Compostable (Biodegradable) Packaging Film/Foils/Pouches

Compostable Substrate film

Norminal	Description	Video	Certificates	Link
PLA+PBAT Film	PLA refers to poly lactic acid resin that is usually made from corn starch. In actually application, PLA+PBAT film is usually a mix of PLA and PBAT resin.	https://www.youtube.com/watch?v=2qAwbBNO9Ps	Certificated By TUV Certificated By DIN	Learn More
BOPLA	Bia-orientated PLA film, is achieved with good clarity, high tensile strength and heat seal property.	https://www.youtube.com/watch?v=aq_6K0dRHUk	Certificated By TUV	Learn More
Cellulose Film (PT)	Cellulose film is made of plant fibre which is fully compostable and biodegradable.	https://www.youtube.com/watch?v=RAch1vsHCto	DINCERTCO Sign Kompostierbar Sign Certificated by DIN	Learn More
Metallized Paper (MP)	Metallized paper is to achieve a high barrier metallized layer onto the paper surface, which can be further printed or laminated with other film materials, for kinds of packages.	https://www.youtube.com/watch?v=M5yoJD2bD10	###	Learn More
Kraft Paper (Kraft)	Kraft paper is the most popular used film material that is made from plant fiber, which of course can fully biodegrade in nature conditions.	https://www.youtube.com/watch?v=vQMOIQwF9MU	###	Learn More
Metallized Cellulose Film	Metalliced cellulose film is to deposit a thin aluminum layer onto the surface of cellulose substrate, that is intended to improve the barrier performance	https://www.youtube.com/watch?v=nx9cq0rHIWU	Same as Cellulose Film Certificates	Learn More

STANDING POUCH PACKAGES

Laminated Foil Structures

PLA Foil

- BOPLA/PLA+PBAT
- PT/PLA+PBAT

Paper Foil

- Kraft Paper/PLA+PBAT
- Kraft/BOPLA

Clear Window

- Kraft Paper/BOPLA

Metallized Barrier Layer

- MP/PLA+PBAT
- MP/PT/PLA+PBAT
- PT/MPT/PLA+PBAT

Barrier Performance

Foil Structures	Description	Video	WVTR(g/m2/24hr)	OTR (cc/m2/24 hr)
BOPLA40/PLA+PBAT60	Suitable for many products without high barrier packages, print up to 10 colors by gravure printing.	https://www.youtube.com/watch?v=EmSPwQ8w784	62.2	267
PT30/PLA+PBAT60	Good oxygen barrier package from this foil laminate, and custom artwork can be printed up to 10 colors in our facility	https://www.youtube.com/watch?v=9mKX-BM7-qY	131.5	5.6
Kraft Paper45g /PLA+PBAT60	Most economical compostable packages that do not provide barrier protection for the products	https://www.youtube.com/watch?v=boc408ciLSQ	44	742
Kraft Paper45g/BOPLA40	Good stiffness and standing effect, and clear front window can be achieved	https://www.youtube.com/watch?v=NEgtYwPwFgY	41	380
Metallized Paper69g/PLA+PBAT40	Economical package with an aluminum metallized layer into the final package	https://www.youtube.com/watch?v=hFCZBFJzzPI	27	127
Metallized Paper69g/PT30/PLA+PBAT60	Good stiffness, higher barrier	https://www.youtube.com/watch?v=_HCxImTMgM4	17.3	1.12
PT30/MPT20/PLA+PBAT60	Good stiffness, and can be printed up to 10 colors	https://www.youtube.com/watch?v=wUzlM4JQ1UI	23	0.16
PT30/Kraft Paper45g/PLA+PBAT40	Good stiffness, and can be printed up to 10 colors	https://www.youtube.com/watch?v=z3HCAjZeICU	89	5.6
Kraft45g/MPT20/PLA+PBAT60	Good stffiness, and higher barrier to oxygen, printed up to 10 colors.	https://www.youtube.com/watch?v=4wm4b9jlGa4	26	0.22

Barrier Performance is usually evaluated by WVTR (Water Vapor Transmission Rate) and OTR (Oxygen Transmission Rate), and these values are tested in our laboratory condition with Mocon equipment, which should be intended for your reference only, and should not be taken as specific test report for each order.

Composting Test

Home Compostable Conditions

The foil materials should be composted more than 98% under home compostable conditions after 180 days. Of course, in actual compost process, the temperature and density of compost bacteria really matters. The compost process may cease under the severe coldness in winter in North China.

Here we are performing the compost test in home conditions, and see how they perform, and will keep updated in this post. Please click for more understanding.

http://www.valuepackaging.cn/compost-test-of-package-film-materials-under-home-garden-conditions-by-china-manufacturer

Earth Soil Conditions

The density of compost bacteria in nature soil conditions is far less than the compost standard, and also the temperature will be not as good as compost standard. So it may take more time to make the foil materials fully composted in earth soil.

Here we are performing the compost test with these foil materials buried in our garden soils and see how they perform, and will keep updated in this post. Please click for more understanding.

http://www.valuepackaging.cn/the-biodegrading-process-of-compostable-film-materials-buried-in-nature-soil

BOPLA/PLA+PBAT Foil

- Semi-opaque
- Not high barrier, not intended for long shelf life
- Good mechanical strength

BOPLA/PLA+PBAT foil pouch makes one of the most popular compostable multi-layer standing pouch in the present market.
BOPLA film is of great mechanical strength, good clarity and printability after biaxial-orientation. When BOPLA film works as outside layer, it should be a great mechanical support for the final pouch. In our facility, it can print up to 10 colors.
PLA film is able to realize good sealing ability, and with good softness, it will make the final package easy for filling.
This pouch can be intended for products that do not need higher barrier or long shelf life.

http://www.valuepackaging.cn/whats-bopla-pla-compostable-foil-laminate-and-its-property/

https://www.youtube.com/watch?v=EmSPwQ8w784

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PT/PLA+PBAT Foil

- Semi-opaque
- Not high barrier, not intended for long shelf life
- Lower cost than BOPLA/PLA

PT/PLA+PBAT foil pouch should be another economical compostable option for the products that do not need high barrier performance.
PT, which is short for cellulose film or cellophane film, is usually made of plant fiber, the same materials as paper. So, PT film is considered fully compostable and biodegradable.
With high temperature resistance, PT/PLA+PBAT foil is able to realize smooth and neat surface in bag-making process.
You may have a further understanding in this post.

https://www.vp-packaging.com/foil-structure/compostable-pla-foil-laminate/cellulose-pla-foil-laminate/whats-cellulose-pla-foil-laminate-compostable-standing-bag-pouch-package/

https://www.youtube.com/watch?v=9mKX-BM7-qY

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Kraft Paper/PLA+PBAT Foil

Kraft paper is a common robust paper that can realize tough and strong packages for most products, and of course, it should be considered fully compostable and biodegradable.
Kraft paper, with brown and white color mostly used, is able to present good hand feeling, quality visual effect and eco friendly function in standing pouch packages.
Kraft paper/PLA+PBAT foil laminate can be easily processed into different forms of packages, from rolls to pouches.

https://www.vp-packaging.com/pouch-materials/compostable-pouch-package/whats-metalized-paper-pla-film-biodegradable-standup-bag-packaging-and-its-property/

- Good standing effect
- Not high barrier, not intended for long shelf life
- Economical

https://www.youtube.com/watch?v=boc408ciLSQ

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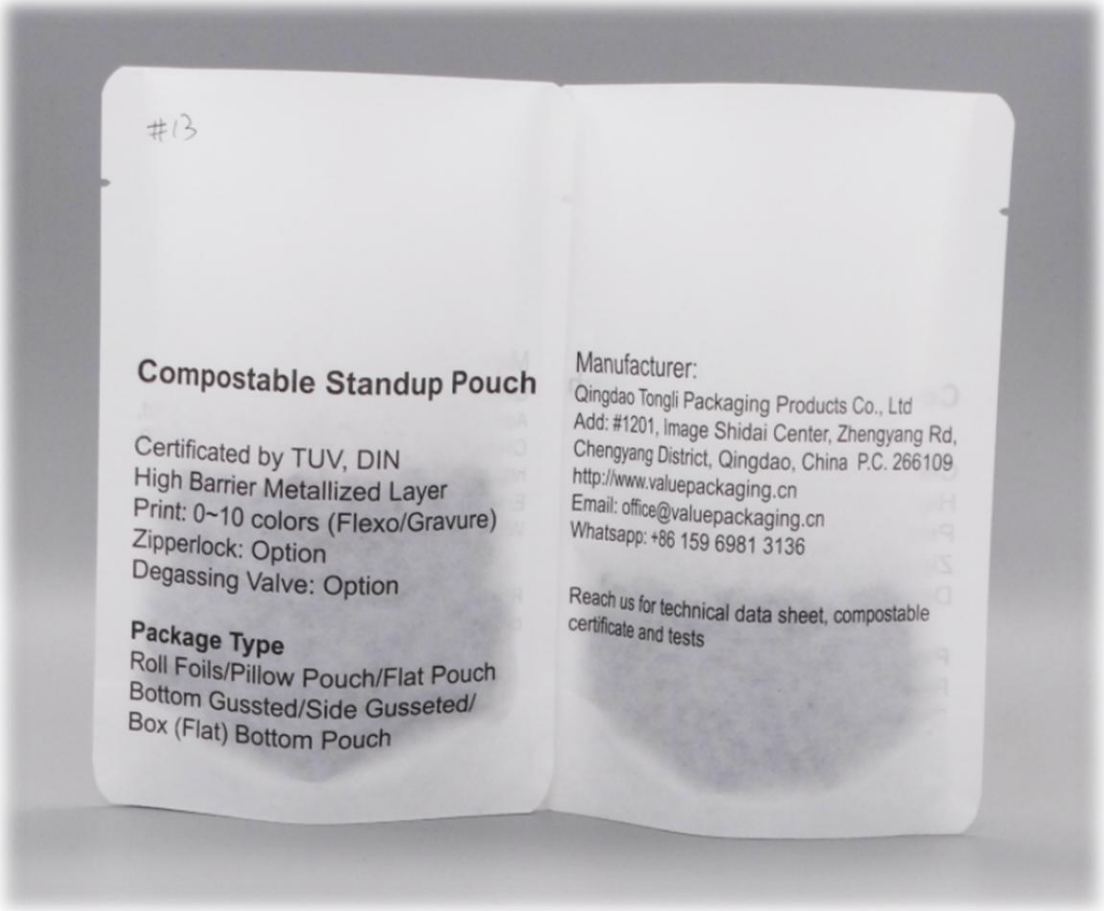
Kraft Paper/BOPLA



BOPLA film is of good sealing performance, which can be sealing layer in the foil laminate.
Kraft paper/BOPLA film is of better stiffness and standing effect than Kraft Paper/PLA+PBAT foil pouch, at customer’ s choice.
As BOPLA is of good clarity, so clear front window can be achieved on these standing pouches.
PLA+PBAT zipper and compostable degassing valve are options at customer’ s requirements.

https://www.vp-packaging.com/pouch-materials/compostable-pouch-package/whats-kraft-paper-bopla-film-compostable-film-standing-bag-packaging/

- More stiff
- Not high barrier, not intended for long shelf life
- Clear front window available

https://www.youtube.com/watch?v=NEgtYwPwFgY

Download Technical Data Sheet

Metallized Paper/PLA+PBAT Foil

Metallized paper is to deposit a thin layer of aluminum atoms onto the surface, to achieve better barrier property and silver metallic effect.
MP/PLA+PBAT should be considered the most economical choice when the customers would like to get a barrier package for his lovely products, like coffee, dry nuts, snacks etc.
Custom artwork can also be printed on paper surface.
Laser rainbow/Gold metallic can be achieved at customer’ s preference.

https://www.vp-packaging.com/pouch-materials/compostable-pouch-package/whats-metalized-paper-pla-film-biodegradable-standup-bag-packaging-and-its-property/

- Semi-opaque
- Not high barrier, not intended for long shelf life
- Good mechanical strength

https://www.youtube.com/watch?v=hFCZBFJzzPI

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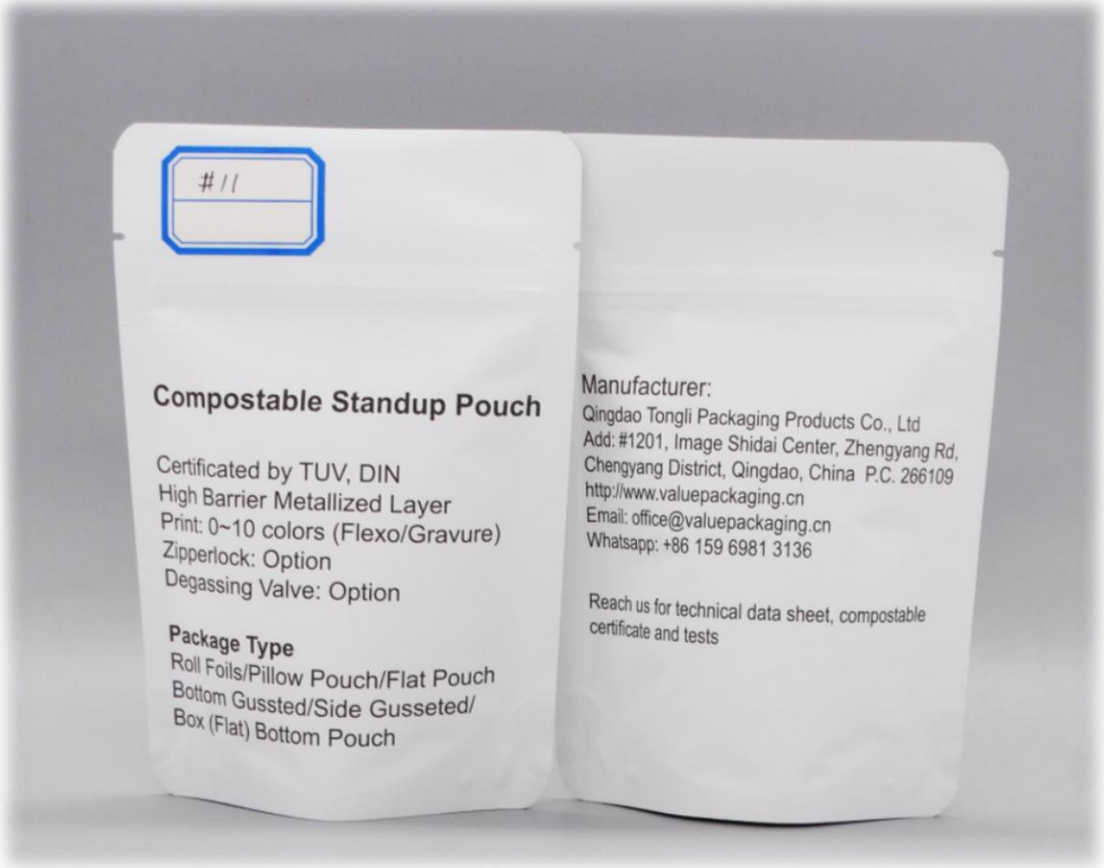
MP/PT/PLA+PBAT Foil



- Opaque
- High barrier performance
- Great mechanical strength

This foil structure should be considered as high barrier package with great mechanical strength, which enables the package well intended for coffee beans up to 5 kgs.
Metallized paper on the outside gives the final package eco friendly impression, good hand feeling, and quality visual effect.
Zipperlock with good airtight property can be enabled on the package to achieve re-close ability.
Compostable degassing valve is option for coffee beans packages.
Custom artwork can be printed by gravure or flexo press.

https://www.vp-packaging.com/pouch-materials/compostable-pouch-package/whats-compostable-metallized-paper-cellulose-pla-foil-self-standing-bag-and-its-property/

https://www.youtube.com/watch?v=_HCxImTMgM4

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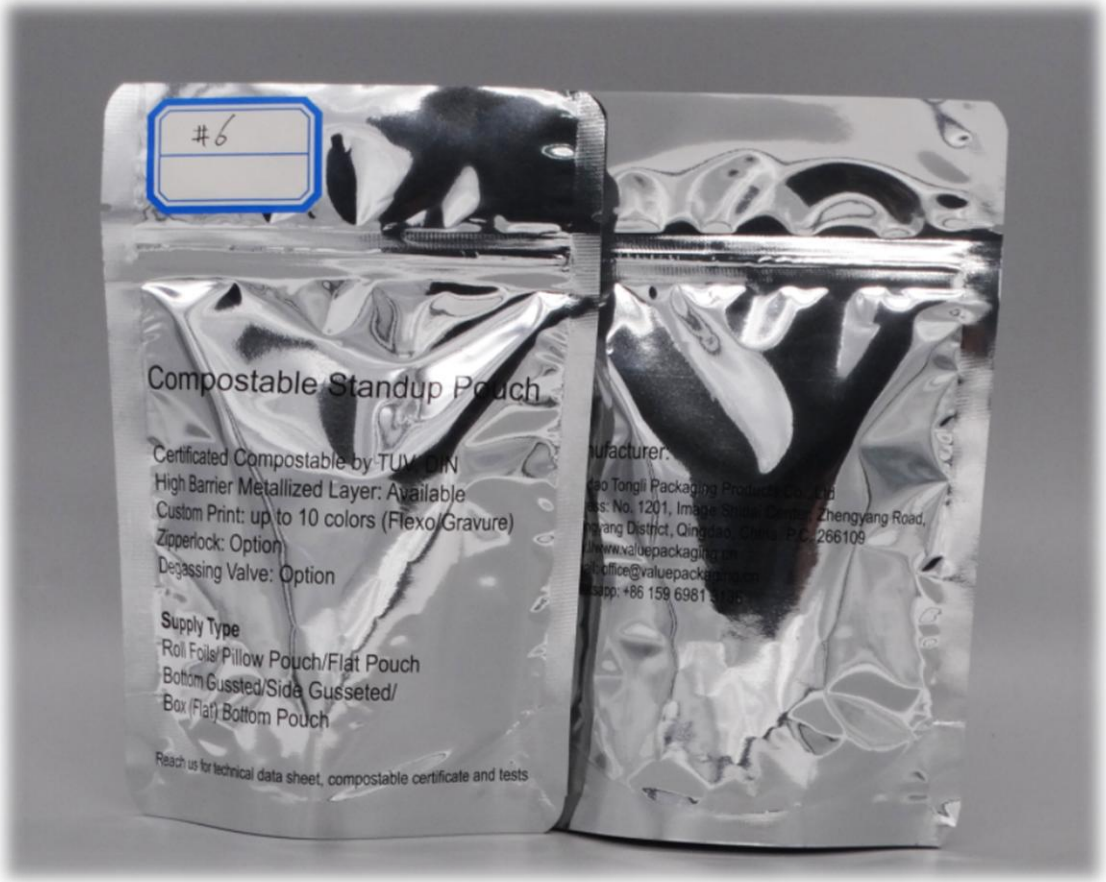
PT/MPT/PLA+PBAT Foil



This foil structure combines a layer of metallized cellulose film which is able to make a bright metallic appearance shown as left picture.
Of course, artwork design can be printed in maximum 10 colors, and the final effect will be more solid and vivid with this metallic background.
This foil is of great mechanical strength and sealing performance, which can be intended for products up to 5kgs in standing pouch packages.

https://www.vp-packaging.com/pouch-materials/compostable-pouch-package/what-is-pt-mpt-pla-eco-friendly-high-barrier-multilayer-foil-standing-coffee-pouch-and-its-property/

- Opaque
- High barrier property
- Good mechanical strength
- Good Standing Effect

https://www.youtube.com/watch?v=wUzlM4JQ1Ul

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PT/Metallized Paper/PLA+PBAT Foil

With cellulose film working on the outer layer, this foil laminate is able to present custom artwork in vivid effect up to 10 colors.
Metallized paper works as middle layer, which can realize good mechanical strength and standing effect for final packages.
So this foil laminate performs great when it is converted into kinds of standing pouch packages.
PLA+PBAT re-sealable zipper and gas releasing valve are at option.

https://www.vp-packaging.com/foil-structure/compostable-pla-foil-laminate/pt-metallized-paper-pla-biodegradable-foil/whats-pt-metallized-paper-pla-eco-friendly-foil-laminate-and-its-property/

- Opaque
- Good mechanical strength
- Vivid print up to 10 colors

https://www.youtube.com/watch?v=te9HSsYGxoU

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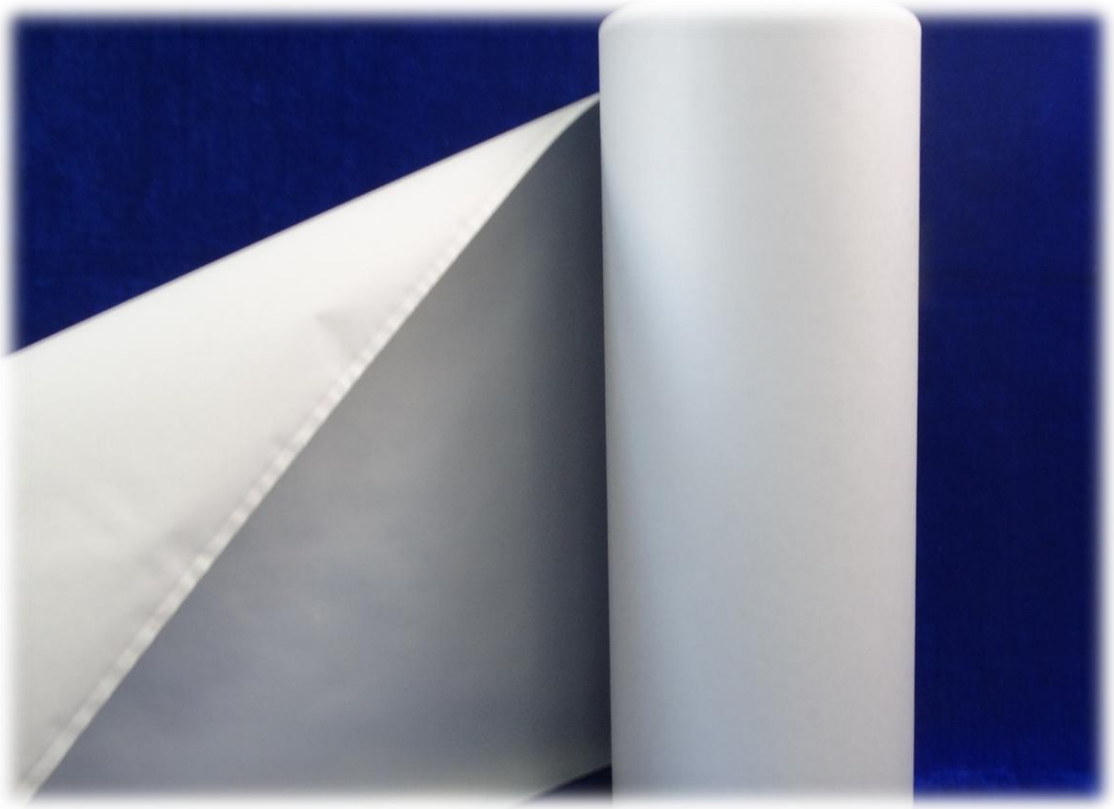
Paper/MPT/PLA+PBAT Foil



This foil laminate is a good choice for higher barrier package with paper appearance.
Kraft paper is able to create good hand feeling and visual effect for some products packages.
Custom artwork can be printed onto paper substrate with water-based ink, which is more environmental friendly.
Kraft paper 45gsm, 60gsm, 70gsm and 50gsm are available against customer’ s requirements.

https://www.vp-packaging.com/foil-structure/compostable-pla-foil-laminate/kraft-paper-mpt-pla-compostable-foil/whats-kraft-paper-mpt-pla-sustainable-multilayer-foil-materials-and-its-property/

- Opaque
- High barrier property
- Good mechanical strength
- Water-based ink print available

https://www.youtube.com/watch?v=4wm4b9jlGa4

Download Technical Data Sheet

Lidding Foil for PLA Cups

This lidding foil is intended for sealing to crystalized PLA cups, which can form a fully compostable package solution for many products.
Upon customer requirements, we are offering several foils to meet the complicated goal for the customer like

1. Sealing Strength
2. Easy Puncture
3. Quick Sealing/Produce
4. High Barrier

You are welcome to reach us if you have any specific requirements for the lidding foil, and we are much glad to be of assistance.

- Great sealing strength to Crystalized PLA cups
- Easy to puncture
- Plain rolls or Custom print available

https://www.vp-packaging.com/bag-type/lidding-foil-bag-type/whats-the-film-materials-for-eco-friendly-compostable-lidding-foil-for-biodegradable-crystalized-pla-cups/

https://www.vp-packaging.com/

Download Technical Data Sheet

PT/MPT/PLA+PBAT For Hand Wash

This roll foil is 100% home compostable materials with vivid printing effect of customer artwork. Matte lacquer coating will bring the visual effect to a higher level in the consumer market.

The materials proves to be great resistant to alkaline contents, like soap, hand wash, detergent powder or liquids. Please refer to the alkaline test later this catalog

https://www.vp-packaging.com/product/printed-film-roll-for-hand-wash-products-8grams-pillow-sachet-package/

- home compostable
- Vivid printing with customer artwork
- Great alkaline resistance

https://www.youtube.com/watch?v=e2nclSY3Zho

Download Technical Data Sheet

PT/MPT/PLA+PBAT For Laundry Liquids

This roll foil is 100% home compostable materials based on cellulose film, metallized cellulose and PLA+PBAT film. Cellulose film foil will be able to compost quickly in home composting conditions. And actually, when PLA+PBAT goes thicker, it will take longer time to compost.

The materials proves to be great resistant to alkaline contents, like soap, hand wash, detergent powder or liquids. Please refer to the alkaline test later this catalog

https://www.vp-packaging.com/product/100-home-compostable-film-roll-material-for-laundry-liquids/

- home compostable
- Vivid printing with customer artwork
- Great alkaline resistance

https://www.youtube.com/watch?v=mrQjmvfDky4

Download Technical Data Sheet

STANDUP POUCH PROPERTY

Drop Test

Drop test is a reliable way to check if the filled package is strong enough to protect the products along the procedure of filling, transport and distribution.

Here we perform the drop test with 1kg of coffee beans filled into the standup doypack with foil structure Metallized Paper69g/Cellul;ose20/PLA+PBAT50.

The package did not break after 6 drops, so robust.

Test Video https://www.youtube.com/watch?v=kmlwgBdzWlg

STANDUP POUCH PROPERTY

Great Sealed Package

When PLA+PBAT film with thickness more than 50 microns works as the inner sealing layer, actually the final package will be of good sealed strength.

The sealed strength can be reinforced with an improved bond strength of the foil laminate. Of course, we will act against your request.

You can see the picture, with a person standing on the inflated sealed package, it won’ t burst, great sealed package.

Test Video https://www.youtube.com/watch?v=iJUVKhjxH7A

STANDUP POUCH PROPERTY

Re-sealability and airtight property on zipper

The compostable zipperlock should work well after open-and-close for several times, and the air will not easily penetrate through the zipper as two parts will still combine with each other in a tight way.

That is absolutely essential to keep the products in freshness as long as possible after the package is torn and opened.

It proves that our compostable zipper pouch can be well intended for coffee bean, dry nuts, snacks, chips, candy, etc.

Test Video https://www.youtube.com/watch?v=Si7DA9Yqi5A/

STANDUP POUCH PROPERTY

Standing Upstraight Effect

Actually, when kraft paper is applied into the multilayer compostable pouch, the standing effect will be good enough for most products.

The standing effect can be further improved when a layer of cellulose film is reinforced in the foil laminate.

So we are going to achieve the standing effect for your expect package in a gorgeous way.

Test Video https://www.youtube.com/watch?v=Di3PYoM8fHY

STANDUP POUCH PROPERTY

Hot Water (100C°) Resistant Test

Some customers may melt scented candle wax in hot water for 2 mins, and this test is performed against this requirements.

The foil materials of compostable pouch is Cellulose20/Kraft Paper45/PLA50, which proves to be great in finalizing this application.

Customer artwork can be printed up to 10 colors with matte lacquer coating finish.

Test Video https://www.youtube.com/watch?v=4VXlHi42mlk

STANDUP POUCH PROPERTY

Frozen Test

Some customers may like to use these compostable pouches for frozen purpose, like soup products, dumplings, French fries etc.

So, we performed this test with water filled into the pouch, well sealed, and put into refrigerator for sufficiently frozen.

When we get the frozen pouch out, and they come back to normal, we perform drop test to check the mechanical strength.

It proves so well for frozen purpose.

Test Video https://www.youtube.com/watch?v=tQ5UZUD2K9A

STANDUP POUCH PROPERTY

Alkaline Resistant Test

Some customers may like to use the compostable foil materials for alkaline products, like hand wash, detergent powder, soap, or soap powder.

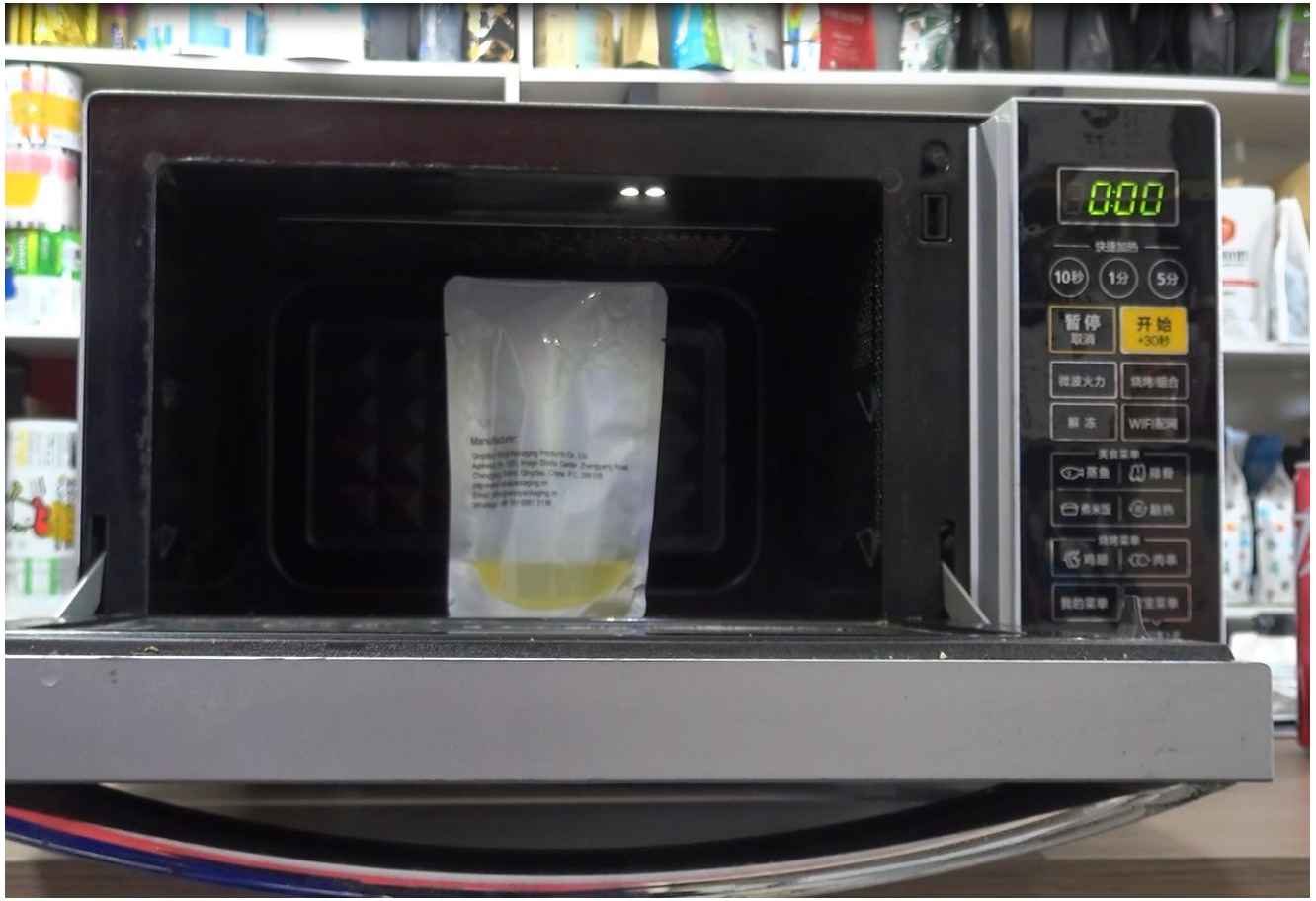
So we perform this alkaline test with bleaching powder filled into the compostable pouches, get them well sealed, and put them in room with temperature 43~45C° for 30 days, which is intended to accelerate the aging process.

It proves so well for the compostable pouch to hold alkaline products.

Test Video https://www.youtube.com/watch?v=sHW6cDL2n44

STANDUP POUCH PROPERTY

Microwave Oven Treatment Test



This test is intended to check whether the compostable pouch can be well intended for microwave oven treatment.

In this test, compostable pouch with foil Cellulose20/PLA+PBAT50 is filled with scented candle wax, and put into microwave oven for 2 minutes.

There should be no metallized layer in the pouch when it is intended for microwave.

Test Video https://www.youtube.com/watch?v=eAOAxyE3mtg

APPLICATIONS

COFFEE

DRY NUTS

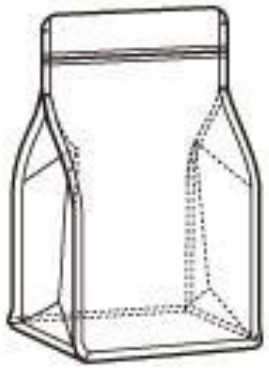
SEEDS

SNACKS

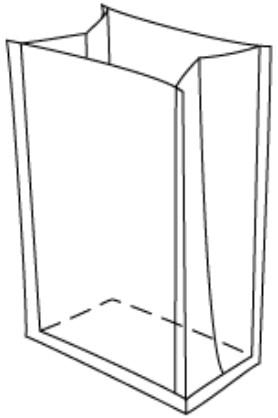
FOODS

PET FOODS

PACKAGE TYPE

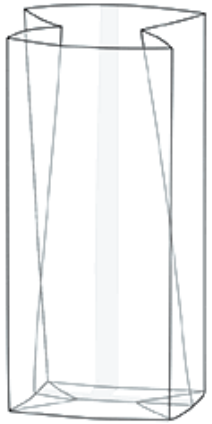


Box Bottom
(Top sealed)

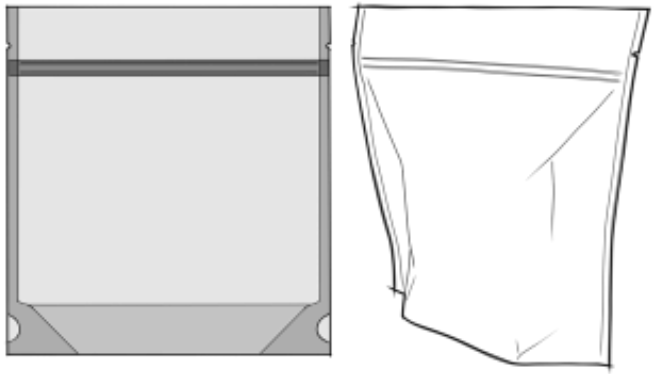


Box Bottom
(Top Unsealed)

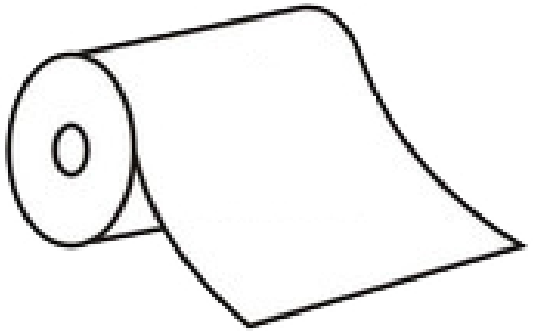
Side Gusseted
(Quad Seal)



Side Gusseted
(Back Seal)



Bottom Gusseted/Doypack



Foil Rolls

Compostable Coffee Bags

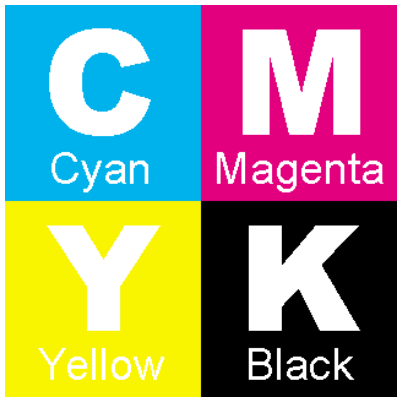
RFQ

Volume	Materials	Bottom Gusset/ Doypack	Side Gusset Quad Seal	Flat Bottom/ Box Bottom
250grams	**Non-barrier materials** 1. BOPLA/PLA+PBAT 2. PT/PLA+PBAT 3. Kraft Paper/PLA+PBAT 4. Kraft paper/BOPLA **High Barrier Metallized Materials** 1. Metallized Paper/PLA+PBAT 2. Metallized Paper/PT/PLA+PBAT 3. PT/MPT/PLA+PBAT 4. MP/MPT/PLA+PBAT	Q160XH240+BG84	High Skinny W90XH270+SG50	Skinny W100XH240+G64 Fat W125XH195+G80 Thinner W130XH200+G70
340grams		Normal W190XH260+BG100 High W170XH310+BG100	Skinny W90XH275+SG50	Skinny W96XH235+G80 Normal W125XH205+G80
454grams		W178XH285+BG100	W100XH360+SG60 W100XH340+SG60 W115XH300+SG60	W140XH240+G80 W110XH290+G80 W118XH255+G80 W135XH260+G80
500grams		W200XH300+G80	W100XH335+SG60 W105XH340+SG60	W135XH275+G80
908grams		W228XH340+BG120	W135XH390+SG70	W135XH330+G90 W140XH325+G90 W195XH295+G90
1kg		W240XH335+BG120	W135XH410+SG70 W128XH420+SG80	W130XH345+G90 W145XH340+G90 W150XH340+G100

* The package dimension is tested based on the coffee beans with density 370grams/1000ml. You are welcome to reach us for further assistance once you have any questions regarding the dimension.

CUSTOM PRINT

We realize the custom print by rotogravure (10 colors) and flexo printing that is able to achieve the best effect for most of customer artworks.



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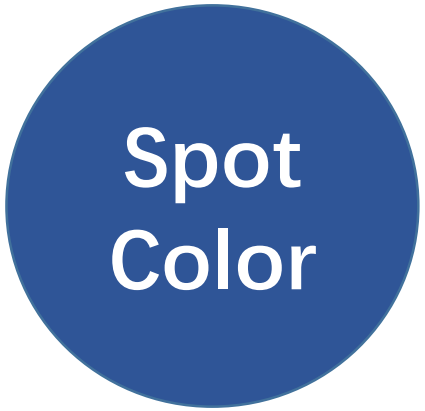

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1. One color will have to need one cylinder to realize print, so that will be further cost for cylinder USD 100/Cylinder.
2. Please reach us for design template of coffee packages.

Print Effect & Matte Finish

1. Solid and Vivid Print Effect

YouTube

2. Good matte finish and scratch resistant

YouTube

3. Good adhesion of matte lacquer to cellulose film

YouTube

Quality Packaging Supplier

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