

opali**o**n



OPALION PLASTICS LTD

BE SUSTAINABLE...
BE GREEN 

'ITS ALL IN THE BAG'

MAIN TYPES OF REFUSE SACKS



BLACK

- General, Industrial & Domestic Waste
- Packaging Items
- Paper & Plastics
- Metals

Disposable type:

Landfill



CLEAR

- Waste in high security areas (such as airports, train stations)
- Cups / Bottles / Trays
- Newspapers

Disposable type:

Landfill / Recycling



COLOURED

- Segregated Waste streams to aide recycling of plastics, paper, packaging, metals

Disposable type:

Recycling



HEALTHCARE

- Hazardous / Infectious Waste
- Anatomical Waste
- Autoclaved Laboratory Waste
- Human Hygiene Waste

Disposable type:

Incineration / Alternative Treatment Plant



COMPOSTABLE

- Food / Organic Waste for Home or Industrial Composting

Disposable type:

Composting



INDUSTRY SECTORS USED WITHIN



Healthcare



Industrial



Facilities Management



Public Sector



Private Sector



Cleaning



Catering



Local Authorities



Transport



Defence

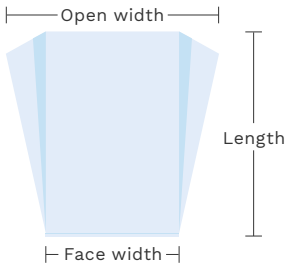


Domestic



Commercial

HOW TO MEASURE REFUSE SACK SIZES



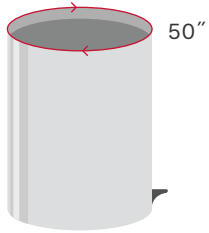
The three measurements are the **face width**, **open width** and **length**.

The face width is the sealed, closed width of the bottom of your bin bag. The open width is the maximum width of the bin bag when it is stretched from one side to the other. The length is simply the measurement from the top to the very bottom of the bin bag. With these three measurements, you can work out what size bag you need for your bins.

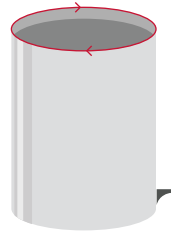


Opalium Plastics are a proud member of the Cleaning and Hygiene Suppliers Association (CHSA). The CHSA is an industry body which ensures that the refuse sacks supplied to our customers adhere to a strict code of practice and manufacturing standards. This ensures that customers can buy with confidence and that **“what’s printed on the box is in the box”**.

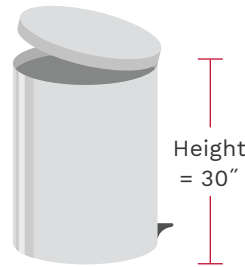
WHAT SIZE BAG WILL FIT MY BIN?



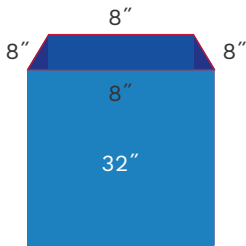
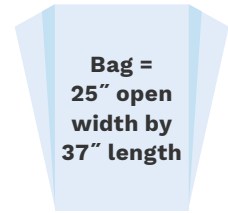
1. Rim Circumference = 50"



2. Open width of bag required 50" divided by 2 = 25"



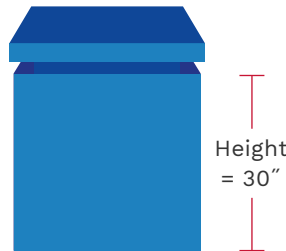
3. Length of Bag required 30" plus 7" = 37"



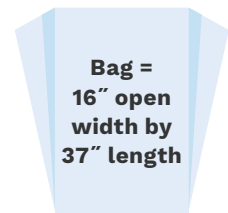
1. Rim Perimeter = 32"



2. Open width of bag required 32" divided by 2 = 16"



3. Length of Bag required 30" plus 7" = 37"



BAG WEIGHT CLASSIFICATION



LIGHT DUTY REFUSE SACKS

Best Suited for:

- Paper and General Office Waste
- Paper
- Cardboard
- Printer and Toner Cartridges
- Plastic and Paper Cups
- Metal Drinks Cans
- Stationery
- Light Food Packaging



MEDIUM DUTY REFUSE SACKS

Best Suited for:

- Domestic Waste and Segregated Recycling
- Light Food Waste
- Cardboard
- Paper
- Plastic Bottles
- Food Packaging



HEAVY DUTY REFUSE SACKS

Best Suited for:

- Catering Waste / Household Waste
- Fresh Food Prep Waste
- Leftover Food Waste
- Food Packaging
- Metal Cans and Bottles
- Bulky Household Waste



EXTRA HEAVY DUTY REFUSE SACKS

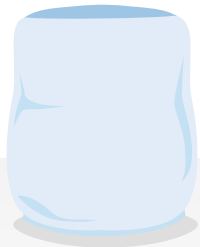
Best Suited for:

- Trade and Industrial Waste
- Heavy Food Waste
- Heavy Packaging and Cardboard
- Scrap Metal
- Large Waste Items
- Garden Waste (Grass Cuttings and Leaves)
- Building Materials

OPTIONS FOR

WASTE BAGS AND SACKS

CLOSURE TYPES



Flush Top



Drawstring



Tie Top



Tie Handle



MATERIAL TYPES

- Low density polythene (LDPE)
- Medium density polythene (MDPE)
- High density polythene (HDPE)
- Co-extruded linear blend polythene
- Recycled polythene
- Biodegradable polythene
- Woven Polypropylene



BAG APPEARANCE

- Clear – enables contents of the bag to be easily seen
- Tinted – aides with the separation of waste for recycling – e.g. green for recycling, blue for cans, etc.
- Opaque – for general waste
- Scented / Anti – bacterial: suitable for feminine hygiene and clinical waste
- Plain or printed up to 6 colours



PACKING TYPES

- Flat packed in box
- On a perforated roll
- Packed in dispenser box
- Poly-packed
- Loose in pallet box



STRENGTH OPTIONS ACCORDING TO APPLICATION

- Light Duty – General Office Waste
- Medium Duty – Household Waste and Segregated Recycling
- Heavy Duty – Catering Waste and Household Waste
- Extra Heavy Duty – Trade and Industrial Waste

STANDARD SACK RANGE

Black Refuse Sacks Typically larger than standard refuse bags and used for collection of general garbage/waste, our LD blend offers ideal carry weight, puncture resistance within a thinner gauge profile, reducing polymer usage and cost to the end user.

Clear Refuse Sacks Our LD blend bags come in a variety of weight classifications, which are developed for identifying waste content, suitable for onward recycling and segregation of domestic and commercial waste.

Pedal, Square & Swing Bin Liners These thin gauge liners in a frost white HD material are ideal for common office /domestic light duty daily waste.

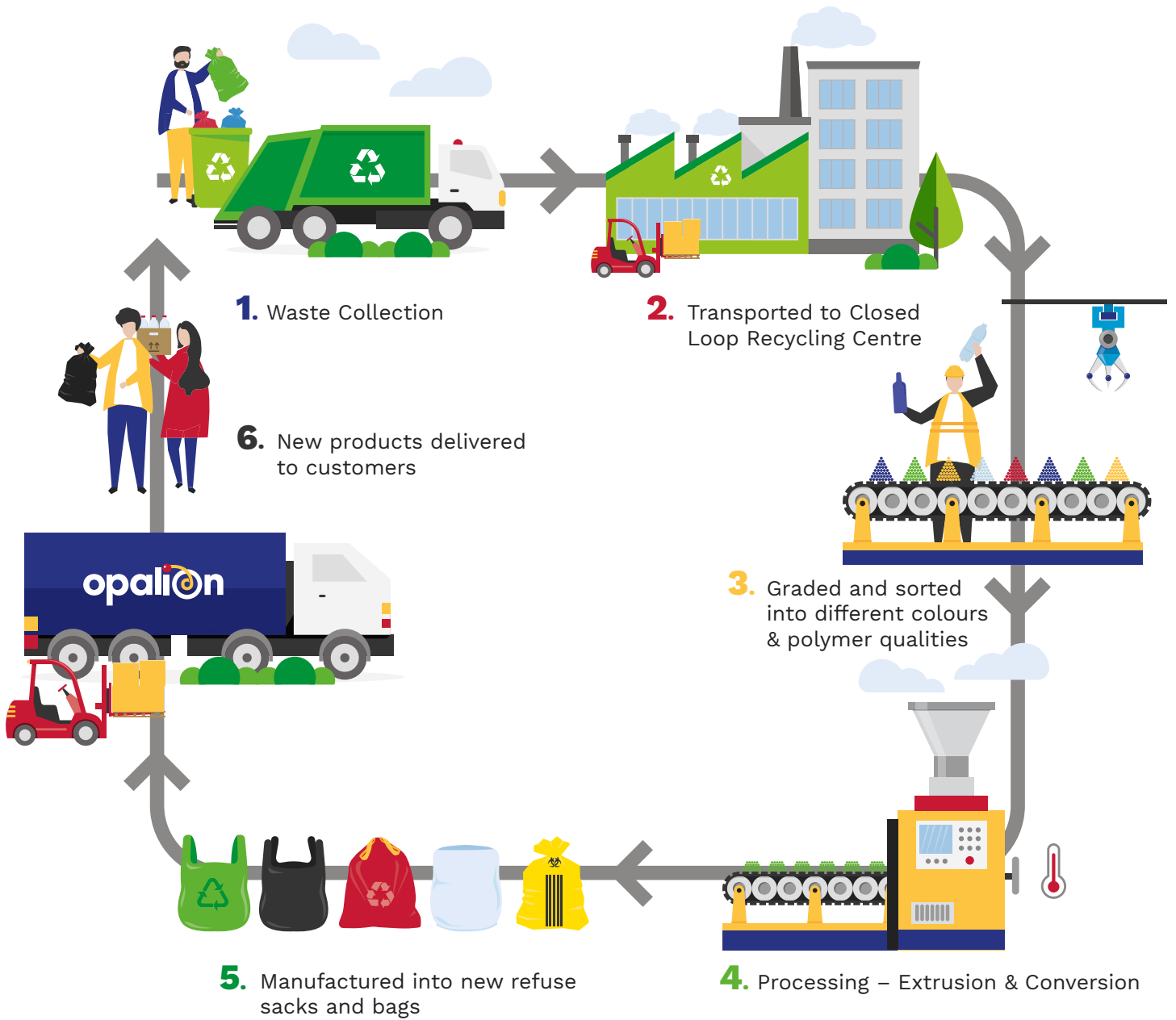
Wheelie Bin Liners & Sacks These bags are typically liners, which are robust and strong enough to hold general waste and are leak-proof against moist waste, thus keeping the waste bin clean and sanitary.

Biodegradable / Compostable Sacks Bags made from degradable polymers or natural organic substances to reduce the impact on the environment and increase sustainability of our supply chain.

Bespoke Waste Sacks Specialist bags used for recycling of clinical / hazardous materials. This ranges from asbestos bags for hazardous building waste, anti-bacteria bags for medical waste to clinical waste bags used in general hospital / clinical practise. All such bags are printed with the relevant industry standard regulations / certifications.

Heavy Duty Aggregate Sacks Commonly used for industrial / building waste i.e. building materials, metals, stone, dirt etc. These bags having a durable seals with high puncture resistance, enhancing the bag re-usability.

GREEN POLYTHENE



CLOSED LOOP RECYCLED PRODUCTS

All of Opalton Plastics' recycled bags are sourced using the most sustainable raw materials available for the bags intended use. With demand for recycled products ever increasing, we strive to ensure that all our products are manufactured using our **"RETHINK, REDUCE & RECYCLE"** policy.

Benefits include:

- Reduces products being sent to landfill
- Lower CO₂ footprint from source to market
- Products can be recycled into new polythene bags after use (renewable / recyclable / sustainable)
- Lowering the need to use our natural resources to extract virgin polymers



Low CO₂ Footprint



Fully Recyclable Product



High Strength Blend



Low Energy Usage

RETHINK REUSE RECYCLE



RETHINK

Opalion Plastics offer customised solutions which can innovate and help enhance the recyclability of the finished product.



REUSE

Opalion Plastics try and use recycled polymers whenever possible in our product portfolio to reduce our dependency on virgin polymers.



RECYCLE

Opalion Plastics encourage and support our customers in recycling plastic waste whenever possible. This waste can be re-processed to manufacture new bags, thereby lessening their environmental impact.

WHY RECYCLE?



RECYCLING CONSERVES RESOURCES

Using recycled post-consumer waste (PCW) material will lessen the need on diminishing fossil fuel reserves via extraction and mining methods. Not only being environmentally friendly, PCW will be more cost effective to the consumer in the long run.



RECYCLING HELPS PROTECT THE ENVIRONMENT

With PCW materials, there isn't the need to impact the earth's natural ecology with mining, quarrying and extractions methods, to simply remove natural resources for our own usage. This will lower CO₂ emissions and subsequent water and air pollution.



RECYCLED MATERIALS LAST LONGER

With modern manufacturing techniques and careful segregation of recycled waste streams, stronger blends can be created with less volume of recycled polymers to produce stronger and more durable refuse sacks. This ensures that bags produced from PCW are sustainable.



RECYCLING SAVES ENERGY

The energy output of manufacturing plastics from re-processed materials / resources is far less than with new virgin material. This is through lower costs to extract / re-process raw material and manufacture to the finished product.



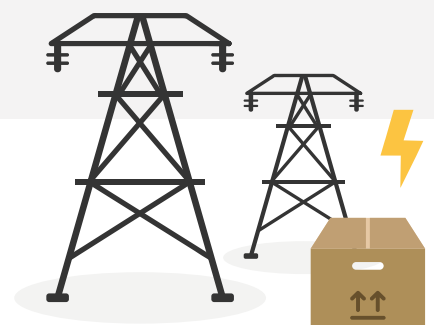
RECYCLING REDUCES LANDFILL

By recycling materials commonly found in our daily living, i.e. plastics disposables, pipes and packaging materials for example, we lessen the need to dump in landfill and further the greenhouse gas emissions which result from this.



FUN FACTS:

- To replace plastic bags with paper bags requires 2.7x more energy, 1.6x more carbon dioxide emissions and 17x more water usage
- Per tonne of recycled polythene can reduce the fossil fuels usage by 1.5 times & reduce harmful CO₂ and toxic emission by 33%.
- Current UK recycling is estimated to save more than 18 million tonnes of CO₂ a year – the equivalent to taking 5 million cars off the road.
- It takes 91% less energy to recycle 1lb of plastics than it does the equivalent paper.

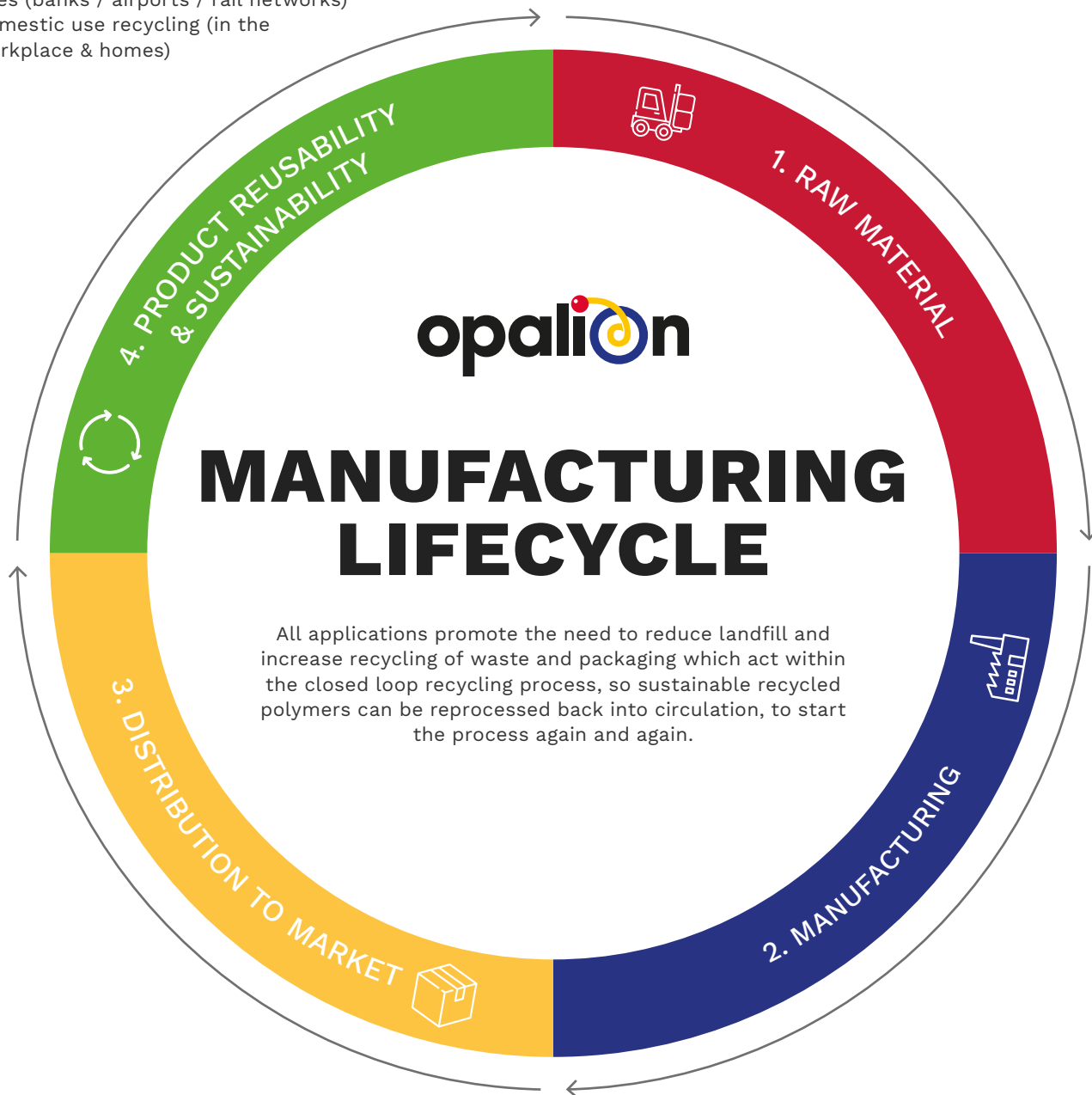


4 Product Reusability & Sustainability – All recycled blend and virgin blend products can be used within the entire market place on more than one occasion and for a variety of uses:

- Bags for GW & DMR segregation schemes
- Collection of packaging waste which can be sorted and recycled (plastics / paper / metals)
- High Security / confidential areas for critical sites (banks / airports / rail networks)
- Domestic use recycling (in the workplace & homes)

1 Raw Material – 100% PCW / High grade factory recycled material is collated and blended together – mixtures of HDPE + LDPE polymers to create specific bag types.

- HDPE + LDPE polymers + linear / metallocene catalysts
- Ethical sourcing from PCW industries – horticulture / agriculture / DMR recycling polymers used



3 Distribution to Market – All products are dispatched from source via FCL shipping containers at maximum capacity to ensure the environmental cost and unit per CO₂ of each product is minimised.

- Cost base is reduced to the customer
- Shelf life of product is maximised
- Product packaging is minimised

2 Manufacturing – Recyclable polymer is washed and treated before reprocessing into new pellets. HDPE + LDPE polymers are separated so they are used in their own product categories. The new recycled polymer is extruded at high temperatures into new polymer film to be converted into new packaging items with our blend of PCW + factory own clean waste for superior product performance.

- Reducing CO₂ emissions
- Reducing Water & Energy consumption
- Reducing Waste polymer output
- Reducing Packaging waste (boxes / tape / packaging shrink wrap)

KNOW YOUR POLYMER



VIRGIN

Extracted from mining natural oil reserves from the ground to create virgin (unused) material.



RECYCLED

Made from post consumer household plastics, diverting valuable resources from being lost to landfill or incineration.



BIODEGRADABLE

Made from natural organic substrates (corn, maize, PLA). They are an environmentally sustainable alternative to fossil fuel based polymer.



HDPE

HDPE PRODUCTS:

- Food packaging / high performance films (healthcare bags / mailing bags / supermarket bags)
- HDPE is a more durable + resistant to impact (doesn't break easily), moisture (water proof), and higher performance at much thinner microns, reducing polymer & environmental impact
- Second life uses of HDPE – milk bottles / plastics crates / buckets / toys



LDPE

LDPE PRODUCTS:

- Trash bags, film on a roll, sheeting, industrial + agricultural films
- LDPE is resistant to impact (doesn't break easily), moisture (water proof), and chemicals (can stand up to many hazardous materials) & extremely lightweight
- Second life uses of LDPE – plastic bottles / pipes / containers / bins / cabling



ADVANTAGES FOR WASTE BAGS

- Low cost
- Leak proof
- Keeps waste bin clean
- Lightweight and Portable
- Hygienic – Use a tie, strong or just knot to prevent the content spillage / leakage
- Reduces clean-up time in office, home, industry etc. Convenient and hygienic
- Printed and Colour coded bags offers easy waste segregation
- Clear liners / sacks enable instant identification of contents
- Strong and durable
- Offers resistance to water and weather
- Can be recycled
- Also available as degradable & biodegradable & compostable

SELECT THE RIGHT MATERIAL FOR YOUR WASTE BAGS AND SACKS

1 **HDPE (high density polythene)** garbage can liners are a strong, thin, material that is frosted in appearance. HD material has increased puncture resistance / tensile strength suitable for sharp objects. By the material being able to be drawn down to much lower thicknesses, this material is ideal for smaller office / domestic bin waste for light duty waste and also this material due to its durability can be ideal for heavier duty bulk / aggregate waste.

2 **LDPE (low density polythene)** material has been the standard for all plastic bags manufacturing since its inception. It is generally thicker and softer in feel than HDPE, which allows it to have more flexibility in its range of applications, sizes and uses.

ALTERNATIVES TO LD/HD POLYTHENE PRODUCTS ARE:

- Require 4.5 times more packaging material by weight,
- Increase energy use by 80 percent, and
- Result in 130 percent more global warming potential.





TECHNICAL ACCREDITATIONS

All our products confirm to the highest industry standards including CHSA, so you can be confident the product performs to the accredited mark given to it.

ON SITE TRIALS

On site field trials to ensure all operatives are using best fit & cost effective products suitable for the market environment.

INNOVATION

Creating bespoke 'made to measure' products with customisation / branding available to enhance company image.

MARKET LEADING

With multiple manufacturing sources in UK and EUROPE, we can quickly adapt to changing volumes, demands and trends.

CUSTOMER SERVICE

Not only can clients be trained in product development and usability to allow them to in turn increase their scope of sales, we can offer a product rationalisation & cost saving initiative to ensure a more customised and optimised solution is found.

STOCK & DELIVER

With an extensive range of over 1000 products and 2000 pallets, we are well equipped to supplying to the market in a short lead time. Stock holding+ distribution across the UK from our 2 distribution sites in Scotland & England allow for weekly/fortnightly deliveries or ad hoc requirement.

FORM FITTING

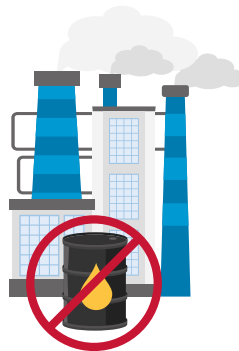
With a variety of packaging styles and formats available within the product and packaging presentation, there will always be a suitable bespoke solution available to you.

WHY GO COMPOSTABLE?



IMPROVES YOUR "GREEN" CREDENTIALS

By using a natural organic product to dispose of your food waste, you immediately improve your waste management processes whilst enhancing your brand / company image as being forward thinking and green.



LOWERS YOUR CARBON FOOTPRINT

In comparison to traditional plastics, compostable bags do not require extraction processes of fossil fuels from our earth's natural environment and so the CO₂ impact to source and produce compostable material is 5 times less than that of plastics, which enhances the 'green' credentials of compostable.



REDUCES THE NEED TO LANDFILL

As compostable bags decompose in the ground within a controlled home or industrial environment, the by-product is clean and non-toxic. This reduces the need to dump and landfill waste packaging.



ENVIRONMENTAL SUSTAINABILITY

Plastics can take decades to biodegrade, even with catalysts to increase their oxo-biodegradability, and so increasing likelihood of greenhouse gas pollution over time compared to compostable packaging, which will degrade into cleaner & greener non-toxic by-products.



FUN FACTS:

- Bio-degradable polymers can fully degrade in about 2 years resulting in micro-plastic fragments
- Compostable alternatives fully degrade within a year depending on environmental conditions
- We generate approximately 3.2 million tones of waste every year, which could be diverted into compost instead of landfill

COMPOSTABLE + BIODEGRADABLE



BIO-SOURCED

Refers to resins which originate from plant / naturally organic based sources (i.e. algae, sugar cane, corn starch, potato starch etc).



BIODEGRADABLE

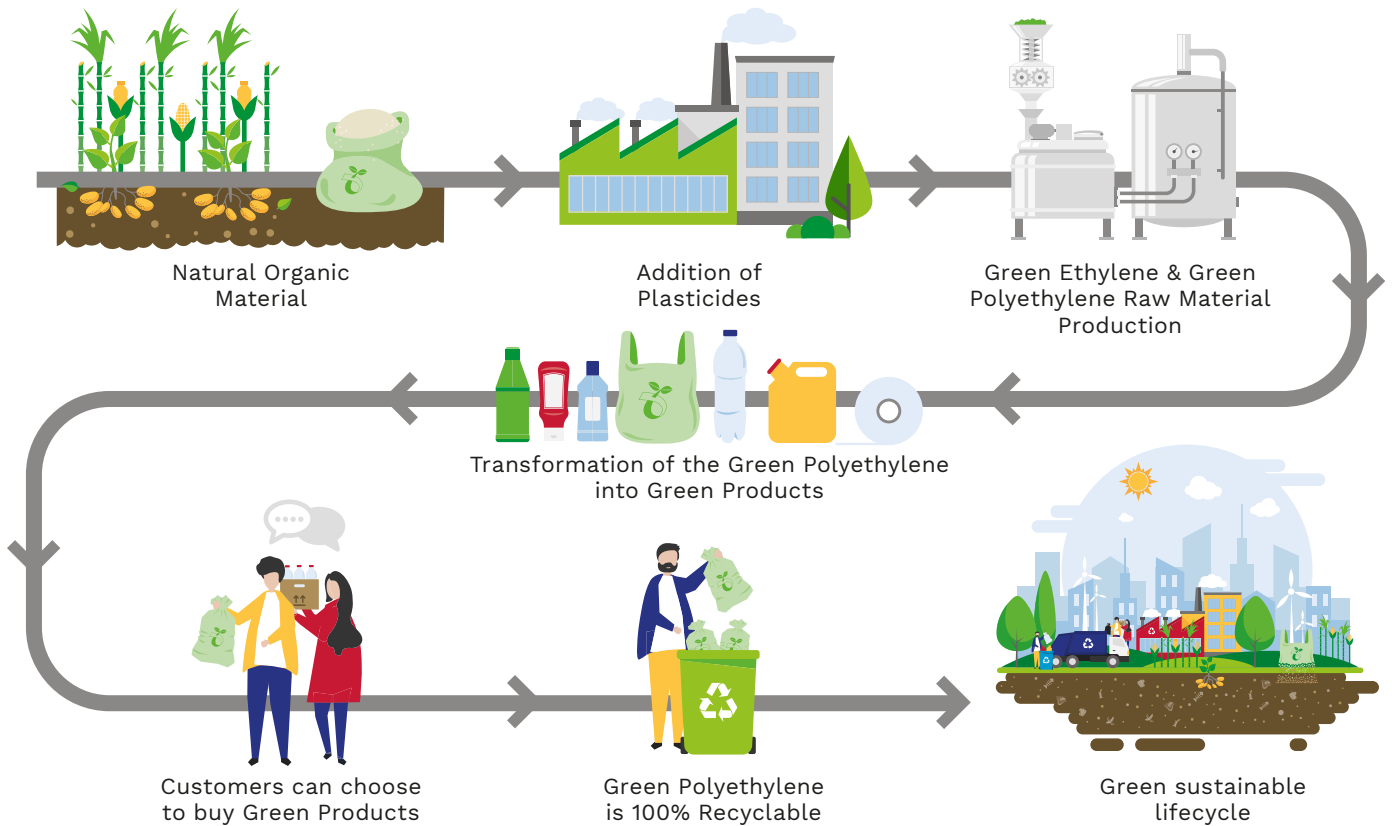
Refers to the full decomposition of bio-sourced materials through bio-assimilations via micro-organisms within a 12 months period, which is dependent in environmental variations such as temperature, humidity, pH levels and micro-organisms within the environment i.e. algae & bacteria).



BY-PRODUCTS

Derived from either **INDUSTRIAL** or **HOME** composting allows for natural by-products such as enriched fertiliser to be developed as a renewable energy source, with far less H₂O and CO₂ impact to the natural environment.

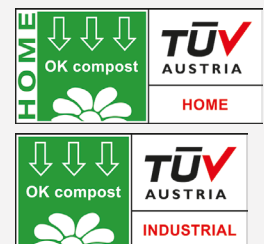
MANUFACTURING STAGES OF COMPOSTABLE BAGS



INDUSTRY STANDARDS

All Opalion compostable products comply with the European Standard regulation EN 13432 for HOME + INDUSTRIAL OK composting, from thicknesses of 14µm – 50µm. This will ensure our products are suitable for a wide range of domestic and commercial applications.

This label certifies the conformity (biodegradability + compostability) of bioplastics under domestic or industrial composting conditions.

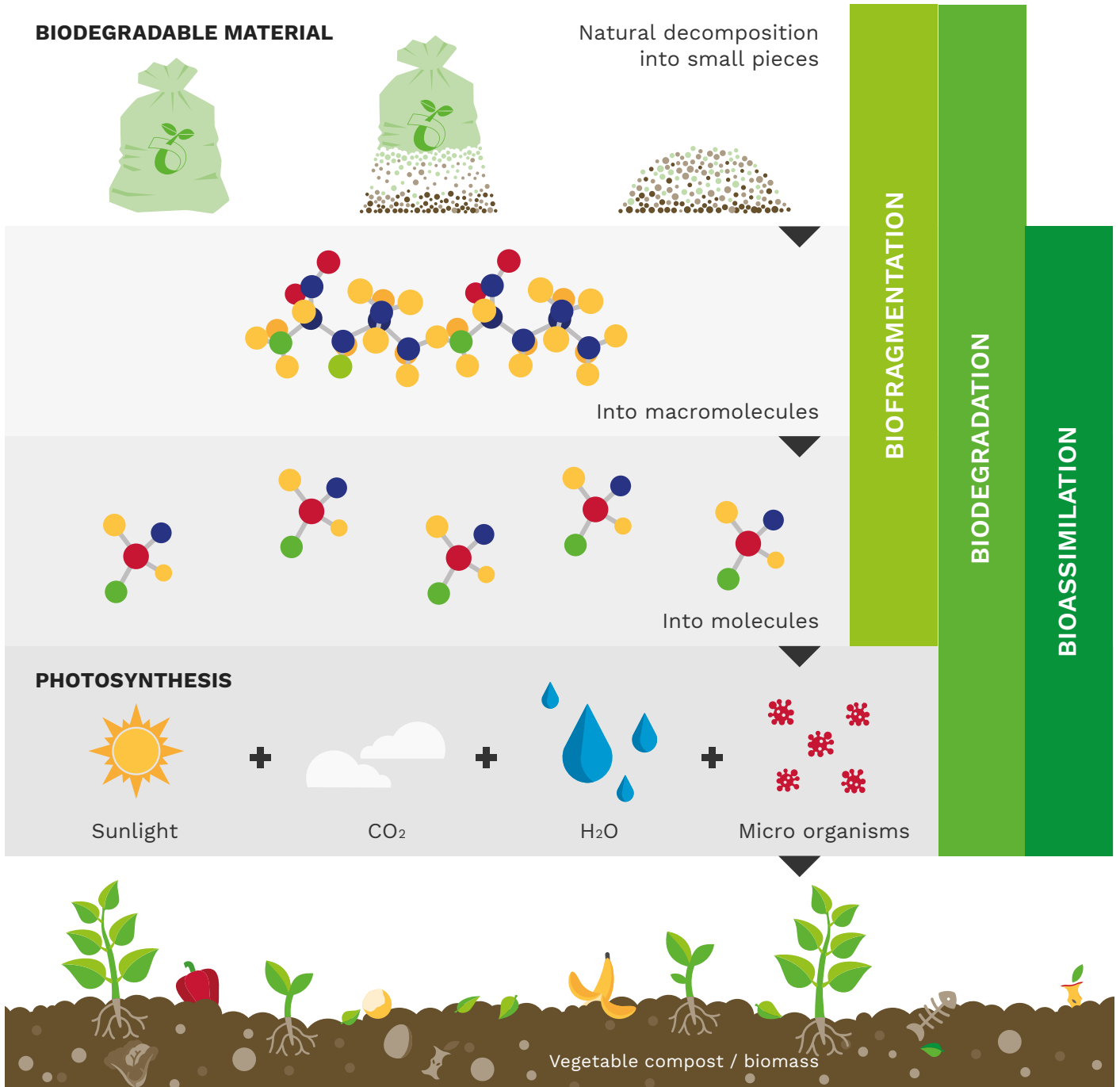


COMPOSTABLE + BIODEGRADABLE

HOW IT WORKS

THE AEROBIC BIODEGRADATION PROCESS

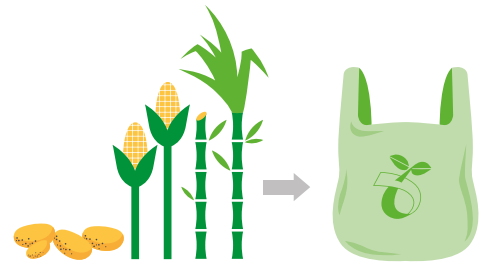
In a temperate humid environment with the presence of micro-organisms



CONDITIONS FOR BIODEGRADATION & DISINTEGRATION

Condition of biodegradation	Temperature	Biodegradation (over 90%)
Industrial composting	50 – 70°C	Within 6 months
Home composting	20 – 30°C	Within 12 months
Biodegradation in soil	20 – 25°C	Within 24 months
Biodegradation in water	20 – 25°C	Within 56 days

KNOW YOUR MATERIALS



THE DIFFERENT TYPES OF BIODEGRADABLE PLASTICS

NATURAL POLYMERS OF VEGETABLE ORIGIN

Biodegradable plastics include first of all those derived from polymers naturally synthesized by plants, in particular polysaccharides (starch, cellulose, lignin, etc.) and oils (rape-seed, soya, sunflower, etc.), but also proteins (gluten).

BIO-SOURCED POLYMERS

P.L.A. (Polylactic acid) is a compostable bioplastic derived from plant sugars. It can be made from sugars derived from any organic base i.e. corn, potato, cassava or sugar cane starch. Once the starch is extracted in the form of a glucose, this is then fermented to produce PLA. A process of polymerisation transforms the PLA (through heating and cooling) into a pellet resin, which can be extruded like traditional polymer resin into a variety of products i.e. bio-bags, plates, spoons, cups, containers for example. The natural source material i.e. corn starch for example is not a food grade and so does not compete with food derived for consumption.

As the entire plant is harvested, the protein and starch elements can be sustainably re-used within the life cycle as follows:

- Proteins: plant based can be used as an animal feed
- Starch: packaging materials, disposable catering items, PLA

Benefits:

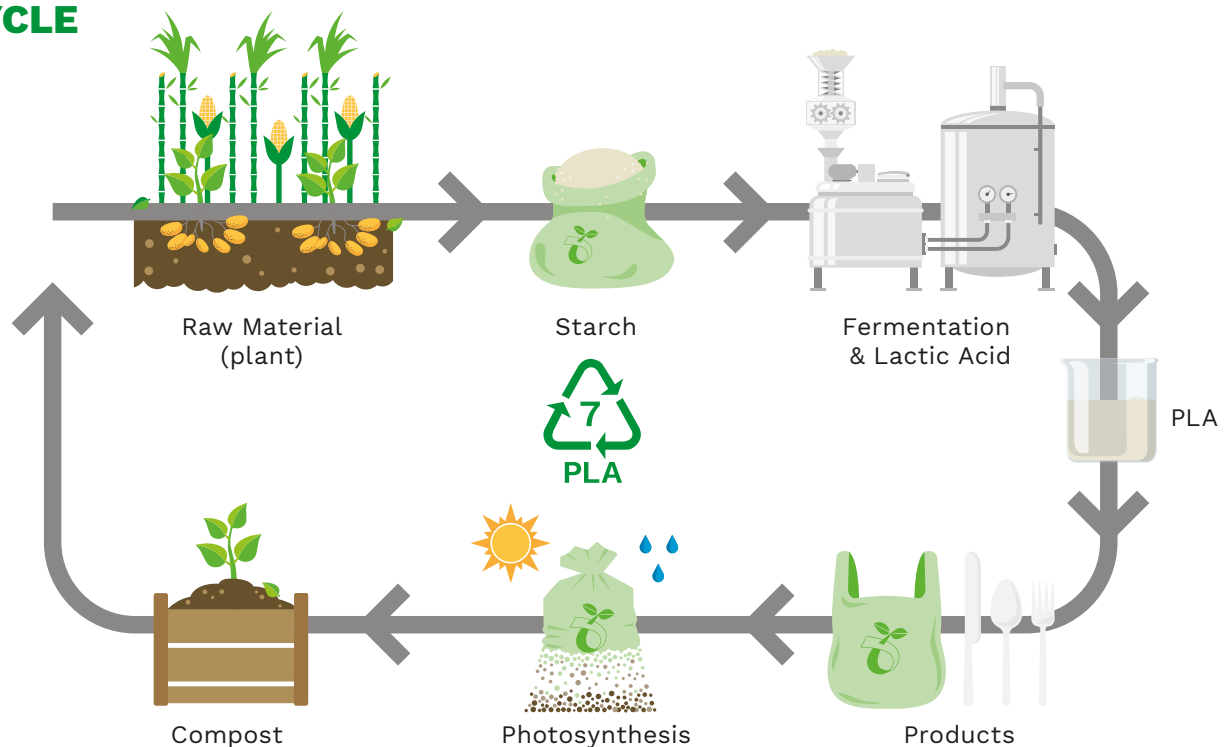
- Zero waste material as it decomposes in Home or Industrial composting conditions
- Lower CO2 & toxic gas emissions, renewable (into new PLA applications), sustainable, safe to landfill
- Can be integrated into a traditional polymer waste stream

OXO-BIODEGRADABLE FOSSIL FUEL POLYMER

In recent years, plastics described as “oxo-degradable”, “fragmentable” have appeared on the market. They are not “bioplastics” because they are neither bio-sourced nor biodegradable. They are actually polymers of petrochemical origin containing mineral oxidising additives that promote their degradation into small pieces. These plastics can effectively fragment, under certain conditions of light and heat, etc., but they are not fully biodegradable with reference to industry standards (EN 13432). Oxo-degradable additives speed up the degradation process from decades to a few years to degrade recycled or virgin polymers.



LIFECYCLE





URS is a member of Registrar of Standards (Holdings) Ltd.



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