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POLYTHENE EXTRUDERS, FILMS, BAGS, SHEETS
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CATERING DISPOSABLES, HYGIENE PRODUCTS

Packaging Waste - Plastics Tax Legislation To apply from 1 April 2022

ONLINE CATALOGUE
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At the end of October 2021, the government confirmed a new Plastics Tax will apply at £200/T for plastic packaging products sold/used in the UK from 1 April 2022. This is intended to encourage plastics recycling, creating a bigger market for recycled plastic material, so that it is simply not dumped.

If 30% recycled product by weight is used in the plastic packaging (their recycled definition excludes manufacturers own process waste), the tax will not be charged but they understand this may not be feasible in all products so the tax will have to be incurred e.g. given the intended product use (e.g. may harm safety), or other legislation (e.g. primary food contact).

Brow Packaging Guidance

Caveat

This document has been prepared in good faith based on our understanding of known facts to date and is intended to offer a technical guidance to our customer base as to what we see the issues as being and what our intended response will be. Customers should follow this up with their own research -refer to HMRC via their Gov.uk website and plastics tax.

Plastics Packaging Tax (PPT)

Legislation has already been in place for about the last 20 years, called the Packaging Waste Obligations. (This legislation will also be changed in 2023 to push up the costs of all types of packaging, cardboard included)!

This leads to a shared cost across the supply chain on anyone handling more than 50 tonnes pa of packaging. We have complied with this for over 20 years, as have our obligated customers, by purchasing PRN's – Packaging Recovery Notes. The money from this scheme was designed to go to recyclers to help them invest in plastics recycling equipment.

From 1 April 2022 the Government want to build on this and will introduce a further set of separate legislation to impose a further tax of £200T on plastics, where the end plastic product does not contain 30% pre or post-consumer waste but specifically excludes manufactures reusing their clean production waste and off cuts. (for example excludes our plastics manufacturing operation from using its own recycled waste towards this 30%). Hence be very careful when someone says a product contains 30% recycled content - it may not be PPT exempt.

Are you dealing with a reliable entity with solid audit trails?

The liabilities of getting it wrong are expensive. HMRC have said in certain circumstances the supplier and customer are jointly and severally liable.

Hence most manufacturers and suppliers will err on the side of caution, paying the tax and passing it on to their customers rather making questionable declarations that the products contain 30% recycled content.

In the case of imported products, risks are higher as it is harder to prove the 30% recycled content is genuine per the approved definition. External approval bodies are not widespread or experienced at this to give independent certificates that could be used as part of the audit trail. HMRC audits will happen – if they challenge the 30% evidence, suppliers and customers may find out months later that they owe substantial plastic tax arrears!

If customers are currently importing some of their product from outside the UK they will be fully liable for the UK tax unless their suppliers registers in the UK.

This will affect all UK packaging manufacturers (i.e. us), importers (i.e. us) and distributors (i.e. us) buying from the UK who have to pass the tax on to their customer base. Exemptions only exist for small businesses which manufacture and / or import less than 10 tonnes of plastic packaging in a 12-month period.

This will affect all the main plastic packaging materials, such as polyethylene, polypropylene, PET or PVC, etc. At this stage we think it also includes plastic substitutes, such as PLA (corn starch) compostable products!

It is hoped this will reduce the amount of plastic packaging going into land fill, used for energy recovery or simply shipped to another country for recycle which currently counts towards PRNS. We hope the £200T will be used to invest in recycling infrastructure but we will wait & see what government does with the funds.

Brow Recycling & Own Film & Bag Manufacturing plant

We are increasing our plastic film recycling activities in the new year, adding to our current 3 machines. We can't obtain plastic tax exemptions for our own process waste which we reuse but we will have 30% recycled mixes of high quality for a range of applications. We will also sell recycled polymer to other manufacturers. (In a small number of cases we may be able to reprocess our customers clean waste and reprocess it to obtain 30% exemption, but most customers have limited waste).

For those customers who will want us to make finished film or bags which contain mixes with recycled polymer to avoid the plastics tax, we will purchase polymer made from external waste streams. These supply lines are in place to try and source products with certain attributes. This is not easy, and the waste industry has a long way to go before this becomes mainstream. By its nature waste product will be variable and won't always be easy to get on a regular basis.

Documentation from Brow to Customers & Tax Recharge

Although HMRC say this is not required in the first year from 1 April 2022 to 31 March 2023, when most suppliers will simply charge a higher new gross price to incorporate the tax, we will try to show UK customers a net price, the plastics tax and the new gross price as soon as we can in early 2021. The gross price will only come into affect on the 1 April 2022. This will help customers manage the transition. This is a UK tax so it does not apply to exported products, but we still have to show reasons for exemption on our documentation.

HMRC deem the latter to be best practice and also want detailed analysis of imported, manufactured goods, exemptions, exports etc – so as a customer you will see plenty of new codes on dispatches and invoices.

This is a big undertaking bear for us so please bear with us!

Contemplate the type of Products you buy from us, why they are used before you move towards 30% recycled content simply to avoid the plastics tax.

Do not simply focus on the 30%. Recycled plastic waste by its nature is a mixed product from different sources, containing different types of plastics with different properties, covered in various materials from its past life. This is explained further on.

Think will a product containing 30% recycled product be:

Safe to use – hold a load securely and not move around?

Will it contaminate my product e.g. a food item?

Will it run on my packing line machinery on a regular basis exhibiting the same properties such as stretch, shrink or overwrap?

Approved waste to actually save the tax (manufacturers process waste doesn't count).

Is the appearance ok? – most recycled waste is cloudy or is slightly coloured.

Remember what is viable as a recycled product will continually improve over time as the recycling market improves to better segregate plastics which will lead to a widening range of products. We will all adapt and plastics will still be a key product for reducing food wastage and are cheaper and less bulkier than other packaging streams which will be targeted in 2023 by separate legislation.

Customers Buying Plastic Trays

We will gradually transition to 30% “approved” recycled content but only where feasible and is backed up by evidence to avoid the PPT.

We are seeing some claims being made that their trays are 30% compliant but we do not have evidence to justify this but will work on it – in the meantime the PPT will be charged.

Our manufactures will have to ensure it is safe to use recycled content for the primary product use (food), and that they can obtain external (not their own) process waste to get the 30% exemption.

Many existing manufacturers are including their clean reprocessed waste but this does not earn the 30% exemption.

Customers Buying Plastic Stretch Wrap films (Pallet Wrap), Over wrapping films such as OPP or Cling Film

We are seeing pallet wrap products being marketed to us on the basis they are 30% recycled compliant but we feel they fall short of the plastic tax exemption. They are thin products and are more likely to have manufacturers own process waste in it so do not comply for PPT exemption.

There are also safety concerns for holding heavy loads. Hence at this stage of the product life cycle virgin products are best.

We haven't as yet seen compliant OPP30% films. There is no infrastructure in Europe to gather in and recycle the quantities required to generate the 30% required to make these very technical, thin films. Hence the PPT tax will be charged.

Polythene Products which we make – Technical Guidance

Over the past number of decades, we (Brow Packaging) have been extruding and converting both LDPE, LLDPE, MDPE & HDPE film at our 3-acre site in Belfast. We focus on extruding homogeneous blends to produce consistent, week in week out, polythene film-based products, with set characteristics and physical properties.

We have full control of the manufacturing process on site from batch tracking of polymer (supplied to rigid specs by our Petro Chemical suppliers) which we load into our silos and ultimately end up in the finished product we make, thus giving us full material traceability. Each mix uses different extrusion heat profiles related to the mix melt index.

Our “know how” centers around mixes/recipes which apart from using different polymer types, also use different grades within the polymer type. This lets us meet specific technical properties required by our customers by using e.g. C4, C6, C8 polymer chained products. Masterbatch additives also compliment these properties.

This gives the final Brow Produced Packaging Products, their specific technical properties - melt flow index, slip properties, shrinkage, clarity, anti-fusion, anti-static, anti-blocking (easy opening) etc.

Every order is made to a unique customer specification that is made on a repeat basis. This is built on the backbone of well in excess of 100 different material recipes which have been proven in practice over many years.

The chemical structure of polythene means additives or contaminants (read on about recycled waste below) can migrate to the surface due to the polymerisation chains not being rigidly locked together.

We do currently utilise our own PIW (post industrial waste) in house for certain products but due to the different combinations of product recipes/ mixes we can only

produce waste sacks and products not used in the Food or Pharma sector. This however does not qualify for PPT exemption per our current understanding of the rules.

Polythene – Waste – Technical Guidance

Pre and Post-consumer waste by its definition is going to contain various types of plastic, various types of polythene polymer and various grades within each polymer made worse by additives such as various colour pigments, slip agents etc. Concentrations of each material will differ per each batch of waste recycled.

This waste, even if it is washed, is still going to contain contaminants e.g. if it was primary packaging – it could have meat or oily fish residues, if secondary packaging may be cleaner but it still won't be free from contaminants!

Once the above waste is recycled into a pellet (which has to be capable of being extruded by us into thin polythene films), each pellet will have different characteristics & contaminants.

Very dirty waste will be avoided by most recyclers for the purposes of making film recycled granules. There may be light at the end of the tunnel for this waste stream – the holy grail would be to use a pyrolysis process using pressure and heat to turn the plastic back into tanks of dense hydro-carbon liquid and separate tanks of liquid wax based products. This hydro-carbon liquid would then be shipped back to the refinery as an oil substitute. It would be cracked back into virgin polymer.

If we could get access to this virgin polymer it would also be classed as recycled (although virgin material!) and would meet the 30% rule and would be ideal for us to use in all our products.

Unfortunately, this does not yet exist on a commercial scale so we cannot utilize this as recycled polymer source!

This will lead us to take the following course of action by product range once the new rules come into account.

Polythene Film products we make for Primary Contact with Food, Pharmaceutical and Medical Products

We as a plastics (Polythene) manufacturer must comply with a wide range of other legislation targeted at risk reduction for the practical end use of products.

We have to comply with Food, Pharmaceutical and specialised legislation.

We also operate in accordance with ISO 9001, BRCGS packaging materials and GMP principles for pharmaceutical customers as well as EU legislation EU-2020/1245 and EU-2019/37.

We have to meet strict migration rules and various other regulations.

Mono or co-extrusion production processes would not stop contaminants reaching the surface & coming into contact with the packaged product.

(in co-extrusion you could notionally put the 30% waste recycled material up the middle of the film structure and sandwich it between virgin material layers on the

inside and outside of the film to try & trap the waste in the middle layer – contaminants however would still migrate to the surface).

Hence for customers buying these products we cannot use 30% recycled material and we will simply have to pass on the £200 on as part of our film price.

Polythene Film products we make for Secondary Wrapping using a Heat Process e.g. Shrink Wrap or a quality based over Wrapping Process

This is a technical application and customers need our products to shrink at an even profile at a set temperature on their machinery with usually a non-slip profile.

Recycled waste is a random product - we would not be able to guarantee it was free from contaminants, nor its colour (at best will be cloudy or greyish), nor what the slip profile was or melt profile (for shrink)!

Regardless of whether we use a mono or co-extrusion process, we could not guarantee consistent products. Our customer base would have processing issues and we could potentially waste the 70% virgin polymer as well as the 30% recycled polymer.

Hence for customers who want consistent products (even shrink profile, low slip, good clarity, good overwrapping) we cannot use a 30% recycled material and we will simply have to pass on the £200 on as part of our film price.

There will be some customers who will live with a 30% recycled mix to save the £200T but this may have a physical impact on their use of packaging:

We will only supply these mixes on the following understanding:

1. We will do our best to source recycled granules with a particular property and melt profile. This will be difficult to have on a week-to-week basis as sometimes supply may not be available due to demand.
2. Prices will vary and could be higher than virgin polymer prices due a high demand (a bit like what has happened in the APET and RPET market).
3. If the product is not available a virgin mix will have to be manufactured by us which the PPT applies to.
4. Recycled polymer is by its nature random/variable - shrink profiles may be uneven, colours will vary, it may be slippery (your loads could shift), you may have to regularly adjust your machine settings to reflect softer or harder mixes, etc.

Our business has been built up over the years by providing reliable consistent products and we know small polymer changes cause processing problems. No matter who you get your recycled product from, you have to expect a non- consistent product being mixed at 30% is a very high random element to mix with 70% virgin polymer!

5. We will not accept recycled mixes back because of your processing difficulties as we cannot stand over the performance of a recycled product. We can only do this for virgin mixes. The cost of too great if your aim is simply to save £200 and cause tonnes of expensive film to be rejected which in turn wastes the polymer, virgin and recycled, used to make the product.

6. This is a customer choice.

Polythene Film products made for Wrapping Industrial Products

This is going to depend on the customers' requirements. If the customer is concerned about smell, contaminants e.g. from inks, oil or acids, slip, etc we cannot use 30% recycled material.

It will be the customer's choice – if they ask us to make a 30% mix to save the £200 we will honor that but we cannot guarantee the products performance. Please refer to the same caveats as per the previous section.

As a result, we recommend that customers do not use the 30% mix and we will simply have to pass on the £200 on as part of our film price.

Polythene Film for Waste Bags & Some Retail Carrier Bags (not in Primary Food Contact)

We would try to use 30% where possible to save the £200 levy. This could lead to much higher waste levels in our production process as we would not know what was in the recycled granules and may have processing difficulties. Our tolerances may have to be higher which would use more virgin and waste material which would push the cost up.

Even if we used co-extrusion it would put the run sizes up and would make the products more expensive.

Issues for us as a Company Generally using Pre and Post-Consumer Waste

We make primarily products for high risk and technical users.

If we use post-consumer waste, we would have to purge our machines frequently wasting more virgin material which is not what the legislation is trying to achieve.

Even if we try to reduce the spread of contaminants by using co-extrusion machines it will not address the security or technical issues and the film price would be much higher to cover the cost of these machines which would wipe out the £200 per tonne. In addition, these machines require much bigger order quantities from customers on scheduled production runs. Even then we would have higher waste levels on each changeover which we would have to pass on. In addition, most of our customers usually require a speedy response which we can currently provide if they run out of material or a product goes on promotion but using these other machines make this less feasible and we & customers would still have product issues.

For that reason, our gut feeling is we as an organization have to be very careful when using pre and post-consumer waste recycled granules and if we do use, we will limit their use to certain machines.

Summary

We think recycled material generated from waste packaging films will work for certain industries (e.g. making heavier duty plastic products such as shampoo bottles or drums with low reactivity chemicals or car parts) but its use will be limited in film production. There will be a higher success rate in food packaging trays using APET and RPET as industry reduces the variety of plastics used to make waste streams simpler to reprocess.

Currently there simply isn't the sorting technology to get polythene into well defined, uncontaminated waste streams but this will improve.

Across all plastics, investment in sorting and recycling will grow, as encouraged by this levy, which will gradually lead to an improvement in the recycled polymer available. This will then let us all change our stance to incorporate it in a wider range of our products thus saving on the levy.

For now, we will have to pass on the £200T to the majority of our customers where sector/product application exemptions do not apply and customers want consistent products.

For those customers wanting 30% recycled content we will be happy to assist to source products or manufacture products subject to the caveats we have raised.

We have attempted to provide an open and honest view. No doubt there will be those businesses which market all sorts of compliant products to save the £200 but we would ask you to think about the above and proceed cautiously and tread with a dose of realism - keep an eye on why you use the product and the issues and liabilities you may expose yourself to.

Our primary job will be to continue to make safe products, or distribute products which perform technically as you expect, have as little environmental impact as possible, ensure downtime in your organization is minimized and that the PPT is correctly accounted for to avoid further liability.

The Team at Brow Packaging

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