcoMax Select

- Optimal source reduction best fit for most common receptacles using EcoMax stock items
- Right fit sizes to eliminate wasted materials
- Recommended application guide
- 0.30 to 0.70 mil gauge range
- PCRpro™ 30%-70% + Super Hexene

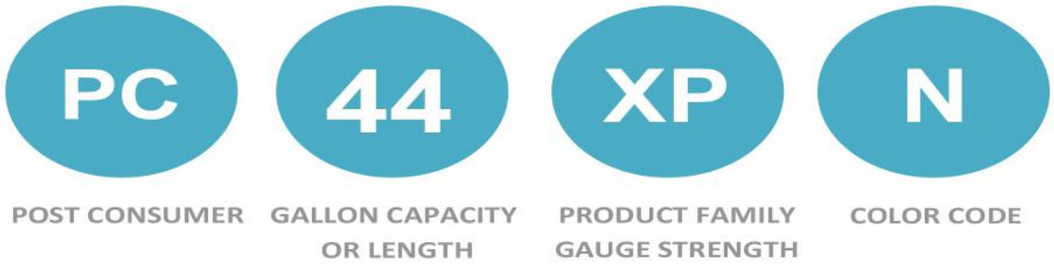
Loadmaster

- Super-heavy weights
- .85 mil to 1.15 mil gauge range
- Natural or black color options
- PCRpro™ Black 70% + Super Hexene
  - ✓ Extra Heavy + (XPBK)
    - targets heavy black up to 1.3 mil or 20 + micron
  - ✓ Extra Tough (XTBK)
    - targets heavy black up to 1.7 mil
- PCRpro™ Natural 35% + Super Hexene
  - ✓ Extra Heavy + (XPN)
    - targets heavy clear/white up to 1.4mil
  - ✓ Extra Tough (XTN)
    - targets heavy clear/white up to 2.0mil

Hercules®

- Heavy recycled content
- .90-1.75 mil gauge range
- Black and natural color options
- PCRpro™ 94%-natural; 91%-black
- Target all heavy black/clear bags
- Right-gauge opportunity is 30%-40% thinner

REVOLUTION BAG BASICS



	EcoMax	Loadmaster	HeRCules®
Gauge Range	0.30 mil – 0.70 mil	.85 mil -1.15 mil	.90 mil – 1.75 mil
Natural	X	X	X
Black	X	X	X

	EcoMax	Target
LW	0.30 mil	6-10 mic
MR	0.45 mil	10-14 mic
HR	0.59 mil	14-17 mic
XH	0.70 mil	17+ mic

	Loadmaster	Target
XPBK	0.90 mil	up to 1.3 mil
XTBK	1.15 mil	up to 1.7 mil
XPN	0.85 mil	up to 1.4 mil
XTN	1.10 mil	up to 2.0 mil

	HerCules®	Target
100	0.90 mil	Heavy Repro
150	1.35 mil	Heavy Repro
168	1.50 mil	Heavy Repro
200	1.75 mil	Heavy Repro

How to Measure a Receptacle

Round Receptacle
Width = circumference÷2 **or** πd÷2 (3.14 x diameter÷2)
Length = height of receptacle + ½ diameter of bottom of the receptacle + 4"-6" for overhang

Square or Rectangle Receptacle
Width = total of all four sides ÷ 2
Length = height of receptacle + ½ the bottom diagonal of receptacle + 4"-6" for overhang

Microns to Mil Formula

To convert microns to mils, divide the micron by 25.4 to arrive at mil thickness

Ex: 16 microns ÷ 25.4 = 0.63 mil

Mils to Micron Formula

To convert mils to microns, multiply by 25.4 to arrive at micron thickness

Ex: .90 mil x 25.4 = 22.9 mic

Linear Low Density Case Weight Formula

Width x Length x Gauge (mils) ÷ 15 ÷ 1000 x Case pack = Net lbs. per case

High Density Case Weight Formula

Gauge (microns) ÷ 25,400 x Width x Length x Case pack x 0.0686 = Net lbs. per case

MANUFACTURING

Star Sealed Bags | Star-seal is the most common type of seal on the market. Designed without gussets, the star-seal eliminates gaps along the seal where leaks can occur. This allows the bag to more easily conform to the shape of the container and distributes refuse weight evenly inside the bag. Star-seal liners maximize the bag's carrying capacity and virtually eliminate leaks.

	Width	Length	Gauge
minimum	21"	15"	0.3 mil
maximum	45"	120"	2.0 mil

Flat Seal Bags | Flat seal is a two-dimensional bag with a bottom seal, much like a pillow case. Though flat seals are strong, they may have a tendency to leak wet trash from the corners. Also, they do not conform well to the shape of most trash receptacles.

	Width	Length	Gauge
minimum	30"	none	1 mil
maximum	44"	none	6 mil

Gusseted Bags | Gusseted bag is a flat-style bag manufactured with both sides tucked in to form gussets. Where indented, the bag is sealed through four layers of film while the middle of the bag has only two. This leads to a potentially weak bottom seal.

	Width	Length	Gauge
minimum	30"	none	1 mil
maximum	52"	none	2 mil

* All custom bags require a minimum order of 2500 lbs and in full pallet increments.

* Lead time for custom products is up to 3 weeks for delivery.

* Lead time for stock products is up to 2 weeks for delivery.

* Product pricing shall be price prevailing at time of shipment unless otherwise specified in writing as evidence by documentation signed by a Revolution Bag executive or appointed Revolution Bag administrator.

* Revolution Bag reserves the right to change pricing at any time without notice, unless such right is specifically waived by written notification to the customer.

*All custom non-stock product pricing shall be by special quotation.

PRODUCT STRUCTURE/PACKAGING

Product Structure

- Tubular no-slit seals
- Star sealed
- Coreless perforated rolls

Dual Labels

- Corner label + front label
- Easy to identify in warehouse/storage

Packaging

- ✓ Corrugated carton containing recycled material
- ✓ Brown kraft
- ✓ Printed with soluble ink
- ✓ Prominently features Ecologo certification for LEED inspector

GLOSSARY OF TERMS

Can Liner Term used for garbage, trash or waste bags. They are used in industrial, institutional and medical applications.

Colors Can liners come in standard colors: natural, black, white, blue, and green. Custom colors are available. Revolution Bag is not able to match exact PMS numbers.

Film Strength Refers to the physical strength of the can liner. Some resins have a higher film strength than others.

Dart Drop ASTM D1709-09 test. Used to determine the resistance of a bag to local failure or puncturing of the film.

Tear ASTM D1922-09 test. A small cut is placed in the plastic sample and then the lab equipment measures the peak amount of force needed to completely tear apart the sample.

Tensile D882-09 test. Plastic is gripped and pulled apart. The value published is the peak amount of force while the sample separates. This test also measures the elongation.

Dry & Wet Load Capacity. How much dry and wet weight a can liner will hold respectfully at an established amount of time. This is an internally developed test as there is no official ASTM test method available.

Gauge Term used to describe thickness. LDPE and LLDPE can liners are measured by mil thickness and HMW-HDPE can liners are measured by micron thickness.

Mil (one thousandth of an inch) Term used in the measurement of LDPE and LLDPE can liners. One mil is .001". Can liners range between .35 – 4.0 mil

Micron (one thousandth of a millimeter) Term used in the measurement of HMW-HD can liners. 25.4 microns equals 1mil. 1,000 microns=1mm. HMW-DPE can liners are 6 – 24 microns.

Resin Short term for Polyethylene (PE) resin. The three types of PE resin are LDPE, LLDPE, and HMW-HDPE (see below). Other plastic resins include vinyl, polypropylene, polystyrene, PET, and nylon.

LDPE (Low Density Polyethylene) This resin was used with older can liner technology. Resin has good clarity but weak film strength. Today it is used primarily for food and utility bags.

LLDPE (Linear Low Density Polyethylene) This is the primary type of resin used in modern can liner manufacturing technology. Bags made from LLDPE film provide excellent combination of film strength, puncture resistance and tear resistance.

HMW-HDPE (High Molecular Weight-High Density Polyethylene) Bags made from HMW-HDPE resin provide excellent film strength and puncture resistance, but less tear resistance than LLDPE.

Butene One of three types of LLDPE resin. Butene (good) has weaker film-strength properties than Hexene or Octene.

Hexene One of three types of LLDPE resin. Revolution Bag uses Super Hexene (best) in the manufacturing of can liners. Properties include high film strength and increased tear resistance.

Prime Resin Refers to the usage of high-quality "fresh from the reactor," resin. Can be post-industrial (scrap) or post-consumer (recycling). Property of resin is decreased each time it is reused.

Seal Term used to describe bottom of a can liner. The three types of seals are flat, gusseted, and star.

Flat Seal Straight seal along bottom of a can liner (looks like a pillow case). Though flat seals are strong, they may have a tendency to leak wet trash from the corners.

Gusset Seal A flat-style bag manufactured with both sides tucked in to form gussets. Has a tendency to leak wet trash from the center at gusset points where four layers of film meet two.

Star Seal This multilayered seal is full gusseted and then folded prior to sealing, allowing for the trash to be evenly distributed.

Top-Side Dispenser Box An innovative style of box that allows stacking in small spaces. It is just as easy to pull a can liner from the side as it is the top.

Individually Folded Can liners are separately folded then stacked on top of one another. This allows the end-user to pull liners out of the box with much more ease vs. bulk-folded bags.

Cored Rolls can liners are rolled together on corrugated cylinders (looks similar to a roll of paper towels). Can liners come inside a special box that dispenses them with ease.

Coreless Rolls Can liners are rolled in groups of 10-50 per roll. There are 4-10 rolls per case. Note: All liners at Revolution Bag are perforated on a coreless roll.

Post-Consumer Recycled (PCR) A material or finished product that has served its intended use and has been diverted or recovered from waste destined for disposal, having completed its life as a consumer item.

REVOLUTION BAG® GOING GREEN IS IN THE BAG

Can liners for every type of commercial or industrial need

QUALITY
STRONG, DURABLE CONSTRUCTION

Premium resin allows performance to equal or exceed that of liners made of non-recycled materials

All tubular construction means no slit seals to split under pressure

Star-sealed bottom

Perforated on coreless rolls for easy separation

ECO-FRIENDLY
EXCEEDS EPA PROCUREMENT GUIDELINES BY AN AVERAGE OF 700%

Qualifies in existing building USGBC LEED program

All bags contain 30% to 94% post-consumer recycled resin

More than 1 billion pounds of waste diverted from landfills to date

VALUE NO EXTRA COST FOR BEING GREEN

CLOSED-LOOP PROCESS A REVOLUTIONARY SYSTEM

Revolution Bag creates liners through a closed-loop, in-house system that ensures the highest-quality post-consumer recycled resin (PCR)

We make the irrigation polytube

We pick up the used polytube from farmers

We recycle the polytube into certified 100% PCR

We make Revolution Bag can liners for you

CERTIFIED RECYCLED CONTENT™ SCS GLOBAL SERVICES

100% RECYCLED CONTENT
POST CONSUMER RESIN

UL ECOLOGO

PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL UL126

ALL REVOLUTION BAG STOCK ITEMS AND BLENDS ARE ECOLOGO CERTIFIED

RB0116

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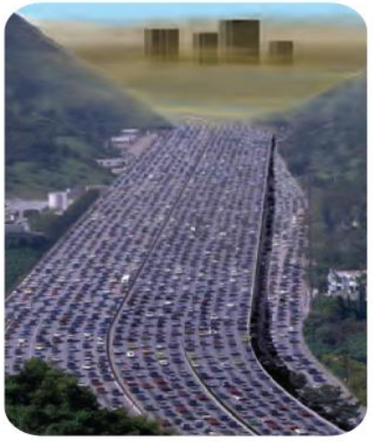
ENVIRONMENTALLY PREFERABLE PRODUCT

Life Cycle Assessment

SCS Global Services conducted an assessment to determine the positive impact our product has on the environment. The LCA shows that production and use of Revolution Bag liners results in lower environmental impacts across the board when compared to liners made without recycled content.

37% Lower Global Climate Change Emissions

Global Climate Change: Tracks man-made greenhouse gases that are changing the planet's climate.

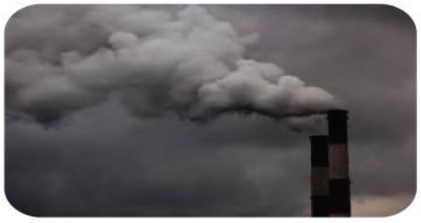


53% Less Depletion of Energy Resources

Energy Resource Depletion: Accounts for the depletion of non-renewable energy resources, such as crude oil, natural gas, and uranium.

50% Decrease in Human Exposure to Fine Particulate Matter

Fine Particulate Matter (Soot): Exposure linked to pulmonary illness, cardiac disease, and cancer in the population.



31% Decrease in Human Exposure to Ground Level Ozone

Ground Level Ozone (Smog): Exposure linked to asthma, bronchitis, and emphysema in the population.

12% Less Impact on Ocean Acidification

Ocean Acidification: Addresses the degree to which carbon dioxide emissions are making oceans more acidic, harming the oceans' ecosystems and food web.

31% Less Impact on Ocean Warming

Ocean Warming: Accounts for the warming effect of greenhouse gases, which are linked to killing coral reefs and changing the oceans' ecosystems.

51% Less Impact on Regional Acidification

Regional Acidification (Acid Rain): Tracks acid emissions that deposit in sensitive areas and affect our lakes, rivers, and wildlife.

Life Cycle Impact declaration of Revolution Bag's Loadmaster PCR LLDPE utility grade institutional can liners based on ISO 14044:2006 Environmental management - Life Cycle Assessment - requirements and guidelines. LCA study proves that production and use of one hundred thousand Loadmaster can liners made with 70% post-consumer recycled content results in lower environmental impacts when compared to can liners made without recycled content. Environmentally Preferable Products (EPP) and services have a lesser or reduced negative effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison applies to raw materials, manufacturing, packaging, distribution use, reuse, operation, maintenance, and disposal. Environmentally Preferable Products possess more than one environmentally friendly attribute.

REVOLUTION BAG®

EcoMax

Utility Grade Can Liners

REVOLUTION BAG®

100% EPA Comprehensive Procurement Guideline Compliant

	PRODUCT CODE				WIDTH	LENGTH	GA (MIL)	GA (MIC)	BAGS/ROLL	ROLLS/CASE	BAGS/CASE	GAL CAP	DRY LOAD RATING (LBS)	WET LOAD RATING (LBS)	CASE/PALLET	NET WT/CS (LBS)	POST-CONSUMER RECYCLED CONTENT (%)**
1	PC	07	LW	BK	22	25	0.30	7.6	50	20	1000	7-10	36	24	72	11.0	30
2	PC	07	LW	N	22	25	0.30	7.6	50	20	1000	7-10	36	24	72	11.0	30
3	PC	07	XH	BK	22	25	0.45	11.4	50	10	500	7-10	44	34	105	8.3	30
4	PC	07	XH	N	22	25	0.45	11.4	50	10	500	7-10	44	34	105	8.3	30
5	PC	10	LW	BK	23	31	0.30	7.6	50	20	1000	12-16	37	24	72	14.3	30
6	PC	10	LW	N	23	31	0.30	7.6	50	20	1000	12-16	37	24	72	14.3	30
7	PC	10	XH	BK	23	31	0.45	11.4	50	10	500	12-16	45	33	105	10.7	30
8	PC	10	XH	N	23	31	0.45	11.4	50	10	500	12-16	45	33	105	10.7	30
9	PC	24	LW	BK	24	24	0.30	7.6	50	20	1000	7-10	36	24	72	11.5	30
10	PC	24	LW	N	24	24	0.30	7.6	50	20	1000	7-10	36	24	72	11.5	30
11	PC	32	LW	BK	24	32	0.30	7.6	50	20	1000	12-16	36	28	72	15.4	30
12	PC	32	LW	N	24	32	0.30	7.6	50	20	1000	12-16	36	28	72	15.4	30
13	PC	SJ	HR	BK	28	45	0.58	14.7	25	10	250	Slim Jim®	55	36	105	12.2	70
14	PC	SJ	HR	N	28	45	0.58	14.7	25	10	250	Slim Jim®	55	36	105	12.2	70
15	PC	SJ	XH	BK	28	45	0.70	17.8	25	10	250	Slim Jim®	64	52	72	14.7	70
16	PC	SJ	XH	N	28	45	0.70	17.8	25	10	250	Slim Jim®	64	52	72	14.7	70
17	PC	36	LW	BK	30	36	0.30	7.6	25	20	500	20-30	36	30	105	10.8	30
18	PC	36	LW	N	30	36	0.30	7.6	25	20	500	20-30	36	30	105	10.8	35
19	PC	36	LR	BK	30	36	0.35	8.9	25	10	250	20-30	36	30	105	6.3	30
20	PC	36	LR	N	30	36	0.35	8.9	25	10	250	20-30	36	30	105	6.3	30
21	PC	36	MR	BK	30	36	0.45	11.4	25	10	250	20-30	46	31	105	8.1	30
22	PC	36	MR	N	30	36	0.45	11.4	25	10	250	20-30	46	31	105	8.1	30
23	PC	36	HR	BK	30	36	0.59	15.0	25	10	250	20-30	55	41	105	10.6	70
24	PC	36	HR	N	30	36	0.59	15.0	25	10	250	20-30	55	41	105	10.6	70
25	PC	36	XH	BK	30	36	0.70	17.8	25	8	200	20-30	73	53	105	10.1	70
26	PC	36	XH	N	30	36	0.70	17.8	25	8	200	20-30	73	53	105	10.1	70
27	PC	39	MR	BK	33	39	0.45	11.4	25	10	250	32-33	46	31	105	9.7	30
28	PC	39	MR	N	33	39	0.45	11.4	25	10	250	32-33	46	31	105	9.7	30
29	PC	39	HR	BK	33	39	0.59	15.0	25	10	250	32-33	59	44	72	12.7	70
30	PC	39	HR	N	33	39	0.59	15.0	25	10	250	32-33	59	44	72	12.7	70
31	PC	39	XH	BK	33	39	0.70	17.8	25	6	150	32-33	73	54	105	9.0	70
32	PC	39	XH	N	33	39	0.70	17.8	25	6	150	32-33	73	54	105	9.0	70
33	PC	43	HR	BK	30	43	0.59	15.0	25	10	250	32-33	59	43	105	12.7	70
34	PC	44	MR	N	36	47	0.45	11.4	25	10	250	44 Brute®	46	34	105	12.7	70
35	PC	44	MR	BK	36	47	0.45	11.4	25	10	250	44 Brute®	46	34	105	12.7	70
36	PC	44	HR	N	36	47	0.59	15.0	25	10	250	44 Brute®	59	47	72	16.6	70
37	PC	44	HR	BK	36	47	0.59	15.0	25	10	250	44 Brute®	59	45	72	16.6	70
38	PC	44	XH	N	36	47	0.70	17.8	25	8	200	44 Brute®	73	55	105	15.8	70
39	PC	44	XH	BK	36	47	0.70	17.8	25	8	200	44 Brute®	73	55	105	15.8	70
40	PC	46	MR	N	40	46	0.45	11.4	25	10	250	40-45	55	37	72	13.8	30
41	PC	46	MR	BK	40	46	0.45	11.4	25	10	250	40-45	55	37	72	13.8	30

LW Light waste • MR Medium refuse • HR Heavy refuse • XH Extra heavy refuse • N Natural with contact clarity • BK Black

** Targeted percentage

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EcoMax

Utility Grade Can Liners

REVOLUTION BAG®

100% EPA Comprehensive Procurement Guideline Compliant

	PRODUCT CODE				WIDTH	LENGTH	GA (MIL)	GA (MIC)	BAGS/ROLL	ROLLS/CASE	BAGS/CASE	GAL CAP	DRY LOAD RATING (LBS)	WET LOAD RATING (LBS)	CASE/PALLET	NET WT/CS (LBS)	POST-CONSUMER RECYCLED CONTENT (%)**
43	PC	46	HR	BK	40	46	0.59	15.0	25	10	250	40-45	64	52	72	18.1	70
44	PC	46	HR	N	40	46	0.59	15.0	25	10	250	40-45	64	52	72	18.1	70
45	PC	46	XH	BK	40	46	0.70	17.8	25	4	100	40-45	72	56	105	8.6	70
46	PC	46	XH	N	40	46	0.70	17.8	25	4	100	40-45	72	56	105	8.6	70
47	PC	47	HR	BK	43	47	0.59	15.0	25	8	200	Glutton®	71	57	72	15.9	70
48	PC	47	HR	N	43	47	0.59	15.0	25	8	200	Glutton®	71	57	72	15.9	70
49	PC	47	XH	BK	43	47	0.70	17.8	25	4	100	Glutton®	78	58	105	9.4	70
50	PC	47	XH	N	43	47	0.70	17.8	25	4	100	Glutton®	78	58	105	9.4	70
51	PC	55	XH	BK	41	52	0.70	17.8	25	4	100	55 Brute®	74	58	105	9.9	70
52	PC	55	XH	N	41	52	0.70	17.8	25	4	100	55 Brute®	74	55	105	9.9	70
53	PC	58	HR	BK	38	58	0.59	15.0	25	8	200	60	71	57	56	17.3	70
54	PC	58	HR	N	38	58	0.59	15.0	25	8	200	60	71	57	56	17.3	70
55	PC	58	XH	BK	38	58	0.70	17.8	25	4	100	60	74	56	105	10.3	70
56	PC	58	XH	N	38	58	0.70	17.8	25	4	100	60	74	56	105	10.3	70
57	PC	BB	XH	N	45	50	2.00	50.8	5	10	50	60+ | Fits Bigbelly compactor	200	160	72	15.0	70

All EcoMax items listed are ECOLOGO certified

ECOLOGO

PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL
UL 126

LW Light waste • MR Medium refuse • HR Heavy refuse • XH Extra heavy refuse • N Natural with contact clarity • BK Black
** Targeted percentage

Brute®, Glutton® and Slim Jim® are registered trademarks of Rubbermaid

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Loadmaster

High Performance Can Liners

REVOLUTION BAG®

100% EPA Comprehensive Procurement Guideline Compliant

	PRODUCT CODE				WIDTH	LENGTH	GA (MIL)	GA (MIC)	BAGS/ROLL	ROLLS/CASE	BAGS/CASE	GAL CAP	DRY LOAD RATING (LBS)	WET LOAD RATING (LBS)	CASE/PALLET	NET WT/CS (LBS)	POST-CONSUMER RECYCLED CONTENT (%)**
1	PC	24	XP	BK	24	24	0.85	21.6	25	20	500	7-10	90	70	72	16.3	70
2	PC	32	XP	BK	24	32	0.85	21.6	25	20	500	12-16	91	81	56	21.8	70
3	PC	36	XP	BK	30	36	0.90	22.9	25	8	200	20-30	73	63	105	13.0	70
4	PC	36	XP	N	30	36	0.85	21.6	25	8	200	20-30	73	63	105	12.2	35
5	PC	39	XP	BK	33	39	0.90	22.9	25	6	150	32-33	78	64	105	11.6	70
6	PC	39	XP	N	33	39	0.85	21.6	25	6	150	32-33	78	64	105	10.9	35
7	PC	44	XP	BK	36	47	0.90	22.9	25	4	100	44 Brute®	82	70	105	10.2	70
8	PC	44	XP	N	36	47	0.85	21.6	25	4	100	44 Brute®	82	70	105	9.6	35
9	PC	46	XP	BK	40	46	0.90	22.9	25	4	100	40-45	86	67	105	11.0	70
10	PC	46	XP	N	40	46	0.85	21.6	25	4	100	40-45	86	67	105	10.4	35
11	PC	47	XP	BK	43	47	0.90	22.9	25	4	100	Glutton®	94	70	105	12.1	70
12	PC	47	XP	N	43	47	0.85	21.6	25	4	100	Glutton®	94	70	105	11.5	35
13	PC	55	XP	BK	41	52	0.90	22.9	25	4	100	55 Brute®	95	71	105	12.8	70
14	PC	55	XP	N	41	52	0.85	21.6	25	4	100	55 Brute®	95	71	105	12.1	35
15	PC	58	XP	BK	38	58	0.90	22.9	25	4	100	60	94	70	110	13.2	70
16	PC	58	XP	N	38	58	0.85	21.6	25	4	100	60	94	70	110	12.5	70
17	PC	36	XT	BK	30	36	1.15	29.2	25	8	200	20-30	94	77	105	16.6	70
18	PC	39	XT	BK	33	39	1.15	29.2	25	6	150	32-33	99	76	105	14.8	70
19	PC	39	XT	N	33	39	1.10	27.9	25	6	150	32-33	99	76	105	14.2	35
20	PC	44	XT	BK	36	47	1.15	29.2	20	5	100	44 Brute®	100	78	105	13.0	70
21	PC	44	XT	N	36	47	1.10	27.9	20	5	100	44 Brute®	100	78	105	12.4	35
22	PC	46	XT	BK	40	46	1.15	29.2	20	5	100	40-45	98	79	105	14.1	70
23	PC	46	XT	N	40	46	1.10	27.9	20	5	100	40-45	98	79	105	13.5	35
24	PC	47	XT	BK	43	47	1.15	29.2	20	5	100	Glutton®	100	80	110	15.5	70
25	PC	47	XT	N	43	47	1.10	27.9	20	5	100	Glutton®	100	80	110	14.8	35
26	PC	55	XT	BK	41	52	1.15	29.2	20	5	100	55 Brute®	100	79	72	16.3	70
27	PC	55	XT	N	41	52	1.10	27.9	20	5	100	55 Brute®	100	79	72	15.6	35
28	PC	58	XT	BK	38	58	1.15	29.2	20	5	100	60	99	78	72	16.9	70
29	PC	58	XT	N	38	58	1.10	27.9	20	5	100	60	99	78	72	16.2	35

All Loadmaster items listed are ECOLOGO certified

ECOLOGO

PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL
UL 126

XP Extra Heavy + • XT Extra Tough • N Natural with contact clarity • BK Black
** Targeted percentage

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HeRCules

Heavy Recycled Content Can Liners

REVOLUTION BAG®

100% EPA Comprehensive Procurement Guideline Compliant

	PRODUCT CODE	WIDTH	LENGTH	GA (MIL)	GA (MIC)	BAGS/ROLL	ROLLS/CASE	BAGS/CASE	GAL CAP	DRY LOAD RATING (LBS)	WET LOAD RATING (LBS)	CASE/PALLET	NET WT/CS (LBS)	POST-CONSUMER RECYCLED CONTENT (%)
1	PC 36 100 BK	30	36	0.90	22.9	20	10	200	20-30	95	81	105	13.0	91
2	PC 36 100 N	30	36	0.90	22.9	20	10	200	20-30	95	81	105	13.0	94
3	PC 39 100 BK	33	39	0.90	22.9	25	6	150	32-33	95	83	105	11.6	91
4	PC 39 100 N	33	39	0.90	22.9	25	6	150	32-33	95	83	105	11.6	94
5	PC 44 100 BK	36	47	0.90	22.9	20	5	100	44 Brute®	104	81	105	10.2	91
6	PC 44 100 N	36	47	0.90	22.9	20	5	100	44 Brute®	104	81	105	10.2	94
7	PC 46 100 BK	40	46	0.90	22.9	20	5	100	40-45	109	85	105	11.0	91
8	PC 46 100 N	40	46	0.90	22.9	20	5	100	40-45	109	85	105	11.0	94
9	PC 47 100 BK	43	47	0.90	22.9	20	5	100	Glutton®	109	85	105	12.1	91
10	PC 47 100 N	43	47	0.90	22.9	20	5	100	Glutton®	109	85	105	12.1	94
11	PC 58 100 BK	38	58	0.90	22.9	20	5	100	60	109	87	110	13.2	91
12	PC 58 100 N	38	58	0.90	22.9	20	5	100	60	109	87	110	13.2	94
13	PC 36 150 BK	30	36	1.35	34.3	20	10	200	20-30	109	81	56	19.4	91
14	PC 39 150 BK	33	39	1.35	34.3	25	6	150	32-33	109	81	56	17.4	91
15	PC 39 150 N	33	39	1.35	34.3	25	6	150	32-33	109	81	56	17.4	94
16	PC 46 150 BK	40	46	1.35	34.3	20	5	100	40-45	118	83	72	16.6	91
17	PC 46 150 N	40	46	1.35	34.3	20	5	100	40-45	118	83	72	16.6	94
18	PC 47 150 BK	43	47	1.35	34.3	20	5	100	Glutton®	118	84	56	18.2	91
19	PC 47 150 N	43	47	1.35	34.3	20	5	100	Glutton®	118	84	56	18.2	94
20	PC 47 168 BK	43	47	1.50	38.1	25	4	100	Glutton®	119	87	56	20.2	91
21	PC 58 150 BK	38	58	1.35	34.3	20	5	100	60	118	84	56	19.8	91
22	PC 58 150 N	38	58	1.35	34.3	20	5	100	60	118	84	56	19.8	94
23	PC 58 168 BK	38	58	1.50	38.1	25	4	100	60	119	89	56	22.0	91
24	PC 58 168 N	38	58	1.50	38.1	25	4	100	60	119	89	56	22.0	94
25	PC 39 200 BK	33	39	1.75	44.5	25	6	150	32-33	118	86	42	22.5	91
26	PC 39 200 N	33	39	1.75	44.5	25	6	150	32-33	118	86	42	22.5	94
27	PC 46 200 BK	40	46	1.75	44.5	25	4	100	40-45	130	90	56	21.5	91
28	PC 46 200 N	40	46	1.75	44.5	25	4	100	40-45	130	90	56	21.5	94
29	PC 47 200 BK	43	47	1.75	44.5	25	4	100	Glutton ®	131	93	56	23.6	91
30	PC 47 200 N	43	47	1.75	44.5	25	4	100	Glutton ®	131	93	56	23.6	94
31	PC 58 200 BK	38	58	1.75	44.5	25	4	100	60	131	93	56	25.7	91
32	PC 58 200 N	38	58	1.75	44.5	25	4	100	60	131	93	56	25.7	94

All HeRCules items listed are ECOLOGO certified

ECOLOGO

PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL
UL 126

N Natural with contact clarity • BK Black

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EcoMax Select

Optimal Liner Sizes for the Most Common Capacity Cans

REVOLUTION BAG®

100% EPA Comprehensive Procurement Guideline Compliant

		PRODUCT CODE				WIDTH	LENGTH	GA (MIL)	BAGS/CASE	STRENGTH	RECOMMENDED USE
28 Qt Wastebasket	1	PC	07	LW	N	22	25	0.30	1000	L	paper trash; admin general use
	2	PC	07	LW	BK	22	25	0.30	1000	L	paper trash; admin general use
	3	PC	07	XH	N	22	25	0.45	500	XH	mixed trash; admin heavy contents
	4	PC	07	XH	BK	22	25	0.45	500	XH	mixed trash; admin heavy contents
40 Qt Wastebasket	1	PC	10	LW	N	23	31	0.30	1000	L	paper trash; admin general use
	2	PC	10	LW	BK	23	31	0.30	1000	L	paper trash; admin general use
	3	PC	10	XH	N	23	31	0.45	500	XH	mixed trash w/sharps; outdoor use; X heavy contents
	4	PC	10	XH	BK	23	31	0.45	500	XH	mixed trash w/sharps; outdoor use; X heavy contents
Slim Jim®	1	PC	SJ	HR	N	28	45	0.58	250	H	mixed trash; admin heavy contents
	2	PC	SJ	HR	BK	28	45	0.58	250	H	mixed trash; admin heavy contents
	3	PC	SJ	XH	N	28	45	0.70	250	XH	mixed trash w/sharps; outdoor use; X heavy contents
	4	PC	SJ	XH	BK	28	45	0.70	250	XH	mixed trash w/sharps; outdoor use; X heavy contents
20 Brute®	1	PC	36	LW	N	30	36	0.30	500	L	paper trash; admin general use
	2	PC	36	LW	BK	30	36	0.30	500	L	paper trash; admin general use
	3	PC	36	MR	N	30	36	0.45	250	M	paper trash; admin general use
	4	PC	36	MR	BK	30	36	0.45	250	M	paper trash; admin general use
	5	PC	36	HR	N	30	36	0.59	250	H	mixed trash; admin heavy contents
	6	PC	36	HR	BK	30	36	0.59	250	H	mixed trash; admin heavy contents
	7	PC	36	XH	N	30	36	0.70	200	XH	mixed trash w/sharps; outdoor use; X heavy contents
	8	PC	36	XH	BK	30	36	0.70	200	XH	mixed trash w/sharps; outdoor use; X heavy contents
32 Brute®	1	PC	39	MR	N	33	39	0.45	250	M	paper trash; admin general use
	2	PC	39	MR	BK	33	39	0.45	250	M	paper trash; admin general use
	3	PC	39	HR	N	33	39	0.59	250	H	mixed trash; admin heavy contents
	4	PC	39	HR	BK	33	39	0.59	250	H	mixed trash; admin heavy contents
	5	PC	39	XH	N	33	39	0.70	150	XH	mixed trash w/sharps; outdoor use; X heavy contents
	6	PC	39	XH	BK	33	39	0.70	150	XH	mixed trash w/sharps; outdoor use; X heavy contents
44 Brute®	1	PC	44	MR	N	36	47	0.45	250	M	mixed trash; admin heavy contents
	2	PC	44	MR	BK	36	47	0.45	250	M	mixed trash; admin heavy contents
	3	PC	44	HR	N	36	47	0.59	250	H	mixed trash; admin heavy contents
	4	PC	44	HR	BK	36	47	0.59	250	H	mixed trash; admin heavy contents
	5	PC	44	XH	N	36	47	0.70	200	XH	mixed trash w/sharps; outdoor use; X heavy contents
	6	PC	44	XH	BK	36	47	0.70	200	XH	mixed trash w/sharps; outdoor use; X heavy contents
55 Brute®	1	PC	55	XH	N	41	52	0.70	100	XH	mixed trash w/sharps; outdoor use; X heavy contents
	2	PC	55	XH	BK	41	52	0.70	100	XH	mixed trash w/sharps; outdoor use; X heavy contents
Glutton®	1	PC	47	HR	N	43	47	0.59	200	H	mixed trash admin heavy contents
	2	PC	47	HR	BK	43	47	0.59	200	H	mixed trash admin heavy contents
	3	PC	47	XH	N	43	47	0.70	100	XH	mixed trash w/sharps; outdoor use; X heavy contents
	4	PC	47	XH	BK	43	47	0.70	100	XH	mixed trash w/sharps; outdoor use; X heavy contents
Compactor	1	PC	BB	XH	N	45	50	2.00	50	XH	fits Bigbelly solar compactors; performs in harsh environments & compacting use

All EcoMax Select items listed are ECOLOGO certified

ECOLOGO

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UL 126

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RBPGS0216

Colored Bags

Environmentally Preferred Specialty Can Liners

REVOLUTION BAG®

100% EPA Comprehensive Procurement Guideline Compliant

	PRODUCT CODE				WIDTH	LENGTH	GA (MIL)	GA (MIC)	BAGS/CASE	STRENGTH	GAL CAP	DRY LOAD RATING (LBS)	WET LOAD RATING (LBS)	CASE/PALLET	NET WT/CS (LBS)	POST-CONSUMER RECYCLED CONTENT (%)**
1	PC	10	XH	BU	23	31	0.45	11.4	500	XH	12-16	45	34	105	10.7	30
2	PC	SJ	XH	BU	28	45	0.70	17.8	250	XH	Slim Jim®	64	53	72	14.7	70
3	PC	SJ	XH	GN	28	45	0.70	17.8	250	XH	Slim Jim®	64	53	72	14.7	70
4	PC	32	XH	W	24	32	0.75	19.1	250	XH	12-16	64	53	105	9.6	56
5	PC	36	XH	W	30	36	0.70	17.8	200	XH	20-30	73	53	105	10.1	91
6	PC	39	XH	W	33	39	0.70	17.8	150	XH	32-33	73	54	105	9.0	91
7	PC	44	XH	GN	36	47	0.70	17.8	200	XH	44 Brute®	73	55	105	15.8	70
8	PC	46	XH	BU	40	46	0.70	17.8	100	XH	40-45	73	55	105	8.6	70
9	PC	46	XH	W	40	46	0.70	17.8	100	XH	40-45	72	56	105	8.6	91
10	PC	47	180	GN	43	47	1.60	40.6	100	SH	Glutton ®	117	custom	56	21.6	91
11	PC	58	XH	W	38	58	0.70	17.8	100	XH	60	74	56	105	10.3	91

*Other sizes, gauges and colors are available upon request

All Specialty Can Liner items listed are ECOLOGO certified

ECOLOGO

PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL
UL 126

LW Light waste • MR Medium refuse • HR Heavy refuse • XH Extra heavy refuse • BU Blue • GN Green • W White

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8801 Frazier Pike | Little Rock, AR 72211 | Office 501-490-0395 | Fax 501-490-0347 | 800-277-9172 | revolutionbag.com

Date Issued: January 01, 2014

I. Identification

Product Name:	Polyethylene Film, Can Liners
Chemical Name:	Polyethylene
Manufacturer's Name/Location:	Revolution Bag, Little Rock, Arkansas

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II. Physical Data

Melting Point:	100 – 130° C
Density:	0.91 – 0.98 g/cm
Solubility in Water:	Nil
Volatility:	Nil
Appearance & Odor	Film, No Odor

III. Ingredients

Polyethylene:	90 – 100%	No Known Hazard
Colorants:	0 – 5%	No Known Hazards
Other Additions:	0 – 5%	No Known Hazards

IV. Fire and Explosion Hazard Data

Auto-ignition:	Generally above 310° C
Temperature:	Not Applicable
Extinguishing Media:	Water Spray, Foam, CO, Dry Chemicals
Usual Fire/Explosion Hazards:	None

V. Health Hazard Data

Threshold Limit Value:	Not Applicable
Effects of Over Exposure:	Not Applicable
Ingestion:	May cause choking if swallowed; Considered Physiological Inert
Skin Contact:	Non-Irritating to Skin
Emergency First Aid:	Not Applicable

VI. Reactivity Data

Stability:	Stable
Conditions to Avoid:	None
Incompatibility:	None
Hazardous Decomposition:	Can produce dense smoke while burning
Hazardous Polymerization:	May not occur

VII. Spill or Leak Procedure

Spills/Leaks:	Sweep up and Discard
Disposal Method:	Recycle, Incinerate or bury in landfill in accordance with Local, Provincial and Federal regulations

VIII. Special Protection Information

Respiratory Protection:	Not Needed
Ventilation:	Not Needed
Skin Protection:	Not Needed
Eye Protection:	Not Needed

IX. Special Precautions

Precautions to be taken in handling and Storage.

Do not store near heat, flame or strong oxidizing chemicals.

The information contained herein is based on Suppliers information

No warranty, expressed or implied is made.

YOUR COMPANY
COMPANY SLOGAN GOES HERE

REVOLUTION BAG

100% EPA Comprehensive Procurement Guideline Compliant

	YOUR COMPANY'S PRODUCT CODE	REVOLUTION BAG PRODUCT CODE				WIDTH	LENGTH	GA (MIL)	GA (MIC)	BAGS/CASE	GAL CAP	DRY LOAD RATING (LBS)	WET LOAD RATING (LBS)	CASE/PALLET	NET WT/CS (LBS)	POST-CONSUMER RECYCLED CONTENT (%)
7-16 Gallon	XXXXXX	PC	07	LW	N	22	25	0.30	7.6	1000	7-10	36	24	72	11.0	30
	XXXXXX	PC	10	LW	N	23	31	0.30	7.6	1000	12-16	37	24	72	14.3	30
	XXXXXX	PC	32	XP	BK	24	32	0.85	21.6	500	12-16	91	81	56	21.8	70
Slim Jim®	XXXXXX	PC	SJ	XH	N	28	45	0.70	17.8	250	Slim Jim®	64	52	72	14.7	70
20 Brute®	XXXXXX	PC	36	LW	N	30	36	0.30	7.6	500	20-30	36	30	105	10.8	35
	XXXXXX	PC	36	HR	BK	30	36	0.59	15.0	250	20-30	55	41	105	10.6	70
32 Brute®	XXXXXX	PC	39	HR	N	33	39	0.59	15.0	250	32-33	59	44	72	12.7	70
	XXXXXX	PC	39	100	BK	33	39	0.90	22.9	150	32-33	95	83	105	11.6	91
	XXXXXX	PC	39	150	BK	33	39	1.35	34.3	150	32-33	109	81	56	17.4	91
44 Brute®	XXXXXX	PC	44	MR	N	36	47	0.45	11.4	250	44 Brute®	46	34	105	12.7	70
	XXXXXX	PC	44	XH	BK	36	47	0.70	17.8	200	44 Brute®	73	55	105	15.8	70
	XXXXXX	PC	44	XP	N	36	47	0.85	21.6	100	44 Brute®	82	70	105	9.6	35
	XXXXXX	PC	44	100	BK	36	47	0.90	22.9	100	44 Brute®	104	81	105	10.2	91
Glutton®	XXXXXX	PC	47	XH	N	43	47	0.70	17.8	100	Glutton®	78	58	105	9.4	70
	XXXXXX	PC	47	150	BK	43	47	1.35	34.3	100	Glutton®	118	84	56	18.2	91
	XXXXXX	PC	47	200	BK	43	47	1.75	44.5	100	Glutton®	131	93	56	23.6	91
Ranger®	XXXXXX	PC	46	HR	N	40	46	0.59	15.0	250	40-45	64	52	72	18.1	70
	XXXXXX	PC	46	XH	BK	40	46	0.70	17.8	100	40-45	72	56	105	8.6	70
	XXXXXX	PC	46	100	BK	40	46	0.90	22.9	100	40-45	109	85	105	11.0	91
	XXXXXX	PC	46	100	N	40	46	0.90	22.9	100	40-45	109	85	105	11.0	94
	XXXXXX	PC	46	150	BK	40	46	1.35	34.3	100	40-45	118	83	72	16.6	91
60 Gal Drum	XXXXXX	PC	58	100	BK	38	58	0.90	22.9	100	60	109	87	105	13.2	91
	XXXXXX	PC	58	100	N	38	58	0.90	22.9	100	60	109	87	105	13.2	94
	XXXXXX	PC	58	150	BK	38	58	1.35	34.3	100	60	118	84	56	19.8	91
	XXXXXX	PC	58	200	BK	38	58	1.75	44.5	100	60	131	93	56	25.7	91

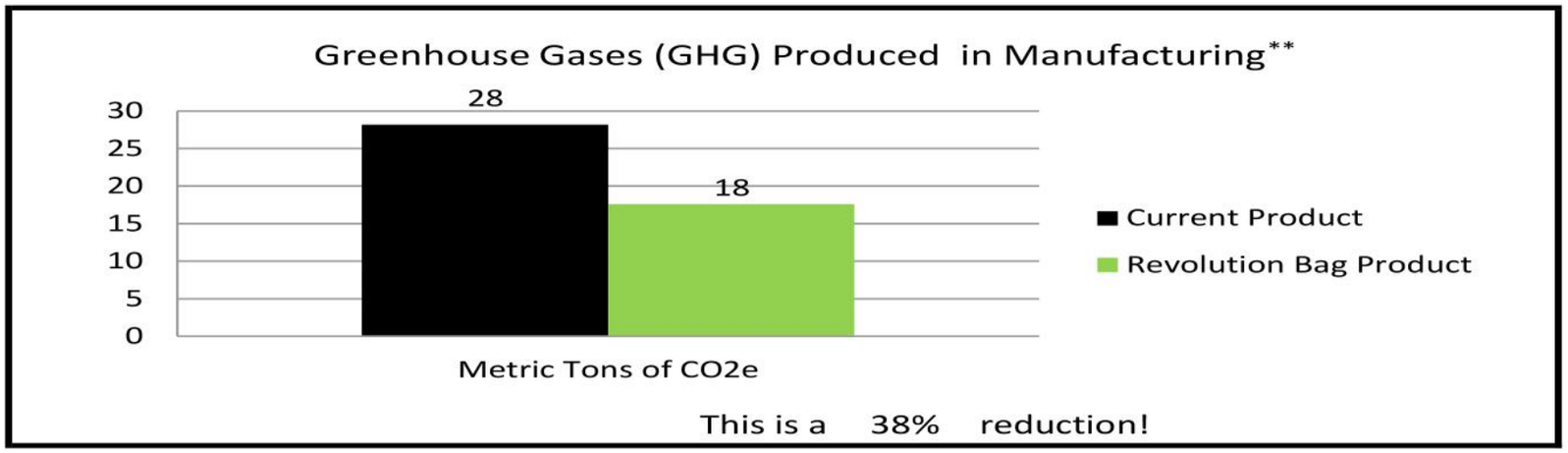
ECOLOGO
PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL
UL 126

LW Light waste • MR Medium refuse • HR Heavy refuse • XH Extra heavy refuse • XP Extra heavy plus
N Natural; contact clarity • BK Black

Paper Enterprises, Inc. | 770 East 132nd Street Bronx, NY 10454 | 718-402-1200 | www.paperenterprisesusa.com

Environmental Impact Calculator

Enter Number of Cases Consumed Here* = 1,600



This is a 38% reduction!

Metric tons of GHG reduced by using Revolution Bag compared to current product = **11**

But, *really,* what is the impact of the greenhouse gas reduction?

Here are some GHG equivalents for 11 metric tons of CO_2e***:

Number of seedlings that would need to be planted and grow for 10 years = **271**

Number of homes powered for one year = **1**

Number of passenger vehicles removed from the road for one year = **2**

* Assuming case is of 100 count 60-gallon liners for Revolution Bag and Corporate Baseline Virgin bags.
** GHG coefficients are based on the Life Cycle Assessment by Scientific Certification Systems
*** All emission equivalents are from epa.gov

ABC Co Environmental And Cost Impact For Can Liners

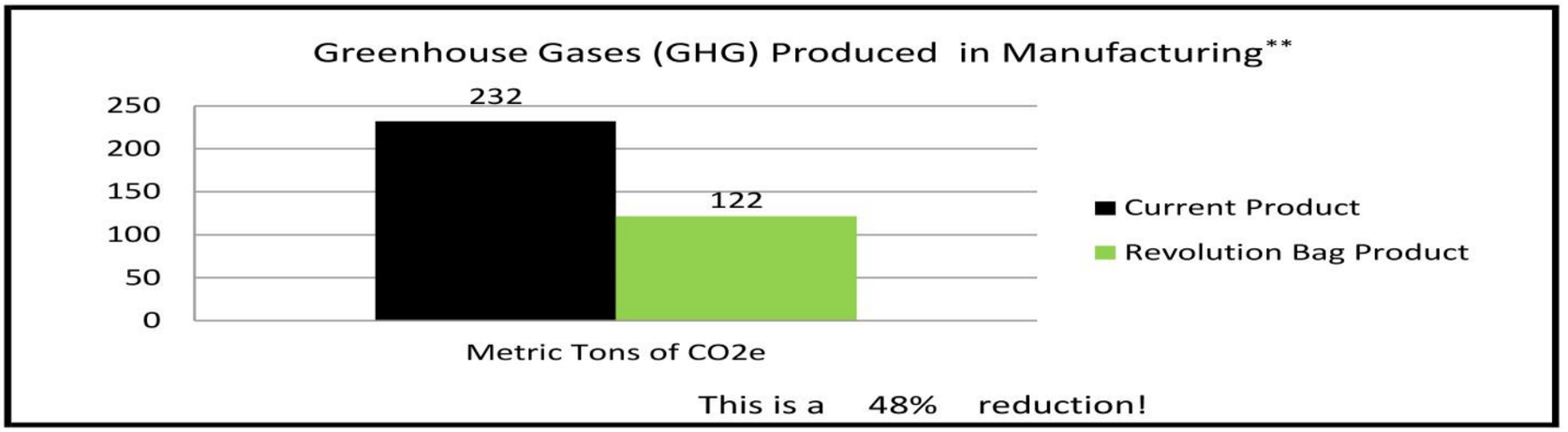
Current or Proposed Alternative	Item Description	Current Product Purchased: Film / Mil Thickness & Size	Bag Type: High-Density Polyethylene (HDPE) or Linear-Low Density Polyethylene (LLDPE)	Color	Seal Type	Case Qty	Net Weight per Case (lbs)	Cases per year	Total lbs per year	Total bags per year	Price per Case	Total $'s per year	Price Per 1000 Bags	% of virgin resin	Total lbs of virgin resin used per year	Post-Consumer Recycled (PCR) Resin Content %
Current-A	386314	40"x46"; 1.7 mil	LLDPE	Clear	Star-seal	100	20.85	5,504	114,758	550,400	$ 29.00	$ 159,616	$ 290.00	100%	114,758	0%
Current-B	381114	30"x36"; .45 mil	LLDPE	Clear	Star-seal	250	8.10	3,505	28,391	876,250	$ 12.00	$ 42,060	$ 48.00	100%	28,391	0%
Current-C	390014	24"x24"; 6 mic (.24 mil)	HDPE	Clear	Star-seal	1000	9.34	1,003	9,368	1,003,000	$ 13.50	$ 13,541	$ 13.50	100%	9,368	0%
Current-D	388114	40"x46"; .74 mil	LLDPE	Clear	Star-seal	100	9.07	1,650	14,966	165,000	$ 13.00	$ 21,450	$ 130.00	100%	14,966	0%
Current-E	393714	43"x48"; 16 mic (.63 mil)	HDPE	Clear	Star-seal	200	17.86	284	5,072	56,800	$ 26.00	$ 7,384	$ 130.00	100%	5,072	0%
Current-F	383814	40"x46"; 1.8 mil	LLDPE	Black	Star-seal	100	22.08	40	883	4,000	$ 28.00	$ 1,120	$ 280.00	100%	883	0%
Current-G	991913	40"x48"; 17 mic (.67 mil)	HDPE	Blue	Star-seal	250	22.06	21	463	5,250	$ 34.00	$ 714	$ 136.00	100%	463	0%
CURRENT TOTAL								**12,007**	**173,901**	**2,660,700**		**$ 245,885**			**173,901**	**0%**
										-						
Proposed-A	PC46150N	40"x46"; 1.35 mil	LLDPE	Natural	Star-seal	100	16.56	5,504	91,146	550,400	$ 22.00	$ 121,088	$ 220.00	0%	-	94%
Proposed-B	PC36MRN	30"x36"; .45 mil	LLDPE	Natural	Star-seal	250	8.10	3,505	28,391	876,250	$ 12.00	$ 42,060	$ 48.00	64%	18,170	30%
Proposed-C	PC24LWN	24"x24"; .30 mil	LLDPE	Natural	Star-seal	1000	11.52	1,003	11,555	1,003,000	$ 20.00	$ 20,060	$ 20.00	64%	7,395	30%
Proposed-D	PC46100N	40"x46"; .90 mil	LLDPE	Natural	Star-seal	100	11.04	1,650	18,216	165,000	$ 15.00	$ 24,750	$ 150.00	0%	-	94%
Proposed-E	PC47HRN	43"x47"; .59 mil	LLDPE	Natural	Star-seal	200	15.90	284	4,516	56,800	$ 25.00	$ 7,100	$ 125.00	24%	1,084	70%
Proposed-F	PC46150BK	40"x46"; 1.35 mil	LLDPE	Black	Star-seal	100	16.56	40	662	4,000	$ 22.00	$ 880	$ 220.00	0%	-	91%
Proposed-G	PC46XHBU	40"x46"; .70 mil	LLDPE	Blue	Star-seal	250	14.70	21	309	5,250	$ 23.00	$ 483	$ 92.00	23%	71	70%
NEW TOTAL								**12,007**	**154,794**	**2,660,700**		**$ 216,421**			**26,720**	

ABC Co Summary:	$'s or lbs	%
Annual Cost Savings:	$ 29,464	12.0%
Total reduction of virgin (non-recycled) plastic used to make trash bags	147,182	84.6%
Total reduction of lbs of trash bags sent to the landfill each year	19,107	11.0%

Weight Average PCR %	76.7%

Environmental Impact Calculator

Total Lbs. of virgin (non-recycled) plastic used currently	=	173,901
Total Lbs. of plastic used proposed with Revolution Bag	=	154,794
Weighted average percentage of PCR* with Revolution Bag	=	77%



Metric tons of GHG reduced by using Revolution Bag compared to current product = **110**

But, *really,* what is the impact of the greenhouse gas reduction?

Here are some GHG equivalents for 110 metric tons of CO_2e***:

Number of seedlings that would need to be planted and grow for 10 years = **2,828**

Number of homes powered for one year = **10**

Number of passenger vehicles removed from the road for one year = **23**

* PCR is defined as Post-Consumer Recycled.
** GHG coefficients are based on the Life Cycle Assessment by Scientific Certification Systems
*** All emission equivalents are from epa.gov

ABC Co.

UL 126

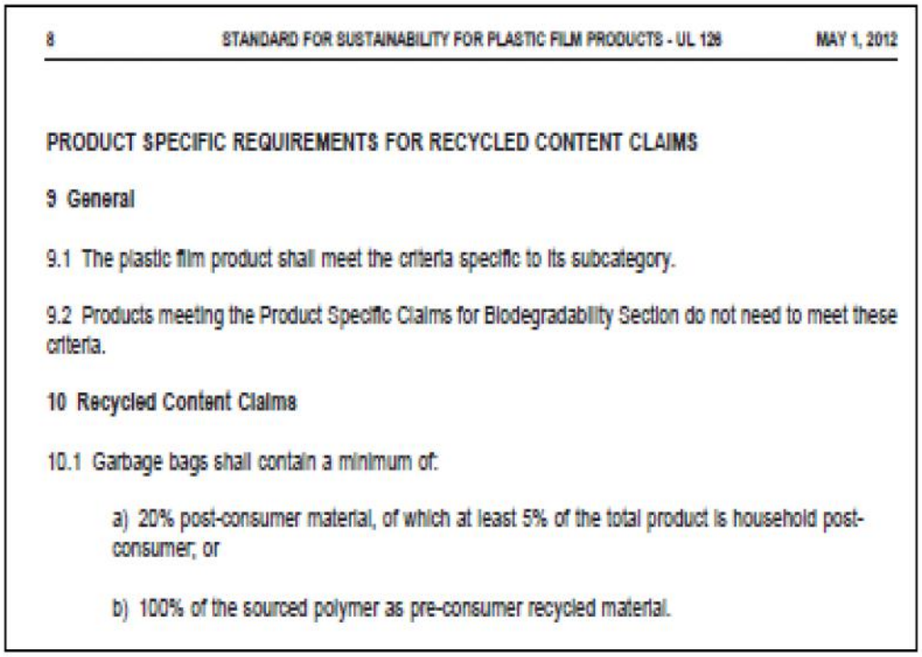
Standard for Sustainability for Plastic Film Products

UL 126 Requirements for Garbage Bags

- **20% post-consumer material, of which at least 5% of the total product is household consumer**

<<OR>>

- **100% of the sourced polymer as pre-consumer recycled material**



8 STANDARD FOR SUSTAINABILITY FOR PLASTIC FILM PRODUCTS - UL 126 MAY 1, 2012

PRODUCT SPECIFIC REQUIREMENTS FOR RECYCLED CONTENT CLAIMS

9 General

9.1 The plastic film product shall meet the criteria specific to its subcategory.

9.2 Products meeting the Product Specific Claims for Biodegradability Section do not need to meet these criteria.

10 Recycled Content Claims

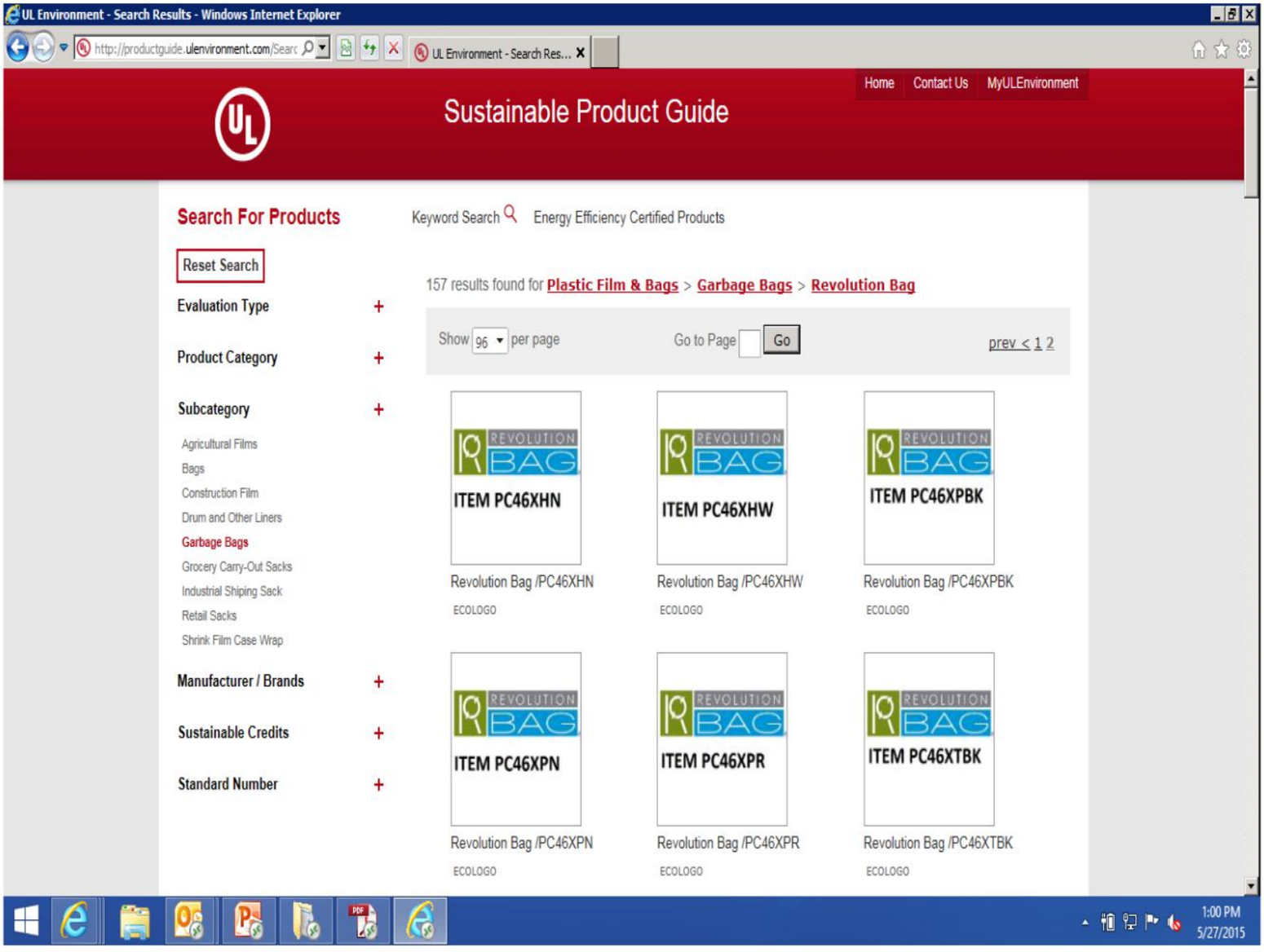
10.1 Garbage bags shall contain a minimum of:

a) 20% post-consumer material, of which at least 5% of the total product is household post-consumer; or

b) 100% of the sourced polymer as pre-consumer recycled material.

REVOLUTION BAG

UL/ECOLOGO CERTIFICATION WEBSITE



CERTIFICATE OF COMPLIANCE

ECOLOGO

PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL

UL 126

Revolution Bag

PC44XPN

UL 126 - 2012 Standard for Sustainability for Plastic Film Products

Standard

4786747307	67966-4270	04/16/2015 - 04/16/2017
Project Number	Certificate Number	Certificate Period

Environment

UL Environment investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL Environment and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Environment Mark for the identified Product(s) manufactured at the production site(s) covered by the ULE Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement.

SCS Global Services *does hereby certify that an independent assessment has been conducted on behalf of:*

Revolution Bag

8801 Frazier Pike, Little Rock, AR, United States

For the following product(s):

Hercules Black (B1 Formula)

This product meets all of the necessary qualifications to be certified for the following claim:

Minimum 91% Post-Consumer Recycled Plastic Resin Content (dry-weight basis)

Made with 100% Post-Consumer Recycled Resin Material

Conforms to the SCS Recycled Content Standard V7-0

Registration # SCS-MC-03358
Valid from: November 1, 2015 to September 30, 2016

MINIMUM 91% RECYCLED CONTENT
POST-CONSUMER

SCS global SERVICES

Robert J. Hrubes, Ph.D., Executive Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

SCS Global Services *does hereby certify that an independent assessment has been conducted on behalf of:*

Revolution Bag

8801 Frazier Pike, Little Rock, AR, United States

For the following product(s):

Hercules Natural (N1 Formula)

MINIMUM 94% RECYCLED CONTENT
POST-CONSUMER

This product meets all of the necessary qualifications to be certified for the following claim:

Minimum 94% Post-Consumer Recycled Plastic Resin Content (dry-weight basis)

Made with 100% Post-Consumer Recycled Resin Material

Conforms to the SCS Recycled Content Standard V7-0

Registration # SCS-MC-03359
Valid from: November 1, 2015 to September 30, 2016

SCSglobal SERVICES

Robert J. Hrubes, Ph.D., Executive Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

SCS Global Services *does hereby certify that an independent assessment has been conducted on behalf of:*

Delta Plastics of the South LLC

3201 South Main Street, Stuttgart, AR, United States

For the following product(s):

LDPE/LLDPE Plastic Resin Pellets

This product meets all of the necessary qualifications to be certified for the following claim:

100% Post-Consumer Recycled Plastic Resin Content
(dry-weight basis)

Conforms to the SCS Recycled Content Standard V7-0

Registration # SCS-MC-01084
Valid from: November 1, 2015 to September 30, 2016

CERTIFIED RECYCLED CONTENT™ SCS GLOBAL SERVICES

100% RECYCLED CONTENT
POST-CONSUMER

SCSglobal SERVICES

Robert J. Hrubes, Ph.D., Executive Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

Recommended Recovered Materials Content Levels for Plastic Envelopes[1], [2]

Product	Material	Postconsumer Content (%)	Total Recovered Materials Content (%)
Plastic Envelopes	Plastic	25	25-35

[1]Paper and Paper Products

[2]EPA's recommendation does not preclude procuring agencies from purchasing envelopes from another material such as paper. It simply requires that a procuring agency, when purchasing plastic envelopes made from plastic, purchase these items made from recovered materials when these items meet applicable specifications and performance requirements.

GSA, the US Government Printing Office (GPO), and the US Postal Service (USPS) purchase plastic envelopes made from Tyvek® containing recovered HDPE.The Navy requests that plastic envelopes not be sent to ships in order to minimize onboard disposal of plastic.

For more information on EPA's product research on plastic envelopes, please see the Technical Background for RMAN II.

Top of Page

Plastic Trash Bags

Plastic trash bags, also called trash can liners, are widely available with recovered material content including HDPE, LDPE and LLDPE. The amount of recovered materials used in the manufacturing process is prescribed by the color, size and thickness of the bag.

EPA's Recovered Materials Advisory Notice (RMAN) recommends recycled-content levels for purchasing plastic trash bags as shown in the table below.

EPA's Recommended Recovered Materials Content Levels for Plastic Trash Bags [1]

Product	Material	Postconsumer Content(%)
Plastic Trash Bags	Plastic	10-100

EPA's recommendation does not preclude procuring agencies from purchasing a trash bag manufactured using another material, such as paper. It merely recommends that procuring agencies, when purchasing plastic trash bags, purchase items made from recovered materials.

For more information on EPA's product research on plastic trash bags, please see the Technical Background for RMAN I.

Top of Page

Printer Ribbons

Reinked printer ribbons are used ribbons in printer cartridges that are reinked using electromagnetic machinery. Ribbons can be reinked until they reach the end of their useful life and begin to fall apart. Reloaded printer ribbons are new fabric ribbons that are reloaded into reused cartridges when used ribbons run out of ink.

Minimum content standards are not appropriate for remanufactured items, such as printer ribbons, because a core part of the item is reused in the new product, even though certain components of a printer ribbon might contain recovered materials.

In lieu of content standards, EPA's Recovered Materials Advisory Notice (RMAN) recommends that procuring agencies adopt one or both of the following approaches:

- Procure printer ribbon reinking or reloading services
- Procure reinked or reloaded printer ribbons

EPA further recommends that procuring agencies establish policies that give priority to reinking or reloading their expended

EQ Credit: Green Cleaning—Products and Materials

EB:O&M
1 point
This credit applies to

- Existing Buildings: Operations & Maintenance (1 point)
- EB:O&M Schools (1 point)
- EB:O&M Retail (1 point)
- EB:O&M Data Centers (1 point)
- EB:O&M Hospitality (1 point)
- EB:O&M Warehouses & Distribution Centers (1 point)

Intent

To reduce the environmental effects of cleaning products, disposable janitorial paper products, and trash bags.

Requirements

EBOM, Schools, Retail, Data Centers, Hospitality, Warehouses & Distribution Centers

ESTABLISHMENT
None.

PERFORMANCE
Purchase green cleaning materials and products such as floor finishes and strippers, disposable janitorial paper products, and trash bags. Include items used by in-house staff or outsourced service providers.

At least 75%, by cost, of the total annual purchases of these products must meet at least one of the following standards.

Cleaning products must meet one or more of the following standards, or a local equivalent for projects outside the U.S.:

- Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes;
- UL EcoLogo 2792 for cleaning and degreasing compounds;
- UL EcoLogo 2759 for hard-surface cleaners;
- UL EcoLogo 2795, for carpet and upholstery care;
- Green Seal GS-40, for industrial and institutional floor care products;
- UL EcoLogo 2777 for hard-floor care;
    - EPA Safer Choice Standard; and/or
- Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

Disinfectants, metal polish, or other products not addressed by the above standards must meet one or more of the following standards (or a local equivalent for projects outside the U.S.):

- UL EcoLogo 2798 for digestion additives for cleaning and odor control;
- UL EcoLogo 2791 for drain or grease trap additives;
- UL EcoLogo 2796 for odor control additives;
- Green Seal GS-52/53, for specialty cleaning products;
- California Code of Regulations maximum allowable VOC levels for the specific product category;

- EPA Safer Choice Standard; and/or
- Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

Disposable janitorial paper products and trash bags must meet the minimum requirements of one or more of the following programs, or a local equivalent for projects outside the U.S.:

- EPA comprehensive procurement guidelines, for janitorial paper;
- Green Seal GS-01, for tissue paper, paper towels and napkins;
- UL EcoLogo 175, for toilet tissue;
- UL EcoLogo 175, for hand towels;
- Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers;
- FSC certification, for fiber procurement;
- EPA comprehensive procurement guidelines, for plastic trash can liners; and/or
- California integrated waste management requirements, for plastic trash can liners (California Code of Regulations Title 14, Chapter 4, Article 5, or SABRC 42290-42297 Recycled Content Plastic Trash Bag Program).

Hand soaps and hand sanitizers must meet one or more of the following standards, or a local equivalent for projects outside the U.S.:

- no antimicrobial agents (other than as a preservative) except where required by health codes and other regulations (e.g., food service and health care requirements);
- Green Seal GS-41, for industrial and institutional hand cleaners;
- ,#UL EcoLogo 2784 for hand cleaners and hand soaps;
- , UL EcoLogo 2783 for hand sanitizers;
- EPA Safer Choice Standard.

For projects outside the U.S., any Type 1 eco-labeling program as defined by ISO 14024: 1999 developed by a member of the Global Ecolabelling Network may be used in lieu of Green Seal or UL Ecolabel standards.

EXECUTIVE ORDER 13693

- *Executive Order 13693 - Planning for Federal Sustainability in the Next Decade*
  - Released March 19, 2015 from President Obama / Whitehouse
  - Goal is for government agencies to further promote building energy conservation, efficiency and management while reducing greenhouse gas emissions.
  - Expands on Executive Order 13423 from January 2007.
  - 13693 cancelled Executive Order 13514 from October 2009.

- **KEY TAKEAWAY:**
  - Executive Order 13693 now gives government agencies the option of adopting standards, such as UL 126, as the product requirement.

REVOLUTION BAG

Federal Register

Friday,
January 26, 2007

Part II

The President

Executive Order 13423—Strengthening Federal Environmental, Energy, and Transportation Management

Federal Register
Vol. 72, No. 17
Friday, January 26, 2007

Presidential Documents

Title 3—

The President

Executive Order 13423 of January 24, 2007

Strengthening Federal Environmental, Energy, and Transportation Management

By the authority vested in me as President by the Constitution and the laws of the United States of America, and to strengthen the environmental, energy, and transportation management of Federal agencies, it is hereby ordered as follows:

Section 1. *Policy*. It is the policy of the United States that Federal agencies conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner.

Sec. 2. *Goals for Agencies*. In implementing the policy set forth in section 1 of this order, the head of each agency shall:

(a) improve energy efficiency and reduce greenhouse gas emissions of the agency, through reduction of energy intensity by (i) 3 percent annually through the end of fiscal year 2015, or (ii) 30 percent by the end of fiscal year 2015, relative to the baseline of the agency's energy use in fiscal year 2003;

(b) ensure that (i) at least half of the statutorily required renewable energy consumed by the agency in a fiscal year comes from new renewable sources, and (ii) to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use;

(c) beginning in FY 2008, reduce water consumption intensity, relative to the baseline of the agency's water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015 or 16 percent by the end of fiscal year 2015;

(d) require in agency acquisitions of goods and services (i) use of sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and (ii) use of paper of at least 30 percent post-consumer fiber content;

(e) ensure that the agency (i) reduces the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency, (ii) increases diversion of solid waste as appropriate, and (iii) maintains cost-effective waste prevention and recycling programs in its facilities;

(f) ensure that (i) new construction and major renovation of agency buildings comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (2006)*, and (ii) 15 percent of the existing Federal capital asset building inventory of the agency as of the end of fiscal year 2015 incorporates the sustainable practices in the Guiding Principles;

(g) ensure that, if the agency operates a fleet of at least 20 motor vehicles, the agency, relative to agency baselines for fiscal year 2005, (i) reduces the fleet's total consumption of petroleum products by 2 percent annually through the end of fiscal year 2015, (ii) increases the total fuel consumption that is non-petroleum-based by 10 percent annually, and (iii) uses plug-in hybrid (PIH) vehicles when PIH vehicles are commercially available at

FEDERAL REGISTER

Vol. 80 Wednesday,
No. 57 March 25, 2015

Part II

The President

Executive Order 13693—Planning for Federal Sustainability in the Next Decade

(viii) including the incorporation of climate-resilient design and management elements into the operation, repair, and renovation of existing agency buildings and the design of new agency buildings;

(i) promote sustainable acquisition and procurement by ensuring that each of the following environmental performance and sustainability factors are included to the maximum extent practicable for all applicable procurements in the planning, award, and execution phases of the acquisition by:

(i) meeting statutory mandates that require purchase preference for:

(A) recycled content products designated by EPA;

(B) energy and water efficient products and services, such as ENERGY STAR qualified and Federal Energy Management Program (FEMP)-designated products, identified by EPA and the Department of Energy (DOE); and

(C) BioPreferred and biobased designated products designated by the United States Department of Agriculture;

(ii) purchasing sustainable products and services identified by EPA programs including:

(A) Significant New Alternative Policy (SNAP) chemicals or other alternatives to ozone-depleting substances and high global warming potential hydrofluorocarbons, where feasible, as identified by SNAP;

(B) WaterSense certified products and services (water efficient products);

(C) Safer Choice labeled products (chemically intensive products that contain safer ingredients); and

(D) SmartWay Transport partners and SmartWay products (fuel efficient products and services);

(iii) purchasing environmentally preferable products or services that:

(A) meet or exceed specifications, standards, or labels recommended by EPA that have been determined to assist agencies in meeting their needs and further advance sustainable procurement goals of this order; or

(B) meet environmental performance criteria developed or adopted by voluntary consensus standards bodies consistent with section 12(d) of the National Technology Transfer and Advancement Act of 1995 (Public Law 104–113) and OMB Circular A–119;

(iv) acting, as part of the implementation of planning requirements of section 14 of this order, until an agency achieves at least 95 percent compliance with the BioPreferred and biobased purchasing requirement in paragraph (i) of this subsection, to:

(A) establish an annual target for the number of contracts to be awarded with BioPreferred and biobased criteria and dollar value of BioPreferred and biobased products to be delivered and reported under those contracts in the following fiscal year. To establish this target, agencies shall consider the dollar value of designated BioPreferred and biobased products reported in previous years, the specifications reviewed and revised for inclusion of BioPreferred and biobased products, and the number of applicable product and service contracts to be awarded, including construction, operations and maintenance, food services, vehicle maintenance, and janitorial services; and

(B) ensure contractors submit timely annual reports of their BioPreferred and biobased purchases; and

(v) reducing copier and printing paper use and acquiring uncoated printing and writing paper containing at least 30 percent postconsumer recycled content or higher as designated by future instruction under section 4(e) of this order;

(j) advance waste prevention and pollution prevention by:

EPA ADOPTED (INTERIM) UL 126 STANDARD

Product Service	Applicable Statutory Requirements	Applicable EPA Ecolabels	Other EPA Recommended Standards and Ecolabels
Cleaners: Carpet, Glass, Multipurpose	BioPreferred	Safer Choice	Purchasers meet one or more of the following: • Green Seal GS-37 Standard for Cleaning Products for Industrial and Institutional Use • UL 2759 Standard for Hard Surface Cleaners
Floor Care	BioPreferred	Safer Choice	Purchases meet one or more of the following: • Green Seal GS-40 Standard for Floor-Care Products for Industrial and Institutional Use • UL 2777 Standard for Sustainability for Hard Floor Care Products
Hand Soap	BioPreferred	Safer Choice	Purchases meet one or more of the following: • Green Seal GS-41 Standard for Hand Cleaners for Industrial and Institutional Use • UL 2784 Standard for Hand Cleaners
Toilet Tissue	Comprehensive Procurement Guidelines for Recycled Content Products	none applicable	• Green Seal GS-01 Standard for Sanitary Paper Products
Towels-Paper	Comprehensive Procurement Guidelines for Recycled	none applicable	• Green Seal GS-01 Standard for Sanitary Paper Products
Wastebasket Liners (24" x 33" or smaller)	• BioPreferred • Comprehensive Procurement Guidelines for Recycled Content Products	none applicable	Purchases meet one or more of the following: • ≥ 20% post-consumer recycled content[2] • UL 126 Standard for Sustainability for Plastic Film Products

http://www.epa.gov/greenerproducts/epas-recommendations-specifications-standards-and-ecolabels

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