

济南华丰印务有限公司

微波爆米花纸袋成分、结构及其使用方法的说明

Jinan Huafeng Printing Co., Ltd.

Description of the composition, structure and usage of microwave  
popcorn paper bags

## 一、前言 Introduction :

我公司生产的微波爆米花纸袋采用双层食品级高防油性能牛皮纸,中间加贴微波效应膜制成。所用材料均进行了严格的入厂检测,符合相关食品卫生标准。具有封口牢固,不回粘;防油性能强,不漏油;可使玉米充分爆裂,开爆率达98%以上(因玉米品质不同,可能会有所差异)的特点,制作完成的爆米花花大味美。

The microwave popcorn paper bag produced by our company is made of double-layer food-grade high-quality greaseproof kraft paper and an susceptor in the middle. All the materials have been strictly tested and meet the relevant food safety standards. It has the characteristics of strong sealing and no sticking, high greaseproof performance and no oil leakage, and making corn pop fully (generally the pop rate is over 98%, but it is decided by the variety of corn). The popcorn produced by our bags is delicious.

## 二、结构 Structure :

1、外层原纸为高级食品级防油牛皮纸,防油等级大于等于 KIT11,并采用食品级水基型油墨印刷。

The outer layer of paper is advanced food-grade greaseproof Kraft paper ( $\geq$ KIT11). It is printed by food-grade water-based ink.

2、中间层为以 PET 为基材的微波效应膜,用以吸收微波和均匀热量,提高玉米的开爆率。

The interlayer is a susceptor (Alox Coated PET Film). It can absorb microwaves and concentrates heat at the film interface, thus ensuring a heat distribution focused on the hard-to-heat flavor coating, which can increase the pop rate.

3、内层原纸高级食品级防油牛皮纸，防油等级大于等于 KIT11。

The inner layer of paper is advanced food-grade greaseproof Kraft paper (≥KIT11).

4、底部及顶部封口均采用美国杜邦公司生产的可接触食品的水性热熔胶印制。

The bottom and top seal are the food-grade water-based hot-melt adhesive produced by DuPont.

5、内、外纸之间的复合用胶粘剂采用无毒环保的水性白乳胶粘合。

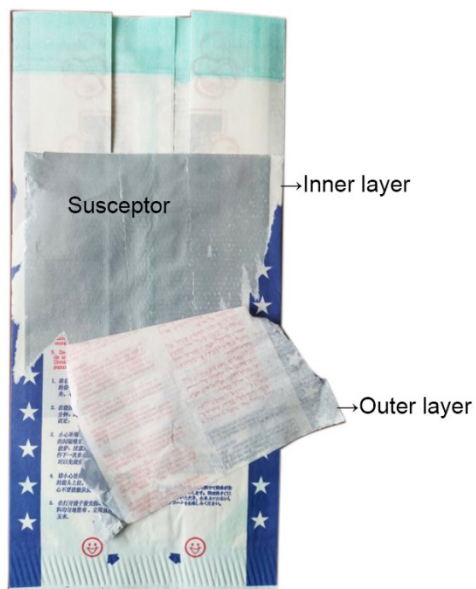
The two pieces of paper are stuck by non-toxic eco-friendly water-based white adhesive.

6、产品结构如下表所述：

The product structure is described in the following table:

Product Description: Microwave Popcorn Food Greaseproof Paper Bag	
产品描述：微波爆米花食品防油纸袋	
Finished Bag Size: 11.5"×5.5118"×3.937"=292.1mm×140mm×100mm	
Outer Ply Type（外层类型）：	Food grade greaseproof paper（食品级防油纸包装）
Outer Ply Basis Wt #（外层的基本重量）：	36g/m <sup>2</sup>
Inner Ply Type（内包装类型）：	Food grade greaseproof paper（食品级防油纸包装）
Inner Ply Basis Wt #（内层的基本重量）：	36g/m <sup>2</sup>
Compound Adhesive（复合胶）：	Water-based white adhesive（水性白乳胶）
PVA Heat Seal Adhesive（聚乙烯醇热密封胶）：	PVA Water Soluble (green)（PVA溶于水，绿色）
Side Seam Adhesive（侧缝胶）：	Water Soluble Emulsion (white)（水溶性乳液，白色）
Ink（油墨）：	MWW (M/W Water Base Carbon Free)M/W 水性油墨

Thickness(厚度)	Containing film含膜≥110um, UN Containing fil不含膜≥90um	
Oil resistant(防油性)	≥ kit11	
STRUCTION (结构围)	Standard(标准)	Variation Range(变化范围)
Face Width（宽度）：	5.5118"=140mm	±0.08"(±2mm)
Gusset Width（侧高）：	4.0"=100mm	±0.08"(±2mm)
Repeat Length（长度）：	11.5"=292mm	±0.08"(±2mm)
Susceptor Width（效应膜宽度）：	5.0"=12.7mm	±0.08"(±2mm)
Susceptor Height（效应膜高度）：	5.0"=12.7mm	±0.08"(±2mm)
PVA Top Seal Height（顶部封口胶高度）：	1"=2.5mm	±0.08"(±2mm)
PVA Bottom Seal Height（底部封底胶高度）：	1"=2.5mm	±0.08"(±2mm)
FINISHED BAG	成品袋	
Moisture（水分）：5.0% Min / 5.5% Target / 6.5% Max	（最低5.0%/标准5.5%/最高6.5%）	
Product quality standard		
产品质量标准和验收标准		
The product quality standard conform to the enterprise in accordance with China's （ GB4806.8-2016 National Standard for Food Safety: paper and Board Materials and products for Food contact） relevant laws and regulations of the requirements. and comply with the relevant laws and regulations of the United States （FDA 21 CFR176.170-Chloroform soluble extractive residues） .		
企业的产品质量标准应该符合中国的（GB4806.8-2016 食品安全国家标准：食品接触用纸和纸板材料及制品 ）的有关法律和法规的要求;并符合美国 （FDA 21 CFR176.170-氟仿可溶萃取物残留） 相关标准要求。		



### 三、本产品主要成分及相关化学物质名称、CAS 编号及使用限值如下

The chemical name, CAS number and application amount of the main components of the product are as follows :

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序号 number	品名 name of a part	化学名称 chemical name	CAS 编号 CAS number	使用量 Application amount	使用部位 Using position
1	化学木浆 Chemical Pulp			75-80%	内外纸制造 Manufacturing internal and external paper

2	防油剂 Oil-proof agent	2-甲基-2-丙烯酸 与 2-甲基丙烯酸 2-羟基乙醇酯、 α-(1-氧代-2-丙烯 -1-基) -ω-羟基聚 (氧基-1,2-乙烷 二基) 和 2-丙烯酸 3,3,4,4,5,5,6,6,7, 7,8,8, -十三氟辛 醇酯的共聚物的 钠盐 (大金)  2-propenoic acid,2-methyl,p olymer with 2-hydroxyethyl 2-methyl-2meth yl-2-propenoate, α-(1-oxo-2-prop en-1-yl)-ω-hydro xypoly(oxy-1,2-e thanediy)and 3,3,4,4,5,5,6,6,7, 7,8,8-tridecaflu rooctyl 2-propenoate,so dium salt(Daikin)	1158951-86-0	<0.25%	内外纸制造  Manufacturing internal and external paper
3	氧化淀粉 oxystarch	氧化淀粉 oxystarch	221897-48-9	<3%	内外纸制造  manufacturing internal and external paper
4	封口胶 PVA Seal	水基型聚乙酸乙 稀 Water-based poly (ethylene acetate)	9003-20-7	<2%	纸袋底部及顶 部封口处  The bottom and top seal
5	复合胶 Lamination Adhesive	聚乙酸乙烯酯乳 液白乳胶 Poly (vinyl acetate) emulsion white latex	9003-20-7	<3%	内外纸复合  Sticking the two pieces of paper

6	水基型油墨 MWW (M/W Water Base Carbon Free)M/W	水溶性丙烯酸树脂  Water soluble acrylic resin	141-32-2	<0.8%	外纸印刷  Printing
7	微波效应膜  Susceptor	聚对苯二甲酸乙二醇酯 polyethylene terephthalate (PET)	25038-59-9	<5%	纸袋中间夹层  Middle layer
8	水分  Moisture	H <sub>2</sub> O	7732-18-5	5-8%	

四、卫生指标及重金属含量：

toxic element metal content and safety standard：

项目 project	单位 unit	标准 standard	检测结果 detection result	备注 remarks
表面 surface	/	色泽正常, 无异味, 霉斑或其他污物。 Normal color, no odour, mildew or other dirt.	符合要求 meet the requirement	
铅 lead	mg/kg	≤ 3.0	未检出 Not detected  (≤ 0.1)	
砷 arsenic	mg/kg	≤ 1.0	未检出 Not detected	

				( $\leq 0.05$ )	
甲醛 formaldehyde		mg/dm <sup>2</sup>	$\leq 1.0$	未检出 Not detected ( $\leq 0.06$ )	
荧光物质 fluorescent material	254m m	cm <sup>2</sup>	阴性	无荧光光斑 No fluorescent spot	
	365m m	cm <sup>2</sup>	阴性	无荧光光斑 No fluorescent spot	
总迁移量 Total migration		mg/dm <sup>2</sup>	$\leq 10$	不适用 not applicable	
高锰酸钾消耗量 potassium permanganate consumption		mg/kg	$\leq 40$	23	(60°C, 2h)
重金属 heavy metal		mg/kg	$\leq 1$	<1	以 Pb 计, 4%乙 酸 (体积分数) (60°C, 2h)  In terms of Pb, 4% acetic acid (volume fraction) (60 °C, 2h)
大肠杆菌 colibacillus	/		不得检出 Not to be detected	未检出 Not detected	(/50cm <sup>2</sup> )
沙门氏菌 salmonella	/		不得检出 Not to be detected	未检出 Not detected	(/50cm <sup>2</sup> )

霉菌 mould	/	$\leq 50$	<10	(CGU/g)
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#### 五、使用方法 Usage：

1、将纸袋的底部的 1/3 向有微波效应膜的一面相反的方向折叠。

Fold the bottom 1/3 of the paper bag in the opposite direction to the susceptor side.

2、根据不同配方将微波玉米、食用油、调味剂充分混合（建议混合比例为 70:19:11），将混合好的玉米装入纸袋。

Mix microwave corn, cooking oil and seasoning fully according to different recipes (70:19:11 recommended) and put the mixed corn in the paper bag.

3、根据纸袋大小不同，建议装量如下：

The recommended volume of various sizes of paper bags is as follows:

纸袋规格（长 X 宽 X 侧高） Paper bag specification (long X wide X side height)	建议装量（混合物） Recommended volume (mixture)
295X152X100mm	125g
295X 140X 100mm	115g
285X 140X 100mm	110g
285X138X100mm	110g
280X 135X 95mm	100g
240X 110X 85mm	70g



注：具体装量可根据玉米品种及配方的不同作适当调整。

Note: the specific weight can be adjusted according to the variety and formula of popcorn.

4、用热封机将纸袋封口，本纸袋具有良好的热封性能，在封口温度达到 120℃时即可牢固封口。但是，因为封口机速度及当地环境温度不同，因此设定温度应根据实际情况做出相应调整。为保证封口牢固及提高工作效率，建议热封机温度设定在 200℃以上，又不至于将纸袋烫坏即可。特别注意，停止工作时，应关掉加温设备，等待该设备彻底降温至安全温度后方可离开，否则有造成火灾的危险！

Then the paper bag should be sealed with a hot sealing machine. The paper bag can be sealed firmly when the sealing temperature reaches 120 °C. However, because the speed of sealing machines and local ambient temperature are different, the temperature should be adjusted according to different conditions. In order to ensure the seal is perfect and improve the working efficiency, we suggest that the temperature of the hot sealing machine should be set above 200 °C, but the paper bag should not be burned out. Pay special attention to turn off the heating machine when stopping work. You need to wait for the equipment to completely cool down to a safe temperature before leaving. Otherwise, there is a risk of fire!

5、将纸袋的顶部的 1/3 向有微波效应膜的一面相反的方向折叠。

Fold the top 1/3 of the paper bag in the opposite direction to the susceptor side.

6、将装好玉米并牢固封口的纸袋放入微波炉，微波效应膜一面向下。将微波炉运行时间设定为 5 分钟，启动微波炉，使其全功率运行大约 3-5 分钟，具体时间视微波炉的功率而定（例：微波输出功率 700W 的微波炉，建议运行时间为 3 分 40 秒）。仔细听玉米的开爆声，当玉米开爆声减缓至 2-3 秒钟一次时，关

闭微波炉。

Place the paper bag that is packed with corn and seal firmly in the microwave oven. the susceptor must face down. Set the microwave oven running time to 5 minutes, and then start the microwave oven. Make it run at maximum power for about 3 to 5 minutes. The specific time depends on the specific power of the microwave oven (example: it takes 3'40" in the microwave oven). In the process, you should listen carefully to the sound of popping. And when you can only hear once in about 2-3 seconds, you should stop the microwave oven.

7、将纸袋从微波炉取出，注意防止烫伤！此时纸袋上部中间位置应有一个小的开口，注意不要将脸部等身体部位靠近开口，以防蒸汽烫伤。双手捏住纸袋上部两个角（对角线方向），轻轻用力拉拽，打开纸袋。在整个操作过程中应特别小心，严防烫伤！

Take out the paper bag from the microwave oven and pay attention to prevent scald! At this time, there should be a small opening in the middle of the upper part of the paper bag. You need to hold the top two corners on the diagonal with both hands, pull gently and open the paper bag (Be careful not to make your face and other body parts close to the opening). You must be very careful in the process to prevent scald!

8、将打开的纸袋轻轻摇晃，使其与调味料充分混合，静置几分钟，待爆米花温度降为适宜食用的温度，即可享用美味可口的爆米花了。

Shake the open paper bag gently and wait for a few minutes to allow popcorn to cool, and then the delicious popcorn can be eaten.

## 五、急救措施 First aid measures :

### 1、食入 Ingestion :

在本产品的制作过程中，我公司严格按照食品卫生法规进行生产。本产品原材料均可接触食品，但是不可直接食入！没有证据表明食入本产品会对人体产生

危害，但也未进行相关食入验证。

The product is produced in strict accordance with the food hygiene regulations and is made of materials that can be contacted with food. But it cannot be eaten directly. No evidence proves that eating paper bags will be harmful to health, but the safety of eating the product does not be tested.

## 2、皮肤接触 Skin Contact：

不会对人体产生危害。

Do not have special treatment.

## 六、消防措施 Fire-fighting measures：

纸的燃点为 130℃，所以，本产品为易燃品。如遇到火灾，可采用水或者干粉灭火器等常规灭火措施进行扑灭。

The ignition temperature of paper is 130 °C, so this product is flammable. In case of fire, water or dry powder fire extinguisher and other conventional measures can be used to extinguish the flames.

## 七、储存和搬运 Storage and handling：

储存：放置于干燥、阴凉处储存，不可重压，上部重量不可超过 150Kg。如长期储存于温度较高或者过于潮湿的地方，有导致纸袋口部黏连的风险;如承受重压或野蛮装卸，会造成纸袋变形而影响使用。

Storage: Store in a dry and cool place and do not press it excessively (the upper weight should not exceed 150Kg). If stored in a high-temperature or too humid place for a long time, the mouth of the paper bag may stick. If it is pressed by overweight things or rough handling, the paper bag will be deformed.

搬运：轻拿轻放，避免强烈撞击致使本产品变形而影响使用。

Move and transport: Handle gently and avoid strong impact, which may

affect the usage of the product.

#### 八、废弃物处理 Waste disposal :

本产品废弃物可作为再生资源，进行回收利用，但不可作为食品类包装重新利用。

The waste of the product can be recycled, but it cannot be reused as food packaging

#### 八、监管信息 Regulatory information :

为保证人民身体健康，作为一家具有社会责任感的企业，我们将会严格按照国家有关法律、法规和用户的特殊要求进行监管（用户有责任确定与该产品相关的监管信息，并在签订合同前告知我公司）。

In order to ensure the health of users, as a socially responsible company, we will strictly follow the relevant national laws, regulations and special requirements of customers (customers are responsible for determining the relative regulations in their nations and inform our company before signing the contract).

济南华丰印务有限公司技术部

Technical Department of Jinan Huafeng Printing Co., Ltd.

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