

Plastics-Challenges Recycling in 2021



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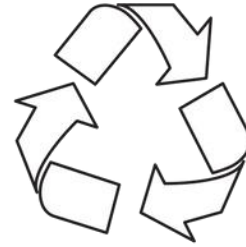
1905

PADNOS was founded in 1905, by Louis Padnos in Holland, MI.

4

Fourth-generation family owned and operated.

~1,300,000 GT



Paper
Plastics
Metal
Electronics



There are **25** PADNOS locations



Continue to
find ways to
innovate, lead
and make a
**positive
impact** in this
world.



World Customers



Paper, Plastic, Metals & Electronics



**Recycling is not the
same everywhere**

What's the difference?



Post-consumer (PCR)

Reclaimed material from homes and businesses.

Recycling at its best! Making the old new again helps the planet and creates jobs.



Post-industrial (PIR) aka pre-consumer

Imperfect products and factory scraps.

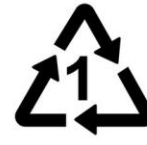
Using up the leftovers is common practice for efficient manufacturing operations.



Virgin (new) plastic

No recycled content.

Making new plastic uses the most energy and extracts resources from the earth.



PET



HDPE



PVC



LDPE



PP

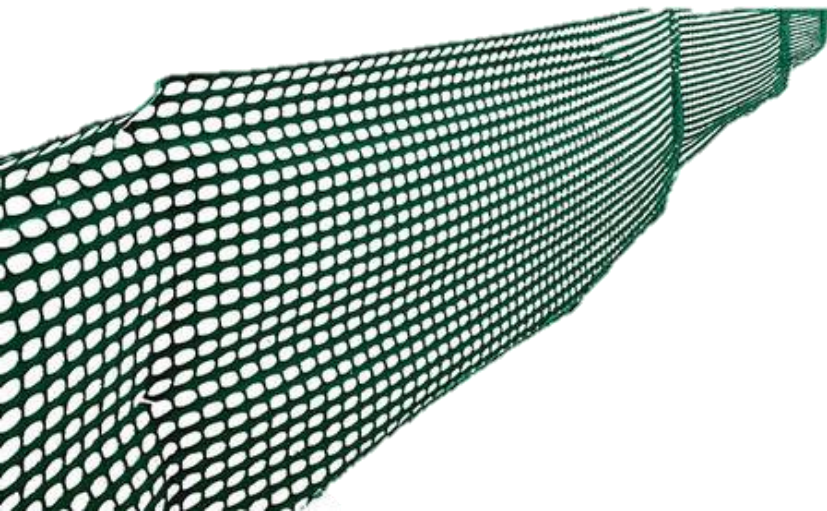


PS



OTHER

We all want to do the **right** thing.



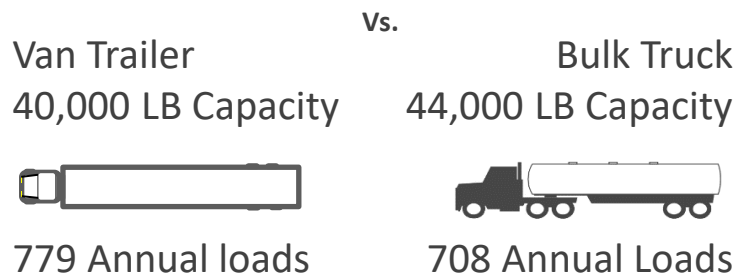
Sustainability Stories

Shipping Method Saves on Freight

Transporting material on bulk trucks eliminates many resources, emissions, and handling.

Containers: Shipping materials on bulk trucks eliminates the need of gaylord boxes. Each year Orbis eliminates the energy and resources needed to produce **36,816** gaylords.

Handling: Bulk trucks are loaded automatically, eliminating the need for hi-lows, reducing carbon consumption and manpower. This process also consumes less floor space for storing/processing material.



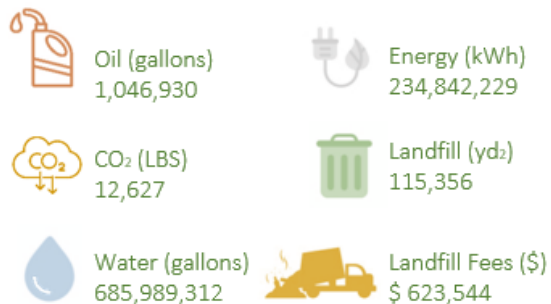
71 Load Reduction = **88,040** LBS CO₂ Emission Reduction



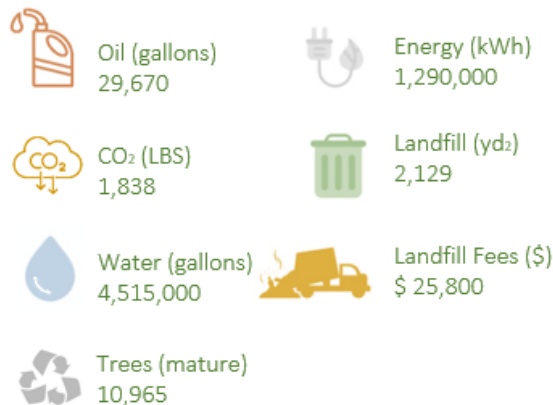
Recycling Plastic Saves our Environment

PADNOS's Environmental Calculator quantifies the importance of using recycled content in our products. These results show the environmental savings Orbis creates each year by using recycled content in place of virgin materials and from the elimination of required packaging in the transport of materials.

Savings Based on Recycled Plastic



Savings Based on Elimination of Gaylords



Logistics

- Barge
- Bulk Trucks
- Rail
- Van Trailers
- Rolloffs
- Luggers



Custom Equipment

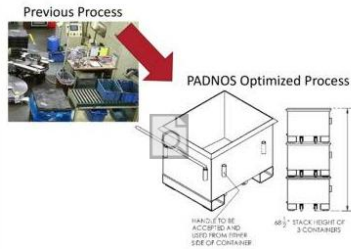


Customer Success Story – Trans-matic

Situation
Our customer was utilizing small plastic totes to manually collect scrap from low discharge points behind their production machines.

Customer Issue
This manual process presented a safety hazard for their TMs (specifically back and leg injuries) and was an inefficient use of labor and time.

Solution
PADNOS provided custom mobile scrap containers with handles that could easily and ergonomically be placed in position at each production machine.



Result
Utilizing these custom, higher-capacity containers, in addition to the use of a rotating fork truck that the project team justified for efficiency and safety purposes, the entire process reduced the labor and time to handle this material stream. The containers were also painted to match their commodities, reducing the need for signage and mitigating cross contamination risk.

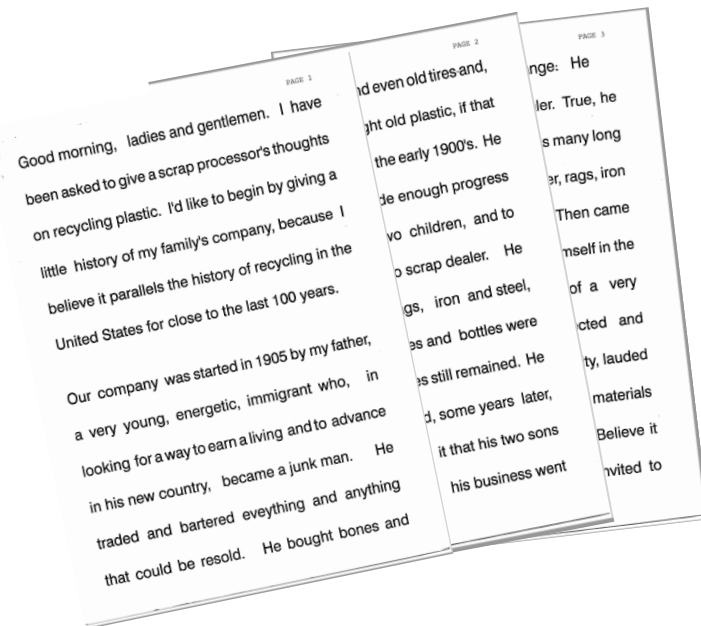
The PADNOS team, consisting of the account executive and mechanical engineer, used an iterative prototyping process with frequent testing and client feedback to hone in on the optimal solution.

IXL's internal engineering, design, and fabrication abilities provided the resources necessary to minimize costs and expedite the final implementation.



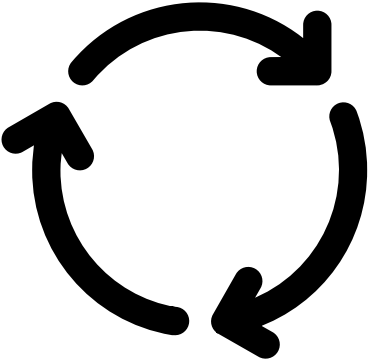
“If we choose to develop a positive automobile program with 100% results, my recommendations are the following: **Do not use a material that does not have a recycling market.** Minimize the number of plastic materials used and code them in a very simple manner. Substitute metals wherever practical.”

~ Stuart Padnos, May 1992, Society of Plastics Engineers Forum

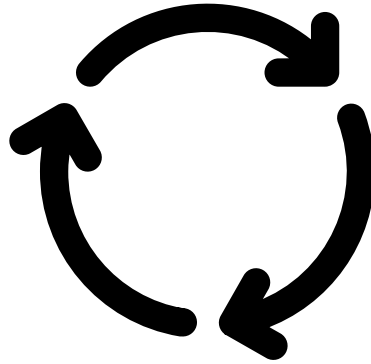


In 1990 the firm joined with Michigan Department of Natural Resources in funding a study to create a college-level curriculum ultimately titled **“Design for Recycling.”**

GF PA Circular Economy



TPO Closed Loop



Plastic Shredder



Plastic Float Sink



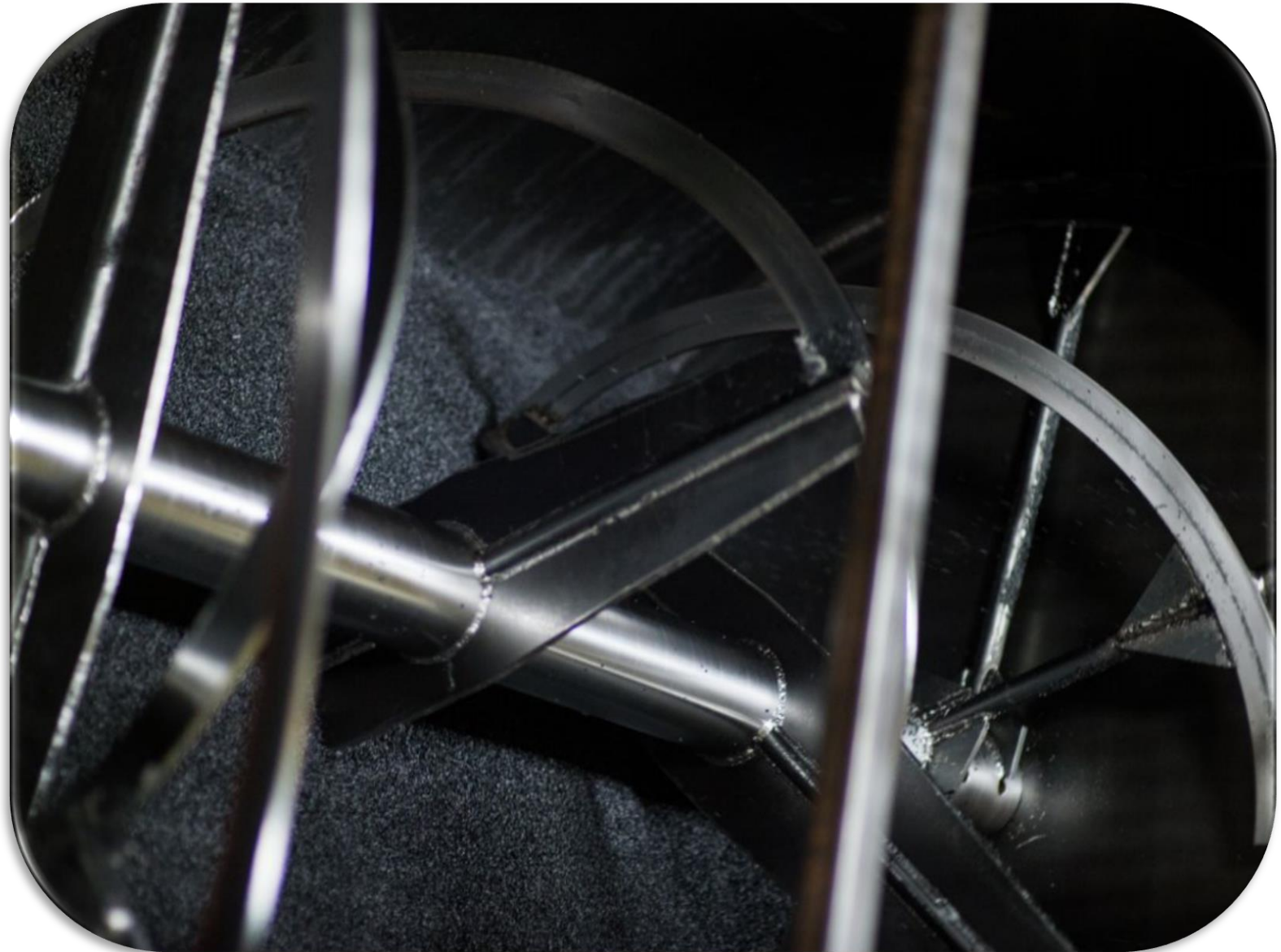
Plastic Solutions



Plastic Extrusion



Plastic Blender



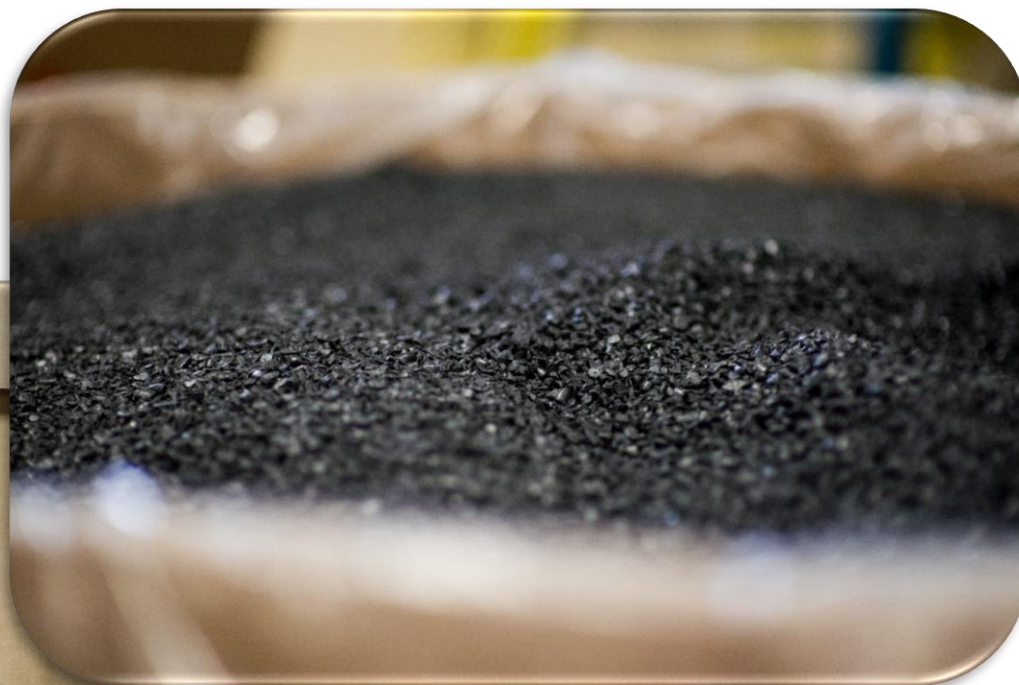
Plastic Lab



Lab Injection Mold Press



Plastic Resin



3100402 Pkg: GAYLOR
Gross: 350
018 Tare: 70
Prod Date: 03/02/2020 Net: 280

MAG4912 ASA INJ
GR

RASA201

3100402 Pkg: GAYLOR
Gross: 350
018 Tare: 70
Prod Date: 03/02/2020 Net: 280

MAG4912 ASA INJ
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RASA201

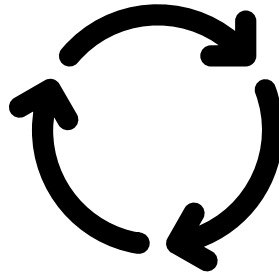
Filename: 5X2MAG5100 Insp By: _____ PADNOS



AIM

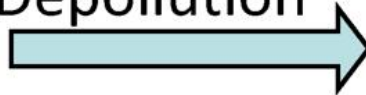
HIGHER

PP Super Sacks





Decontamination / Depollution



Pressed



Loading to shredder



Shredding to ASR



Eddy Current



STAKEHOLDER

MODELS/SYSTEMS

GROUPS

ETHICS

- Coding for Physiologic Birth
- Equity
- Implications

- ACA
- ACO
- H.I.T, etc.
- Liability Coverage for Collaborating Physicians
- Shared Decisions

CREATE MODELS

- Efforts to Decriminalize Midwives
- Broaden Malpractice Ins.
- Develop Patient Entered Data
- Expand Liability Model
- More & Cited Decision Making

EDUCATORS

- WE NEED to collaborate effectively
- NEED to train future workforce

- DISPARITY - BIG ISSUE!
- Educate on:
 - Cultural Competency
 - HB Transpersonal Disciplines
 - Interpersonal Discipline
 - Primary Birth/Client-Centered Consensus on Education
- teaching on Physiologic Birth
- VISION: NonClinical Midwifery Reg. Multi-Entry/CPM

MIDWIVES

• Agreement to broaden agenda to focus on All Birth

CHALLENGES

- No Family Time/Self
- Create local GUIDELINES
- State Task Forces → Forms transfer guidelines
- Leg. of CPM's
- Midwifery Programs
- Issues of fair Reimbursement Processes
- EHR Usage
- Infant Mortality
- Midwifery Membership - self building leadership
- External version

CONSUMERS & ADVOCATES

CHALLENGES

- Are we growing? Cultural appropriateness work force?
- Prison Birth/Rights & Laws
- Facebook/Social Media
- Statement of Physiologic Birth Toolkit
- Medical Reimbursement
- Research: Pre-Conception Care
- Transform. Childbirth Connections
- Reaching Women
- Medicaid/Reimb.
- Political Pressure
- Org. Reports

COLLABORATORS

WE ARE INVOLVED:

- Empowering Consumers
- Diverse Audience
- Education
- Prof. Orgs. - agreement with Midwives
- Consulting
- Help consumers Make Policy
- Blog/Physiologic Birth

CHALLENGES

- Time for Personal Well-Being
- Peer Review
- Shared Education Model
- Research to HELP ALL understand issues
- Prenatal/Postnatal Providers
- Connect Consumers & Boards
- Speak the same language

Research → Experiential Knowledge → Research Data → COMBINE → Create Models of Diverse Speaker

COMMON GROUND

ARE THERE NEW OPPORTUNITIES?

WHAT ARE YOU DOING?
↓

WHAT ARE YOU NOT DOING?
↓

POLICY

WHAT WE WANT TO DO:

- There is a Book "GOOD BIRTHS" - read
- Work for CPM Licensure
- Prevent legal coercion for Mom & babies
- Grassroots Advocacy
- Nat'l Conversations
- Scholarships
- Fed. Reg. of CPM's
- Human Rights Awareness for providers and consumers
- Robust Participation of CPM's in Nat'l Health Care Policy
- Voices on idiosyncrasies in EMBARKS
- It's all interconnected

PUBLIC HEALTH, ETC.

- Professional Educ. Practicum
- transfers
- no cost
- no malpractice

CHALLENGE

Support Disparities
• People are on the "ground" for this need to connect with us so funding can be accessible and grants written...??

OB/FP

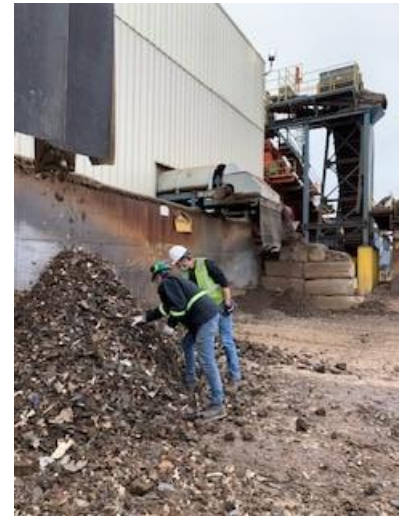
- EVIDENCED BASED Process Research Underway
- View Birth Cert. Data ~ Reporting Outcome ~ Capabilities ~ Physiologic Birth Outcomes ~ Transfers
- Continual Exchange w/ Consumer - Future Project
- Publications forthcoming
- High Level Data - March of Dimes Funding

What's looking?

- Look at continuing Ed. As a Route to Change Current Flow/ Collaboration
- Possible Response to CHERVENAK
- Cast Broader Net w/ opportunities to connect
- Disparities Topic/Awareness
- Use of P.I. - Define Usage - Arrest Disorder
- C-sec reduction for 1st Pregnancy
- Transfer Outcomes Based on Birth Cert Data
- Improve Marketing Techniques
- Local Revision for Policy/Patient Anatomy
- Dialog on both Providers for Patients
- Preliminary Dialog there w/ -ACOG - joint statement
- Disparities Topic/Awareness
- Use of P.I. - Define Usage - Arrest Disorder
- C-sec reduction for 1st Pregnancy
- Transfer Outcomes Based on Birth Cert Data
- Liability - BIGGEST CHALLENGE
- Hopkins Case
- Continuing Journals + Articles



ASR Recycling - Partnership Initial Sample 11/11/2020



Zurik Waste 5%

Zorba Waste 25%

NOTES:

Zurik waste stream is about 5% of what runs through the Eddy Current.

Zorba Waste is about 25% of what runs through the Eddy Current.

Martin will capture 3 Gaylords or 4 Shop Tubs of ASR direct from both Zurik Waste and Zorba Waste. Please mark the containers with the source.

If schedule permits, Martin will capture additional ASR and run the waste streams through the Xray to see if we can pull out the black and white pieces.

Material to be delivered to PPR by Wednesday November 18.



**SUSTAINABILITY
CITY**



PADNOS[®]

RPS800

Recycling the world over, and over.®

Empaque de Unicele

EPS Foam

Expanded Polystyrene



Nest and Place in PADNOS Bags
Coloca los uniceles en bolsas PADNOS

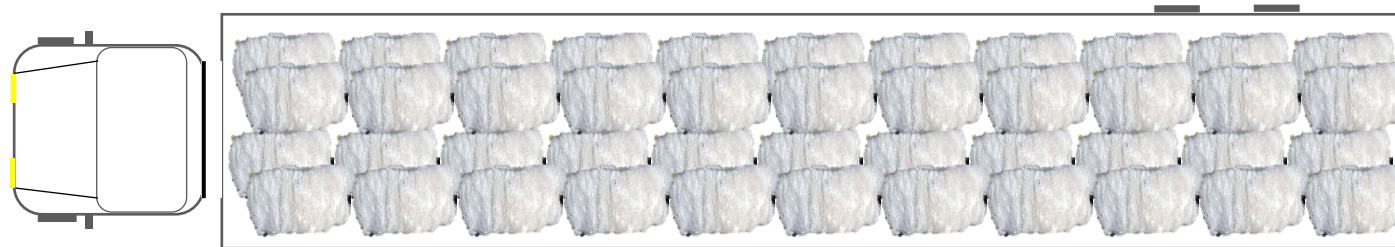
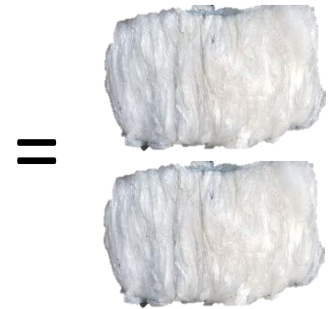


Balers 22 : 1 reduction for film



Carbon Footprint

52 Gaylords at 35 lbs each = 1,820 lbs



44 bales at ~900 lbs each = 40,000 lbs

22 : 1

Customer Steps



Box of 75 Vented Bags \$108

PADNOS Steps



PADNOS

SUSTAINABLE SOLUTIONS

Choppers 40 : 1 volume reduction

PET Banding Guide 

Historical Process	Sustainable Solution
Mixed Material → Landfilled	Mixed Material → Sort & Chop
Loose Material → Landfilled	Loose Material → Chop, Lease Chopper
Chopped Sorted Material → Sell to Customer	Chopped Sorted Material → Sell to Customer

Accepted 

- Chopped GREEN PET banding
- Baled GREEN PET banding
- Loose GREEN PET banding
- Green Opaque, Green Translucent
- Size of chopped banding need only be small enough to lay flat in a gaylord (size can vary)
- Shiny, Smooth texture- occasional
- Dull, Woven Texture- occasional



PET banding is stronger than PP banding.

PET has a stronger market, making it more widely recyclable.



Commodity Code: **RPET932CH**



Commodity Code: **RSUS999**

Options	LBS/ Gaylord	Gaylords Loose: Chopped	Gaylords/ Trailer	Max Trailer Weight	Load Reduction Loose → Chopped
Loose PET Banding	17.50 LBS			910 LBS	
Chopped PET Banding	700+ LBS	40:1	52	36,400 LBS	40 Load Reduction



Densifiers 46 : 1 volume reduction



Grinders 6 : 1 volume reduction

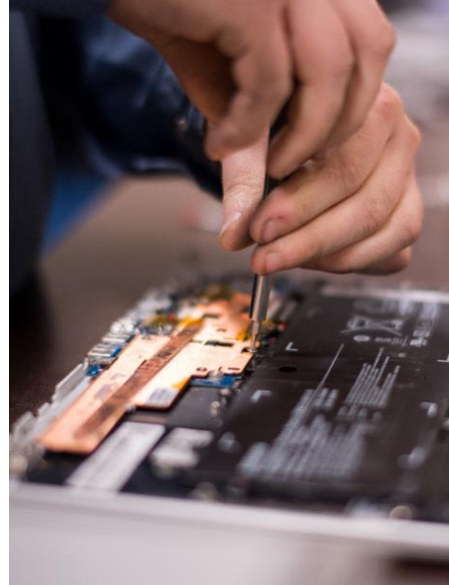


Balers 8 : 1 volume reduction for OCC



Other Solutions: Perforators provide second life





Looking for
a fresh start?

Start your next chapter today.



Thank you



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