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浙江众成包装材料股份有限公司  
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全球知名整体包装解决方案提供商  
LEADING PACKAGING SOLUTION PROVIDER

**ZHONGCHENG**  
PACKING MATERIAL CO.,LTD

Polyolefin Shrink Film



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诚信为本  
Integrity-based



技术领先  
Technological Leadership



合作共赢  
Win-win cooperation



# Company Profile

## 公司简介

浙江众成包装材料股份有限公司成立于2001年，是一家集科研、设计、生产、销售及售后服务于一体的全过程制造企业，是全球知名的高品质POF热收缩膜制造商和POF热收缩膜整体包装解决方案提供商。

公司自成立以来，始终坚持“赢在领先，胜于双赢”的企业精神、“诚信拥抱客户，真情温暖员工”的经营理念 and “差异化、个性化”市场战略，着力打造集约高效现代企业，致力于行业高精尖设备、先进生产工艺以及高端、高附加值产品的自主研发，核心设备自制。经过多年扎实经营，公司自主研发制造的设备处于行业领先水平，生产的产品与国际同步，积累了众多优质客户，产品远销全球60多个国家和地区。2010年12月，公司在深圳证券交易所中小板市场成功上市。

Established in 2001, Zhejiang Zhongcheng Packing Material Co., Ltd. is an integrated manufacturing company that combines scientific research, design, production, sales and after sales service in all that we do.

Our philosophy of "innovation that leads" is the core concept that guides our company. We devote ourselves to developing new products, most of which are pioneers in the China market. Zhongcheng quality is unsurpassed worldwide. With annual capacity of 80,000 metric tons, we are one of the largest polyolefin shrink film manufacturers in the world. We sell Zhongcheng products in over 60 countries. Our commitment to quality, efficient manufacturing, and service provides real value to our customers.

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# Company Culture

## 企业文化

企业精神：赢在领先 胜于双赢

经营理念：诚信拥抱客户 真情温暖员工

企业愿景：铸就民族品牌 建设百年众成

### Corporate Spirit

Innovation that creates value by focusing customer needs

### Business Philosophy

Transparency in all interactions with customers and employees

### Corporate Vision

Build a long lasting zhongcheng with respected brands



# Green Development

## 绿色发展

已获得浙江省绿色企业、浙江省转型升级引领示范企业等荣誉。主营产品POF热收缩膜是一种新型的绿色环保型包装材料，已逐步替代市面上有毒有害的PVC热收缩膜，符合低碳减量绿色环保的包装理念。公司通过技术迭代实现了绿色节能生产，积极布局新产品，已研发出超薄POF热收缩膜、符合欧盟标准的PCR聚烯烃热收缩膜，同时致力于可降解薄膜的持续研发，积极参与国家的“碳达峰与碳中和”目标。

It has been honored as a green enterprise and a leading demonstration enterprise in transformation and upgrading in Zhejiang Province. The main product, POF shrink film, is a new type of green and environment-friendly packaging material, which has gradually replaced the toxic and harmful PVC heat shrinkable film on the market, in line with the packaging concept of low-carbon and environment-friendly. The company has achieved green and energy-saving production through technology iteration, actively distributed new products, developed ultra-thin POF shrink film and PCR polyolefin heat shrinkable film conforming to EU standards, committed to the continuous research and development of degradable film, and actively participated in the national goal of "carbon peaking and carbon neutralization".

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# Company History

## 企业历程



1996 2007 2010 2016 2021

赢在领先 胜于双赢

1996

### 1996

3月，公司前身浙江众大塑料有限公司成立。  
Zhejiang Zhongda was founded in 1996.

### 1999

公司产品荣获“国家重点新产品”、“浙江省科学技术进步奖三等奖”荣誉。包装用共挤双向拉伸聚烯烃热收缩薄膜获浙江省科学技术进步奖三等奖。  
We won the prize of The National New Products and the third prize of The Provincial-Level Progress of Science and Technology. Biaxially oriented polyolefin shrink film won the third prize of Scientific and Technological Award of Zhejiang Province.

### 2000

公司在消化、吸收意大利生产线设备基础上，经过50余项自主创新改造，研发出首条性能更优异、生产更稳定的POF热收缩膜生产线。4月，公司首次承担国家火炬计划项目。8月，公司获得首个授权专利。  
We developed the first superior polyolefin shrink film production line in 2000 after research on the Italian production equipment and more than 50 independent innovation and upgrading. We undertook the national torch program project for the first time in April. We obtained the first authorized patent in August.

2007

### 2001

3月公司产品首次走出国门，出口韩国。10月，嘉善众成包装材料有限公司成立，公司由中外合资企业转变为民营企业。  
Our products were exported to South Korea for the first time in March. We were transformed from a Sino foreign joint venture into a private enterprise and renamed as Jiashan Zhongcheng Packing Material Ltd. In Oct.

### 2004

12月，公司自主研发的国内首创产品——聚烯烃交联热收缩膜面市销售并通过新产品项目鉴定。2004年至2008年，公司在设计、装备、工艺等方面取得重大突破，自主研发、制造15条POF自动化生产线，其中6条生产线采用公司独创的“三泡法”生产工艺，解决了收缩率和收卷张力难以控制等困扰全球行业的世界性难题。  
We individually developed cross-linked polyolefin shrink film which passed the new product project appraisal and was on sale in 2004. From 2004 to 2008, we made significant breakthroughs in design, equipment, technology, and other aspects. It independently developed 15 POF automated production lines, 6 of which adopted company's unique "three bubble method" production process, solving difficulties in controlling shrinkage and winding tension faced by manufacturers worldwide.

### 2007

5月，公司更名为浙江众成包装材料有限公司。We were renamed as Zhejiang Zhongcheng Packing Material Ltd. In 2007.

2010

### 2008

10月，时任中共中央政治局常委、中央书记处书记、国家副主席习近平来公司视察。12月，公司顺利完成股份制改革，更名为浙江众成包装材料有限公司。  
Xi Jinping, Members of the Political Bureau, member of secretariat of the CPC Central Committee and vice president at that time, inspected our company in 2008. We successfully completed the shareholding reform and was renamed as Zhejiang Zhongcheng Packaging Materials Co., Ltd in December.

### 2010

公司首次通过国家高新技术企业认定。12月“浙江众成”（股票代码002522）在深圳证券交易所挂牌上市，成为嘉善本土民营上市企业第一股。2010年至今，公司攻克大尺寸关键装备制造技术、电子束辐射交联技术、生产装备集成与布局技术、多学科集成优化技术和柔性化生产技术等一系列关键技术。公司自主研发的全新一代生产线——新型聚烯烃3.4米热收缩膜生产线调试成功，标志着全球POF热收缩膜最新技术水平，该项目被列入“2012年产业振兴和技术改造中央预算内投资项目”。  
We has passed the national high-tech enterprise certification for the first time in 2010. In December, "Zhejiang Zhongcheng" (stock code 002522) was listed on the Shenzhen Stock Exchange, becoming the first local private listed enterprise of Jiashan. Since 2010, the company has conquered a series of key technologies such as the key manufacturing technology of large-scale key equipment, electron beam radiation cross-linking technology, production equipment integration and layout technology, multidisciplinary integration optimization technology, and flexible production technology. The new generation production line independently developed by us, the new 3.4 meter heat polyolefin shrink film production line, has been successfully debugged, marking we reached the latest technological level of POF heat shrink film globally. This project has been included in the "2012 Central Budget Investment Project for Industrial Revitalization and Technological Transformation".

2016

### 2012

10月，公司全资设立的首家海外公司——众成包装（美国）公司成立。  
Zhongcheng Packaging (USA) Company, our first wholly-owned overseas company, was established in 2012.

### 2013

9月，公司与中国科学院化学研究所成立联合研发中心，产学研合作迈上一个新台阶。The company established a joint research and development center with the Institute of Chemistry of the Chinese Academy of Sciences in September, and the industry-University-Institute cooperation reached a new level.

### 2014

7月，公司首次承担国家863计划项目。8月，公司上市募投项目落成启用。  
In July, we undertook the national 863 Program project for the first time. In August, our IPO project was completed and put into use.

### 2016

10月，公司被遴选为浙江省第三批“三名”培育试点企业，公司研究院升格为省级重点企业研究院。  
In October, our company was selected as the third batch of "Top Three" cultivation pilot enterprises in Zhejiang Province, and our research institute was upgraded to a provincial-level key enterprise research institute.

2021

### 2017

8月，公司控股设立的子公司众立科技一期项目顺利投产。  
In August, the first phase project of Zhongli Technology, our holding subsidiary company, was successfully put into operation.

### 2021

2月，公司通过国家绿色工厂认定。6月，公司“扩建年产3万吨聚烯烃热收缩膜”项目开工，公司产能、规模优势将进一步扩大。7月，公司斩获第三批国家专精特新“小巨人”企业。12月，常德市城市发展集团有限公司管理团队进驻，公司踏上二次创业新征程。  
In February, we passed the national green factory certification. In June, our "expansion of an annual production capacity of 30000 tons of polyolefin heat shrink film" project started construction, and the company's production capacity and scale advantages will be further expanded. In July, the company won the third batch of national specialized, refined, and new "Little Giant" enterprises. In December, the management team of Changde City Development Group Co., Ltd. entered, and we embarked on a new journey of second entrepreneurship.

.....

### 2022

2月，公司被列入第6批国家绿色工厂名单。  
In February, the company was included in the 6th batch of national green factory lists.

### 2023

2023年底，公司“扩建年产3万吨聚烯烃热收缩膜”项目完成。  
At the end of 2023, the company's "expansion of an annual production capacity of 30000 tons of polyolefin heat shrink film" project was completed.



# Company Honor

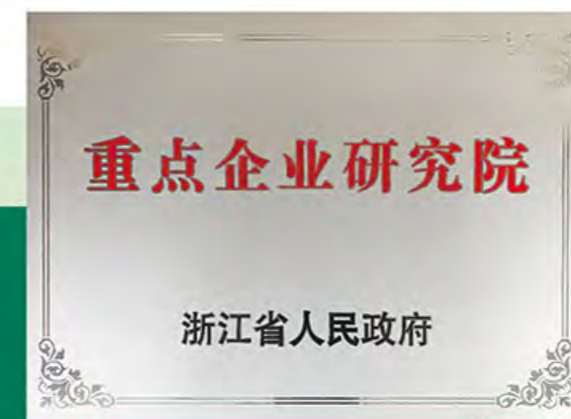
## 企业荣誉



公司秉承“赢在领先”的企业精神，坚持核心设备自制，不断在新产品、新工艺上取得创新，已累计获得知识产权48项，其中发明专利21项。先后开发了POF普通膜和POF交联膜，并在此基础上进一步研发了聚烯烃高性能（低温）热收缩薄膜、聚烯烃高收缩（交联）薄膜、包装用超低收缩力热收缩膜、包装用聚烯烃超薄热收缩薄膜等产业化新产品，多次承担火炬计划项目，获得浙江省科学技术进步奖三等奖4次、嘉兴市科学技术奖一、三等奖各1次，嘉善县科学技术进步奖一等奖2次。Adhering to the enterprise spirit of "winning in the lead", the company insists on self-making core equipment, and constantly makes innovations in new products and processes. It has accumulated 48 intellectual property rights, including 21 invention patents. We have developed both POF shrink film and POF cross-linked shrink film, and further developed new industrial products such as polyolefin high performance (low temperature) shrink film, polyolefin high shrinkage (cross-linked) film, ultra-low shrinkage shrink film for packaging, and ultra-thin shrink film for packaging.

我们追求的不仅仅是荣誉，更是客户的认可

We seek not only honor, but also the customer's approval





# ZDF01 Polyolefin Shrink Film

## ZDF01 聚烯烃热收缩膜

ZDF01是一种强韧的，透明度极佳的双向收缩的热收缩膜，在包装过程中收缩率稳定、均衡，收缩效果好，包装完成后边角柔软，有韧性，而且耐低温性能好，低温时不会发硬，可以有效地保护被包装物品。使用过程中，不会产生任何有害气体。并能适应大部分自动式、半自动式包装机械的要求，是一种使用非常广泛且经济实惠的产品。可供厚度: 12um, 15um, 19um, 25um, 30um。

ZDF01 Polyolefin Shrink Film is a strong, high clarity, biaxially oriented, pof heat shrinkable film with stable and balanced shrinkage. This film has a soft touch and will not become brittle at normal freezer temperatures. ZDF01 also exhibits corrosion free sealing with no fumes or wire build up. It is a cost effective non-crosslinked film that works easily on most shrink packaging machines. Thickness: 12micron, 15micron, 19micron, 25micron, 30micron.



ZDF01 聚烯烃热收缩膜性能表 / ZDF01 Polyolefin Shrink Film Technical Data Sheet

TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES				
			12um	15um	19um	25um	30um
GAUGE 厚度			12um	15um	19um	25um	30um
<b>TENSILE</b>							
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	130	125	120	110	105
Tensile Strength (TD)			125	120	115	105	100
Elongation(MD) 断裂伸长率	%	D882	110	110	115	120	120
Elongation (TD)			105	105	110	115	115
<b>TEAR 撕裂强度</b>							
MD at 400gm	gf	D1922	10.0	13.5	16.5	23.0	27.5
TD at 400gm			9.5	12.5	16.0	22.5	26.5
<b>SEAL STRENGTH 热封强度</b>							
MD\Hot Wire Seal	N/mm	F88	0.75	0.91	1.08	1.25	1.45
TD\Hot Wire Seal			0.78	0.95	1.10	1.30	1.55
COF (Film To Film)							
Static 静摩擦		D1894	0.23	0.21	0.19	0.22	0.25
Dynamic 动摩擦			0.23	0.21	0.19	0.22	0.25
<b>OPTICS</b>							
Haze 雾度		D1003	2.1	2.5	3.1	3.6	4.5
Clarity 透明度		D1746	98.5	98.0	97.0	95.0	92.0
Gloss @ 45Deg 光泽度		D2457	88.0	87.0	84.0	82.0	81.0
<b>BARRIER 阻隔性</b>							
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	11500	10200	7700	5400	4500
Water Vapor Transmission Rate 透水汽率	gm/m <sup>2</sup> /day	F1249	43.8	36.7	26.7	22.4	19.8
<b>SHRINKAGE PROPERTIES 收缩性</b>							
Free Shrinkage 收缩率	100℃	%	D2732	MD	TD	MD	TD
	110℃			23	32	21	27
	120℃			37	45	33	44
	130℃			59	64	57	61
	130℃			67	68	65	67
Shrink Tension 收缩张力	100℃	Mpa	D2838	MD	TD	MD	TD
	110℃			1.85	2.65	1.90	2.60
	120℃			2.65	3.50	2.85	3.65
	130℃			2.85	3.65	2.95	3.60
	130℃			2.65	3.20	2.75	3.05

MD\Machine Direction TD\Transverse Direction

Note: This information represents our best judgment on the work done, but the company assumes no liability whatsoever in connection with the use of information or findings contained herein.

以上资料是本公司内部评测之数据，仅供参考。



# ZDF03 Cross-Linked Shrink Film

## ZDF03 交联热收缩膜

ZDF03在生产过程中采用了辐射交联技术，使树脂的高分子链由线状结构转变为网状体结构，从而显著提高了收缩膜的各项性能，主要体现在以下几个方面。首先是大幅度提高了薄膜收缩率（高达80%），使薄膜收缩更贴体，包装效果更完美。再就是提高了薄膜的强度和韧性，使包装更为结实。其次也提高了薄膜的热封性能，使封口更为牢固，并且彻底避免了封口处的“拉丝”现象。除此三项外，薄膜的耐热性能和耐寒性能也有一定程度的提高，使其适应范围变得更为广泛。

可供厚度：12um、15um、19um、25um、30um、38um、52um。

With crosslink technology, ZDF03 is the universal film. This versatile shrink film is designed to be very user friendly. ZDF03 offers excellent shrinkage & burn through resistance, strong seals & a wide sealing temperature range, and outstanding puncture & tear resistance. It is suitable for nearly all packaging systems in use today.

ZDF03 film shrinkage rate (up to 80%) has been greatly improved, brings perfect packaging performance. Moreover, the improved strength and toughness of the film, makes the packaging more solid. It also has better sealing performance, which makes the sealing more firm, and completely avoids the "wire drawing" phenomenon at the sealing.

It is suitable for nearly all packaging systems in use today.

Thickness: 12 micron, 15 micron, 19 micron, 25 micron, 30 micron, 38 micron, 52 micron.



ZDF03 交联热收缩膜性能表									
ZDF03 Cross-Linked Polyolefin Shrink Film Technical Data Sheet									
TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES						
GAUGE 厚度			12um	15um	19um	25um	30um	38um	52um
<b>TENSILE</b>									
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	130	135	135	125	120	115	110
Tensile Strength (TD)			125	125	125	120	115	110	105
Elongation(MD) 断裂伸长率	%	D882	115	120	120	120	125	130	140
Elongation (TD)			105	110	110	115	115	120	125
<b>TEAR 撕裂强度</b>									
MD at 400gm	gf	D1922	11.5	14.5	18.5	27.0	32.0	38.5	41.5
TD at 400gm			12.5	17.0	22.5	30.0	35.0	42.5	47.5
<b>SEAL STRENGTH 热封强度</b>									
MD\Hot Wire Seal	N/mm	F88	1.13	1.29	1.45	1.75	2.15	2.10	32
TD\Hot Wire Seal			1.18	1.43	1.65	1.75	2.10	2.10	33
<b>COF (Film To Film)</b>									
Static 静摩擦		D1894	0.23	0.19	0.18	0.22	0.23	0.25	0.21
Dynamic 动摩擦			0.23	0.19	0.18	0.22	0.23	0.25	0.2
<b>OPTICS</b>									
Haze 雾度		D1003	2.3	2.6	3.5	3.8	4.2	4.8	4.2
Clarity 透明度		D1746	98.5	98.8	98.0	97.5	94.0	92.0	97.5
Gloss @ 45Deg 光泽度		D2457	88.5	88.0	87.5	86.0	86.0	85.0	84.5
<b>BARRIER 阻隔性</b>									
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	10300	9500	6200	5400	4200	3700	2900
Water Vapor Transmission Rate 透水汽率	gm/m <sup>2</sup> /day	F1249	32.5	27.5	20.5	14.5	11	9.5	8.5
<b>SHRINKAGE PROPERTIES 收缩性</b>									
Free Shrinkage 收缩率	100℃	%	D2732	MD	TD	MD	TD	MD	TD
	110℃			17.5	27.5	16.0	26.0	15.0	24.5
	120℃			36.5	44.5	34.0	43.0	31.5	40.5
	130℃			70.5	72.0	68.5	67.0	65.5	64.5
Shrink Tension 收缩张力	100℃	Mpa	D2838	MD	TD	MD	TD	MD	TD
	110℃			2.30	2.55	2.70	2.85	2.65	2.85
	120℃			2.90	3.85	3.40	4.10	3.35	4.05
	130℃			3.45	4.25	3.85	4.65	3.75	4.55
				3.20	3.90	3.30	4.00	3.55	4.15

MD\Machine Direction TD\Transverse Direction  
 Note: This information represents our best judgment on the work done, but the company assumes no liability whatsoever in connection with the use of information or findings contained herein.  
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# ZDF04 Anti Fog Cross-Linked Shrink Film

## ZDF04防雾交联热收缩膜

当含有水份的物品需要在冷藏情况下存放或销售时, 请考虑使用ZDF04防雾交联膜。ZDF04最大优点是具有消除水雾的功能, 使被包装含水份物品(如肉类、水果和蔬菜等)在冷藏情况下, 仍然清晰可见。

与ZDF03一样, ZDF04也采用了交联技术, 因而也拥有高收缩、高强度、高韧性及耐寒等优点。ZDF04能适应所有包装机械。

可供厚度: 11um、15um、19um。

ZDF04 is an ideal overwrap for refrigerated foods. This anti-fog film resists water condensation build up on the film surface allowing refrigerated products to remain visible in the retail display case. ZDF04 is crosslinked and has all properties of ZDF03.

It also is compatible with all nearly all packaging machinery.

Thickness: 11 micron, 15 micron, 19micron.



ZDF04 防雾交联热收缩膜性能表  
 ZDF04 Anti Fog Cross-Linked Polyolefin Shrink Film Technical Data Sheet

TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES		
GAUGE 厚度			11um	15um	19um
<b>TENSILE</b>					
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	135	135	140
Tensile Strength (TD)			135	130	135
Elongation(MD) 断裂伸长率	%		130	130	135
Elongation (TD)			120	120	125
<b>TEAR 撕裂强度</b>					
MD at 400gm	gf	D1922	7.5	11.0	14.5
TD at 400gm			8.5	11.5	15.5
<b>SEAL STRENGTH 热封强度</b>					
MD\Hot Wire Seal	N/mm	F88	0.90	1.05	1.25
TD\Hot Wire Seal			0.95	1.15	1.35
<b>COF (Film To Film)</b>					
Static 静摩擦		D1894	0.31	0.29	0.27
Dynamic 动摩擦			0.3	0.29	0.28
<b>OPTICS</b>					
Haze 雾度		D1003	3.9	4.8	5.4
Clarity 透明度		D1746	95.5	94.5	93.5
Gloss @ 45Deg 光泽度		D2457	81.5	79.0	77.0
Antifog arrival time at5℃防雾起始时间	2 hours				
Antifog Effect 防雾效果	Complete transparent, no visible water 清晰透明无明显水珠				
<b>BARRIER 阻隔性</b>					
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	9900	8600	6200
Water Vapor Transmission Rate 透水汽率	gm/m <sup>2</sup> /day	F1249	30.7	27.3	19.5
<b>SHRINKAGE PROPERTIES 收缩性</b>					
Free Shrinkage 收缩率	100℃	%	D2732	MD	TD
	110℃			20	30
	120℃			38	45
	130℃			62	64
	130℃			81	78
Shrink Tension 收缩张力	100℃	Mpa	D2838	MD	TD
	110℃			2.15	2.50
	120℃			2.80	3.90
	130℃			3.30	4.15
	130℃			3.10	3.85

MD\Machine Direction TD\Transverse Direction

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# ZDF08 Economical Cross-Linked Shrink Film

## ZDF08经济型交联热收缩膜

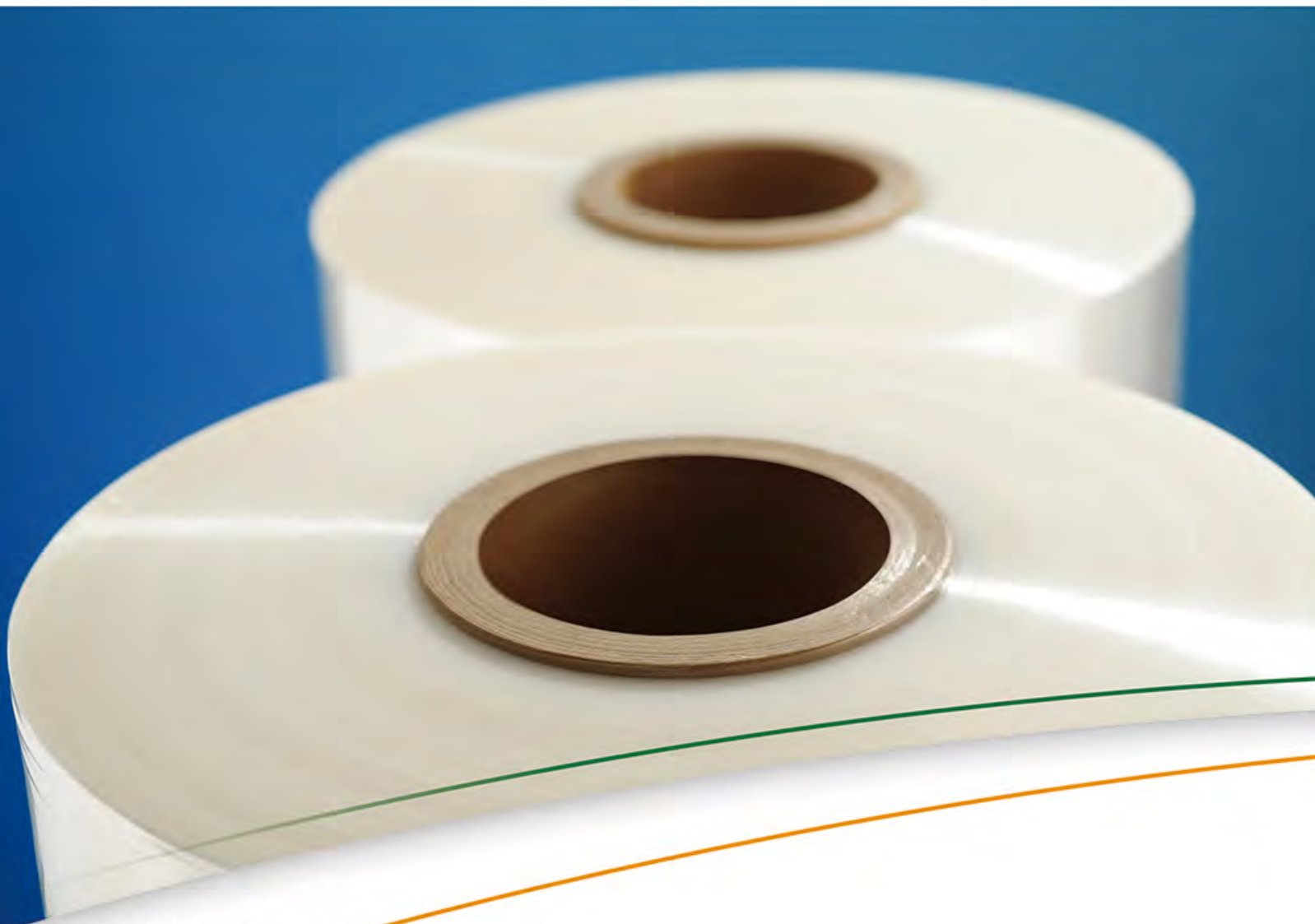
因为经过交联，所以ZDF08是一种全功能的收缩膜，高强度和高收缩性能能让这种膜可以在任何包装设备上适用。ZDF08最有竞争力的成本控制为您最大限度的节约使用成本。

完美的包装性能和最有竞争力的成本控制是我们向您强烈推荐这种膜的理由。

可供厚度：10um、13.5um、17um、22um。

With cross-link technology, ZDF08 is a perfect combination of performance and yield. This film is suitable for nearly all sealing systems because of its high strength and high seal-ability. The higher yielding gauges provide lower film cost per package and the efficiencies of fewer roll changes. ZDF08 is our high yield equivalent to ZDF03.

Available thickness: 10 micron, 13.5 micron,,17 micron, 22 micron.



ZDF08 经济型交联热收缩膜性能表						
ZDF08 Economical Cross-Linked Shrink Film Technical Data Sheet						
TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES			
GAUGE 厚度			10um	13.5um	17um	22um
<b>TENSILE</b>						
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	130	130	130	125
Tensile Strength (TD)			125	125	125	120
Elongation(MD) 断裂伸长率	%		110	115	120	120
Elongation (TD)			105	110	110	115
<b>TEAR 撕裂强度</b>						
MD at 400gm	f	D1922	9	14.0	16.5	22.5
TD at 400gm			9.5	13.0	18.5	23.5
<b>SEAL STRENGTH 热封强度</b>						
MD\Hot Wire Seal	N/mm	F88	0.95	1.20	1.25	1.50
TD\Hot Wire Seal			1.05	1.35	1.45	1.65
<b>COF (Film To Film)</b>						
Static 静摩擦		D1894	0.24	0.21	0.18	0.19
Dynamic 动摩擦			0.24	0.21	0.18	0.19
<b>OPTICS</b>						
Haze 雾度		D1003	2.2	2.4	2.6	2.9
Clarity 透明度		D1746	98.5	98.5	98.0	98.0
Gloss @ 45Deg 光泽度		D2457	89.0	88.5	88.0	86.5
<b>BARRIER 阻隔性</b>						
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	12100	9700	7400	6800
Water Vapor Transmission Rate 透水汽率	gm/m <sup>2</sup> /day	F1249	40.5	32.5	25.5	19.5
<b>SHRINKAGE PROPERTIES 收缩性</b>						
Free Shrinkage 收缩率	100℃	D2732	MD		TD	
	110℃		19	28		
	120℃		37	45		
	130℃		70	72		
Shrink Tension 收缩张力	100℃	D2838	MD		TD	
	110℃		2.20	2.65		
	120℃		2.65	3.80		
	130℃		2.85	4.00		
			2.80	3.90		

MD\Machine Direction TD\Transverse Direction

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# X5 Hot-Slip Low Temperature Shrink Film

## X5热滑低温热收缩膜

X5是一种性能非常优秀的热收缩膜,它几乎可以帮助您解决所有的收缩过程中遇到的问题。X5的低温收缩效果非常好,收缩温度低,并且收缩速度快,封口强度也好,收缩率可以达到70%以上,所以X5能在最恶劣的情况下达到最完美的包装效果。X5的热滑性很好,可以用于盒状或平片状物品收缩包装后的叠合快速入箱,不会产生粘合或擦破现象。此外,X5还具有收缩温度范围宽、热封性能好、收缩力低等优点。在非交联聚烯烃热收缩膜品种中,X5是目前收缩包装效果最好的一种。

X5适合在任何包装机上使用。

可供厚度: 9um、11um、14um、19um。

X5 is a kind of POF heat shrinkable film with excellent performance, which helps to solve almost all problems encountered in the process of shrinkage. It has very good shrinkage at low temperature, and with high shrink speed and good sealing strength. As X5 film has more than 70% of shrinkage, it brings best packaging effect even under the worst conditions. X5 has a good slip property, and can be used for folding box or flat sheet articles after shrink packaging, without adhesion or abrasion. In addition, X5 also has the advantages of wide shrinkage temperature range, good heat sealing performance and low shrinkage force, compared to all other non cross-linked polyolefin shrink film.

X5 is suitable for any packaging machine.

Thickness: 9micron, 11micron, 14micron, 19micron.

X5 热滑低温热收缩膜性能表						
X5 Hot-Slip Low Temperature Polyolefin Shrink Film Technical Data Sheet						
TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES			
GAUGE 厚度			9um	11um	14um	19um
<b>TENSILE</b>						
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	115	115	110	95
Tensile Strength (TD)			110	110	105	95
Elongation(MD) 断裂伸长率	%	D882	95	100	105	100
Elongation (TD)			90	95	100	95
<b>TEAR 撕裂强度</b>						
MD\400gm	gf	D1922	6.5	8.5	12.5	15.5
TD\400gm			6.2	9.5	13.5	16.5
<b>SEAL STRENGTH 热封强度</b>						
MD\Hot Wire Seal	N/mm	F88	0.6	0.75	0.88	0.95
TD\Hot Wire Seal			0.65	0.75	0.93	1.1
<b>COF (Film To Film)</b>						
Static 静摩擦		D1894	0.16	0.15	0.15	0.18
Dynamic 动摩擦			0.16	0.15	0.12	0.18
Dynamic(HotSlip)\@60℃ 热动摩擦			0.28	0.26	0.23	0.22
<b>OPTICS</b>						
Haze 雾度		D1003	3.2	3.5	3.8	4.0
Clarity 透明度	%	D1746	98.5	98.0	97.5	97.0
Gloss @ 45Deg 光泽度		D2457	82	82.0	84.0	84.0
<b>BARRIER 阻隔性</b>						
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	14400	11800	11700	9600
Water Vapor Transmission Rate 透水汽率		F1249	55	48	45	38
<b>SHRINKAGE PROPERTIES 收缩性</b>						
Free Shrinkage 收缩率	80℃	D2732	MD	TD	MD	TD
	90℃		16.5	24.5	15.5	24.0
	100℃		25.0	31.5	24.5	31.5
	110℃		35.0	43.5	34.0	43.0
	120℃		52.0	55.0	51.0	54.0
	130℃		64.0	66.0	63.0	65.5
Shrink Tension 收缩张力	80℃	D2838	MD	TD	MD	TD
	90℃		1.45	1.75	1.60	1.85
	100℃		1.85	2.10	1.95	2.25
	110℃		2.15	2.35	2.25	2.40
	120℃		2.50	2.75	2.65	2.80
	130℃		2.70	2.80	2.85	2.95

MD\Machine Direction TD\Transverse Direction

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# Z101 Low Temperature Cross-Linked Shrink Film

## Z101低温交联热收缩膜

Z101是一种经过交联的软性交联热收缩膜，最突出的优点是低温收缩性能非常好，还具备其他如：收缩率高、透明度好、封口强度高、韧性好以及防松弛性能好等优点，是公司目前收缩包装效果最好的聚烯烃热收缩膜。Z101可以用来包装各种物品，是包装书本等柔软产品、不规则形状产品等的最理想的热收缩膜，其低温收缩性能，可以很好地保护热敏感的产品，还可以避免盒状物品棱角处“排骨纹”现象的产生。

Z101适用于任何收缩包装设备。

可供厚度：11um、15um及19um。

Z101 is a cross-linked soft cross-linked shrink film. The most outstanding advantage is that it has very good low-temperature shrinkage performance. Besides of low temperature shrinkage, it also has high shrinkage, good transparency, high sealing strength, good toughness and good anti relaxation performance. It is the polyolefin heat shrinkable film with the best shrink packaging performance at present. Z101 can be used to package all kinds of articles. It is the most ideal heat shrinkable film for packaging soft products such as books and products with irregular shapes. Its low temperature shrinkage performance can protect heat sensitive products well, and can also avoid the "ribs" phenomenon at the corners of box shaped articles.

Thickness: 11micron, 15micron, 19micron.

**Z101 低温交联热收缩膜性能表**  
**Z101 Low Temperature Cross-Linked Shrink Film Technical Data Sheet**

TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES		
GAUGE 厚度			11um	15um	19um
<b>TENSILE</b>					
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	100	105	110
Tensile Strength (TD)			95	100	105
Elongation(MD) 断裂伸长率	%		110	115	120
Elongation (TD)			100	110	115
<b>TEAR 撕裂强度</b>					
MD at 400gm	gf	D1922	9.5	14.5	18.5
TD at 400gm			11.5	16.5	22.5
<b>SEAL STRENGTH 热封强度</b>					
MD\Hot Wire Seal	N/mm	F88	1.25	1.35	1.45
TD\Hot Wire Seal			1.35	1.45	1.65
<b>COF (Film To Film)</b>					
Static 静摩擦		D1894	0.26	0.24	0.22
Dynamic 动摩擦			0.26	0.24	0.22
<b>OPTICS</b>					
Haze 雾度		D1003	2.4	2.5	2.8
Clarity 透明度		D1746	99.0	98.5	98.0
Gloss @ 45Deg 光泽度		D2457	88.0	88.0	87.5
<b>BARRIER 阻隔性</b>					
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	9600	8700	5900
Water Vapor Transmission Rate 透水汽率	gm/m <sup>2</sup> /day	F1249	32.1	27.8	19.5
<b>SHRINKAGE PROPERTIES 收缩性</b>			MD		TD
Free Shrinkage 收缩率	90℃	D2732	17	23	
	100℃		34	41	
	110℃		60	66	
	120℃		78	77	
	130℃		82	82	
Shrink Tension 收缩张力	90℃	D2838	MD		TD
	100℃		1.70	1.85	
	110℃		1.90	2.55	
	120℃		2.50	3.20	
	130℃		2.70	3.50	
			2.45	3.05	

MD\Machine Direction TD\Transverse Direction

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# ZCR01 Post Consumer Recycling Polyolefin Shrink Film

## ZCR01 PCR聚烯烃热收缩膜

这是一种大量使用PCR回料（Post Customer Recycled material 消费后再回收料）而生产的聚烯烃热收缩膜，膜中PCR料占比30%，该膜已通过了GRS4.0认证（全球回收标准认证）。该膜除使用大量PCR回料外，其生产工艺与ZDF01基本相同，产品特性及应用领域，与ZDF01膜也基本相同，同样具有力学性能好、热封性好，收缩率高等优点，对各种包装机的适应性也很好。

可供厚度：15um、19um、25um。

This is a polyolefin shrink film contains 30% of post consumer recycled material. In addition to using a large number of PCR returns, this film has the same production process as ZDF01, with basically same properties and application. It also has the advantages of good mechanical properties, good heat sealing, high shrinkage, and good adaptability to various packaging machines.

The film has passed the GRS4.0 certification (global recycling standard certification).

Thickness: 15micron, 19micron, 25micron.



ZCR01 PCR 聚烯烃热收缩膜性能表				
ZCR01 Post Consumer Recycling Polyolefin Shrink Film Technical Data Sheet				
TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES	
<b>INTRODUCTION</b>				
Post Consumer Recycling			30% Recycled post-consumer polyethylene(RM0193)	
Gauge 厚度			15um	19um 25um
<b>TENSILE</b>				
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	115	110 90
Tensile Strength (TD)			110	105 85
Elongation(MD) 断裂伸长率	%		105	110 105
Elongation (TD)		100	105 95	
<b>TEAR 撕裂强度</b>				
MD at 400gm	gf	D1922	10.5	13.5 16.5
TD at 400gm			9.8	12.5 16.5
<b>SEAL STRENGTH 热封强度</b>				
MD\Hot Wire Seal	N/mm	F88	0.85	0.95 1.15
TD\Hot Wire Seal			1.05	1.15 1.25
<b>COF (Film To Film)</b>				
Static 静摩擦		D1894	0.20	0.18 0.22
Dynamic 动摩擦			0.20	0.18 0.22
<b>OPTICS</b>				
Haze 雾度		D1003	3.5	3.8 4.0
Clarity 透明度		D1746	93.0	92.0 91.0
Gloss @ 45Deg 光泽度		D2457	85.0	82.0 80.0
<b>BARRIER 阻隔性</b>				
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	9200	8200 5600
Water Vapor Transmission Rate 透水气率	gm/m <sup>2</sup> /day	F1249	25.9	17.2 14.5
<b>SHRINKAGE PROPERTIES 收缩性</b>				
Free Shrinkage 收缩率	100℃	D2732	MD	TD MD TD
	110℃		17	26 14 23
	120℃		32	44 29 42
	130℃		54	59 53 60
Shrink Tension 收缩张力	100℃	D2838	MD	TD MD TD
	110℃		1.65	2.35 1.70 2.25
	120℃		2.55	3.20 2.65 3.45
	130℃		2.70	3.45 2.95 3.65
			2.45	3.10 2.75 3.20

MD\Machine Direction TD\Transverse Direction

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# ZCR03 Post Consumer Recycling Cross-Linked Shrink Film

## ZCR03 PCR聚烯烃交联热收缩膜

这是一种大量使用PCR回料（Post Customer Recycled material 消费后再回收料），并通过辐射交联而生产的聚烯烃交联热收缩膜，PCR回收料在膜中净占比高达31%，ZCR03膜已通过了GRS4.0认证（全球回收标准认证）。除了使用PCR回料以外，ZCR03与ZDF03在生产工艺方面基本相同，因此两者之间的性能也非常相似，也具有收缩率高（近80%）、力学性能好、热封强度高、韧性好等优点，而且耐热及耐寒性也都比较突出。ZCR03能适应各种包装机。可供厚度：15um、19um、25um。

This is a kind of polyolefin cross-linked heat shrinkable film contains 31% of post consumer recycled material. In addition to using PCR returns, ZCR03 and ZDF03 are basically the same in terms of production process, so their properties are also very similar, and they also have the advantages of high shrinkage (nearly 80%), good mechanical properties, high heat sealing strength, good toughness, and outstanding heat and cold resistance. ZCR03 film has passed the GRS4.0 certification (global recycling standard certification). Thickness: 15micron, 19micron, 25micron.



ZCR03 PCR 聚烯烃交联热收缩膜性能表				
ZCR03 Post Consumer Recycling Cross-Linked Shrink Film Technical Data Sheet				
TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES	
<b>INTRODUCTION</b>				
Post Consumer Recycling			31% Recycled post-consumer polyethylene(RM0193)	
Gauge 厚度			15um	19um 25um
<b>TENSILE</b>				
Tensile Strength (MD) 拉伸强度	N/mm <sup>2</sup>	D882	130	125 120
Tensile Strength (TD)			115	110 110
Elongation(MD) 断裂伸长率	%		125	115 125
Elongation (TD)			110	110 110
<b>TEAR 撕裂强度</b>				
MD at 400gm	gf	D1922	11.5	14.3 16.7
TD at 400gm			9.8	14.8 17.2
<b>SEAL STRENGTH 热封强度</b>				
MD\Hot Wire Seal	N/mm	F88	1.20	1.40 1.55
TD\Hot Wire Seal			1.40	1.55 1.65
<b>COF (Film To Film)</b>				
Static 静摩擦		D1894	0.20	0.18 0.22
Dynamic 动摩擦			0.20	0.18 0.22
<b>OPTICS</b>				
Haze 雾度		D1003	3.2	3.6 4.0
Clarity 透明度		D1746	92.5	91.5 90.5
Gloss @ 45Deg 光泽度		D2457	85.0	84.0 82.0
<b>BARRIER 阻隔性</b>				
Oxygen Transmission Rate 透氧率	cc/m <sup>2</sup> /day	D3985	8800	7500 5100
Water Vapor Transmission Rate 透水气率	gm/m <sup>2</sup> /day	F1249	23.5	19.4 11.6
<b>SHRINKAGE PROPERTIES 收缩性</b>				
Free Shrinkage 收缩率	100℃	D2732	MD	TD MD TD
	110℃		14.0	22.5 13.0 22.0
	120℃		36.5	45.0 33.0 44.5
	130℃		73.0	71.5 70.5 70.0
Shrink Tension 收缩张力	100℃	D2838	MD	TD MD TD
	110℃		2.05	2.35 1.70 2.25
	120℃		2.75	3.65 2.65 3.45
	130℃		3.15	4.05 2.95 3.65
			3.00	3.65 2.75 3.20

MD\Machine Direction TD\Transverse Direction

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以上资料是本公司内部评测之数据，仅供参考。



# Introduction of Special Shrink Film Items

## 特种收缩膜系列介绍

### ※ 热打孔膜

为所有ZHONGCHENG系列的膜提供热打孔的加工服务！经过热打孔加工过的膜主要用于蔬菜、鸡蛋、面包等食品包装，可以最大限度的保证被包装的食品与外界的气体交换，有助于食品的保鲜。

### ※ 冷打孔膜

为所有ZHONGCHENG系列的膜提供冷打孔的加工服务！由于收缩膜在设备上的使用过程中需要设备中的打孔系统为收缩膜进行打孔，这时设备的打孔质量直接影响到收缩膜在收缩过程中的气体排放，很多包装设备由于老化，往往在打孔质量方面无法达到长时间的稳定，一旦出现这样的打孔问题就会导致收缩膜不能正常的收缩，从而使包装效果下降，损耗增大。

ZHONGCHENG可以为您提供已经打好孔的收缩膜卷，这使您在设备上使用ZHONGCHENG的收缩膜包装时不再需要打孔，由于我们提供的打孔质量是完全一致的，这会让您在使用时更稳定，包装效果更好，损耗更低！

### ※ Marcoperforated Shrink Film

We provide Marcoperforated per customer order for all series of ZHONGCHENG films.

Marcoperforated film is suitable for shrink wrapping of vegetables, eggs, breads, and other food packaging. It accelerates the air exchange between packed food and outside air, which will promote food freshness.

### ※ Regular Perforated Shrink Film

We provide regular perforation per customer order for all series of ZHONGCHENG films.

When packaging equipment use its own perforation system, perforation quality directly affects the air evacuation during shrinking. Many old packaging machines cannot maintain good perforation quality, which results in seal problems and package quality issues. ZHONGCHENG can provide you with pre-perforated film rolls so there is no need to perforate on your equipment. Our high standard perforation quality provides better quality packages and reduced costs.

# ZDF03G Shading Cross-Linked Shrink Film

## ZDF03G遮光交联聚烯烃热收缩膜

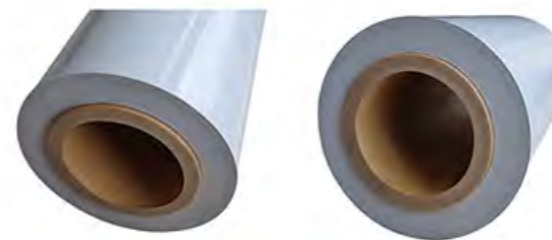
ZDF03G是一种具有良好遮光效果的聚烯烃交联热收缩膜，具有聚烯烃交联热收缩膜的常规优势如收缩率高（最高达80%）、拉伸强度高、耐撕裂性能好、耐热耐寒性好及封口强度高优点外，其特殊之处是，还兼具有遮光效果好和遮盖效果好的特点，可以用来收缩包装快递物品、防光照物品以及包装不可透视的物品。

ZDF03G能适应各种包装机。

可供厚度：25um、30um。

ZDF03G is a polyolefin cross-linked shrink film with good shading effect. It has the conventional advantages of cross-linked polyolefin film collection, such as high shrinkage rate (up to 80%), high tensile strength, good tear resistance, good heat, cold resistance, and high sealing strength. In addition, it also has the characteristics of good shading effect and good covering effect, which can be used to shrink and package express delivery items, Anti light items and items with non transparent packaging.

ZDF03G can adapt to various packaging machines, with conventional thicknesses :25 micron and 30 micron.



# Antistatic Shrink Film

## 防静电膜

这是一种具有超强静电控制能力的热收缩薄膜，表面有最低的电阻系数，具有内在的抗静电特性，能为产品提供持久稳定性。具有完美收缩膜的所有特性，比如封口，快速收缩，广泛的适机性等。薄膜的高透明度更有助于被包装产品里面的组件更容易看清楚。

特性：

持久抗静电保护

不含胺成分

薄膜表面稳定的电阻系数

收缩封口性能：

普通机器上都可以容易封口

快速收缩



This is a new shrink film with super static reduction. Film surface has very low resistivity and inherent antistatic properties which provides permanent product stability Antistatic Shrink film has all properties of other ZHONGCHENG shrink film: strong seal, quick shrink, good mach inability, etc. The excellent film clarity provides a retail ready package.

Features:

Permanent antistatic protection. Amine free

Stable resistivity on film surface Perfect seal and shrink properties. Seals easily on all equipment Quick shrink



# Printing Shrink Film

## 印刷收缩膜



拥有领先的聚烯烃热收缩膜印刷设备以及印刷技术，丰富而又独特的经验，为您提供完美的热收缩膜印刷产品和全方位的服务！收缩膜印刷方案可以解决产品防伪包装、信息识别、形象提升、降低包装成本等各种难题。在商品陈列销售中创造差异化，产品信息更清晰突出。高品质和优质的服务更能满足您多样化的需求。

广泛应用于防水卷材、食品饮料及其他工业产品中。



Our printed shrink film and printable shrink film products are high-quality packaging solutions designed to enhance the visual appearance of your products while providing superior protection during shipping, handling, and storage. They are highly customizable, eco-friendly, and suitable for a wide range of packaging applications including food, pharmaceuticals, industrial, and consumer goods packaging.

Widely used in waterproof rolls, food, beverage, and other industrial products.



# ZMC Cross Composite Film

## ZMC交叉复合膜

ZMC交叉复合膜，采用流涎复合工艺生产而成。以高密度聚乙烯（HDPE）作为主要原材料，通过吹塑、单向拉伸、旋转切割及挤出流涎复合等工艺制作而成，是一种力学性能好且各向均衡的高强度薄膜。

采用挤出流涎复合工艺生产交叉复合膜，浙江众成是国内首家。与其它复合工艺相比，它具有如下优点：

- 1、拉伸强度高，耐撕裂性能好，钉杆撕裂强度高。
- 2、生产和使用过程环保，无任何胶水及溶剂残留；
- 3、粘牢度高，不脱层，不受环境气候的影响；
- 4、热稳定性和尺寸稳定性好。与沥青复合后，其边缘几乎不翘起、不卷曲。
- 5、表面平整度好，无垂直交叉的折痕；
- 6、抗紫外线及耐老化性能优良。

ZMC交叉复合膜的典型应用领域是防水卷材，既可用于芯层作为支撑材料生产双面沥青防水卷材，也可用于表层生产单面沥青防水卷材。用ZMC交叉复合膜生产的防水卷材，具有铺贴性好、平整度好、耐老化及不易翘边或卷曲的优点。

ZMC交叉复合膜，也可作为包装材料使用，可大幅提高包装材料的强度、挺度以及耐撕裂性能。此外，还可于室外使用的标识牌和耐撕标签等。



ZMC 交叉复合膜性能表 / ZMC Cross Composite Film

TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES			
			88um	100um	220um( 四层 )	
GAUGE 厚度			88um	100um	220um( 四层 )	
拉伸性能						
拉力	MD	N/50mm	GB/T35467-2017	290	290	580
	TD			277	300	540
最大拉力延伸率	MD	%	GB/T35467-2017	267	320	280
	TD			291	330	300
耐撕裂性能						
撕裂强度	MD	N	GB/T529-2008	33	38	72
	TD			35	41	76
钉杆撕裂强度	MD	N	GB/T328.18-2007	110	140	230
	TD			112	142	220
热老化性能						
拉力保持率 (80℃,168h)	MD	%	GB/T35467-2017	96	95	96
	TD			98	97	96
延伸率保持率 (80℃,168h)	MD	%	GB/T35467-2017	97	96	97
	TD			98	97	97
低温柔性 (-18℃)			GB/T35467-2017	无裂纹		
尺寸稳定性						
尺寸变化率 (90℃,24h)	MD	%	GB/T35467-2017	0.8	1.0	0.9
	TD			0.6	0.8	0.7
热稳定性 (复沥青后)						
边缘卷曲 (70℃,24h, 卷材)	MD	%	GB/T35467-2017	≤ 边长 15%		
	TD			≤ 边长 15%		
热收缩性能						
热收缩率 (120℃)	100℃	%	D2372	MD	TD	
	110℃			0.8	0	
	120℃			1.2	0.5	
				2.0	1.0	
其它						
水汽透过率			GB/T328.10-2007	waterproof 不透水		
工作温度				-50℃~+90℃		

MD\Machine Direction TD\Transverse Direction

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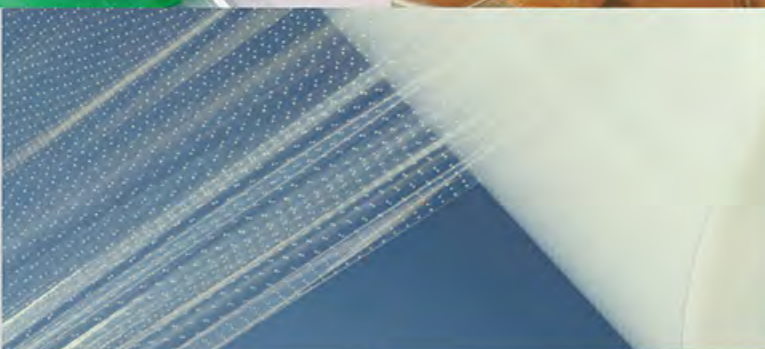


## Widespread Application 广泛的应用

让技术打造产品的灵魂  
让技术检测产品的标准  
让技术保证产品的质量



Let technology build the spirit of products;  
Let technology inspect the standard of products;  
Let technology ensure the quality of products;



赢在领先 胜于双赢

温和洁肤 水润滋养

## Cooperative Partner 合作伙伴

实践让我们得出一个经验：真诚的合作，友好的关系，彼此的信任，全力的支持，是我们成功的基础；优质的产品，完美的服务，想客户所想，迎合市场最新需求，是我们发展的关键。

珍惜每一次珍贵的合作，想您所想，急您所急，无畏前行是我们的准则。

According to practice, we educed an experience: pure-heart cooperation, friendly relation, believe each other and full support, all above are our successful foundation; high quality productions, perfectly service, thinking customers' want and meeting the market demand are our developmental key.

To treasure all precious cooperation, thinking what you want and do what you need, intrepidity go ahead is our rule.

