



Qingdao Tongli Packaging

Add: No. 1010 Image Center, Zhengyang Road,
Qingdao, Shandong, China P.C.:266109
Tel: 0086-532-89082296 Fax: 0086-532-66721158
Http://www.valuepackaging.cn

Last updated April 12, 2022

QC & TEST MANUAL

- ※ This document is intended to stipulate the procedures we take to make sure each and every details for the customer orders going on the correct way in our company.
- ※ Any ideas or advices from the customer are highly appreciated, and will be put into action once it approves to be effective in assuring the quality of the customer orders.



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1. CONFIDENTIALITY

The artwork designs and documents from the customer should be always taken as confidential and should not be shared to any third party in any cases.



View the Non-Disclosure Agreement.

<http://www.valuepackaging.cn/confidential/>

2. Artwork To Print-proof

The original artwork from the customer is not always the best ideal for print on physical film or paper substrate, based on the current craftsmanship of the print technologies.



We promise to improve your artwork into physical print based on the principle of doing best, and will never alter your specific intention for your branding. Any improvement done should be updated to you, and take effective only on customer approval.

The final print-proof can only be put into print process against your confirmation/signature.



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What we believe on QC

In our eyes, QC work is not only limited to the produce process for your orders in our manufacturing plant, but also each step and detail in accepting and finalizing customer order should be taken into a very close attention, and going on well as expected.

So, we take the first serious step in keeping confidential when reviewing your artwork designs, to the final step of packaging and delivery for your order, with the sequences as below.



- Confidentiality
- Artwork Print Proof
- Customer requirements & Properties
- Agreed Standards
- Food Safety
- Test of materials: Film, Inks and Adhesive
- Workshop Operation
- QC & Test Standards
- QC & Test report provided to customer
- Packaging & Delivery

Coming to the complicated and customization work for each customer, we do not boast each detail will be done perfectly. However, we will always be doing our best to meet your expectations. So, any advices from the customers are to be seriously considered and will be implemented into our work once it proves effective.





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3. Properties & Customer Requirements



It comes to a lot of details when we try to describe the properties of a package customized for a customer, as nearly all the information is decided against customer requirements.

- Artwork print
- Film Materials
- Thickness
- Properties
- Dimensions/Filled Effect

Furthermore, different customers may have quite different preference on the properties even for the same film materials, so it becomes more difficult to consolidate an specific standard with the customer on his orders.

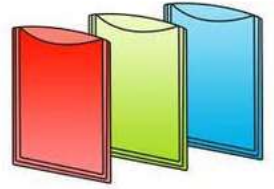
Here, we would like to present the list of properties for a pre-made pouch and roll foil, and will come to an agreed standard with the customer on each product before moving into order produce.





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3.1 Properties List of Premade Pouch

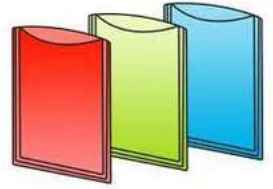
There are really many details to consider when a customer chooses a premade pouch. The package is also an indivisible part of the customer's product. So we get the properties listed here for the customer understanding, to consolidate an ideal pouch.

Serial	Aspect	Property Item	Details	Learn More
1	Artwork Print	Color Exactness	Matching CMYK or pantone color in artwork	View
2		CMYK Overlapping	No apparent defects in naked eyes	View
3		Matte Lacquer Finish	No apparent defects or falloff	View
4		Solid Background	Solid reflective background	View
5	Appearance	Scratch Line on surface	Very few lines on surface	View
6		Wrinkles	Wrinkles may appear in surface	View
7			Glossy/Matte/Hot stamping/Holographic/Emboss	View
8	Artwork Positioning		The position of artwork on pouch should be as expect	View
9	Transparency		Transparency for the package	View
10	Bag Strength	Burst Impact	A common parameter to check foil strength	View
11		Tensile Strength	A common parameter to check foil strength	View
12		Drop test	Most common used method to check bag strength with products filled	View
13		Anti-pressure	Certain pressure applied on a well sealed package	View
14	Seal Property	Seal Strength	To check seal strength by tensile	View
15		Sealing conditions	Temperature, time and pressure	View
16	Bag Dimension	Dimension tolerance		View
17	Thickness	Thickness	+5% against expected thickness	View
18	Stiffness	Stiffness	Stiffness of the foil and bag	View
19		Standing Effect	Standing effect when the package is well filled with products	View
20	Barrier Property	Oxygen	Oxygen transmission rate	View
21		Water vapor	Water vapor transmission rate	View
22		Sunlight	Sunlight shielding	View
23	Bonding Strength	Bonding strength	Bonding strength between the different layers	View
24	Window	Matte Window	Matte finish window with certain haze	View
25		Clear Window		View
26	Airtight Property	Airtight	No air leak is allowed	View
27	Transparency	Transparency	Transparency of the package	View
28	Emboss		Emboss effect on bags	View
29	Zipper Re-seal		Re-seal performance of zipper after repeatedly open and close	View
30	Hand Feeling		Softness or hand feeling for the package	View
31	Filled Effect		The package effect after products filled	View
32	Solvents Left		Solvents left in the foil laminate	View
33	Anti-Puncture		Anti-puncture performance for the foil laminate	View



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3.1 Properties List of Premade Pouch

There are really many details to consider when a customer chooses a premade pouch. The package is also an indivisible part of the customer's product. So we get the properties listed here for the customer understanding, to consolidate an ideal pouch.

Serial	Aspect	Property Item	Details	Learn More
34	Temperature resistance	121~125 °C retort	121~125 C retort process in the pasteurization equipment	View
35		Boiling Water	Pasteurization in boiling water	View
36		Frozen conditions	Frozen treatment	View
37	Tear Property	Linear tear	Linear tear	View
38		Easy Tear	Easy tear for the package in consumer place	View
39	Easy Peel Package		Easy peel	View
40	Tab Zipper	Easy tear	Easy tear for tab/rip zipper	View
41		Tear Straight	Tab zipper should be torn into straight line on the package	View
42	Anti-Static Property		Anti-static performance for powder products	View
43	Short and High		Short and high effect when standing	View
44	Anti-slippery		Not easy to slip when piled up	View
45	Alcohol Resistant		Alcohol resistant performance	View
46	Grease Resistant		Grease resistant performance	View
47	Air Flushing		Air flushing requires the package good barrier to gas	View
48	Vacuum Pack		Vacuum pack	View
49	Spout		Spout welded	View
50	Degassing Valve		Degassing valve	View
51	Easy Carry	Handle Hole	Handle hole	View
52		Plastic Handle	Plastic handle	View
53	Hang on shelf	Euro hole	Euro hole	View





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3.2 Properties List of Roll Foil

Different from premade pouch, roll foils are going to be formed on the customer's filling machine. Things should be confirmed before it is actually moved into produce.

Serial	Aspect	Property Item	Details	Learn More
1	Artwork Print	Color Exactness	Matching Pantone color	View
2		CMYK Overlapping	No apparent defects in naked eyes	View
3		Matte Lacquer Finish	No apparent defects or falloff	View
4		Solid Background		View
5	Appearance	Scratch Line on surface	Very few lines on surface	View
6		Wrinkles		View
			Glossy/Matte/Hot stamping/Holographic	View
7	Artwork Positioning	Positioning	The position of artwork on pouch should be as expect	View
8	Transparency	Transparency		View
9	Mechanical Strength	Tensile Strength	To test the foil	View
10		Elongation	Elongation rate at break	View
11		Burst Impact Strength	Burst impact strength	View
12	Anti-Puncture	Anti-puncture		View
13	Roll Dimension	Dimension tolerance		View
14		Roll Diameter		View
15	Thickness	Thickness		View
16	Stiffness	Stiffness		View
17	Barrier Property	Oxygen	Oxygen transmission rate	View
18		Water vapor	Water vapor transmission rate	View
19		Sunlight	Sunlight shielding	View
20	Bonding Strength	Bonding strength		View
21	Solvents Left			View
22	Temperature resistance	121~125 °C retort		View
23		Boiling Water		View
24		Frozen conditions		View
25	COF		Coefficient of friction	View
26	Splices			View
27	Anti-Static Performance	Anti-Static Property	Anti-static for filling powder products	View



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Work Procedure

01

Print Proof

The original version of customer artwork design may need to be improved into package profile against the craftsmanship of printing and produce operation in manufacture plant, such as UV glossy part, matte lacquer, Pantone spot color, metallic color etc.

Of course, each and every of the details improved will have to inform the customers for approval.



02

Customer Signature

Customers need to sign on the print proofs when he approves all the details. Please do take it seriously before you sign, as once it is approved, the afterward process can not be retrieved.



03

Print Cylinders Making

Print proofs will be engraved onto the print cylinders in a well-controlled accurate way.

Usually it take 3~5 days to finished a set of print cylinders.





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04 Print with in-line Inspection

Printing will be proceed on our print press with in-line inspection, which is able to remove more than 90% of the apparent printing defects. Produce recordings will be finished in our document system, view in QC part in this document.



05 Laminate and Cure

Printed film will be laminated with other film materials to achieve multi-functional foils. Produce recordings will be finished in our document system, view in QC part in this document.



06 Offline Inspection and Slitting

Offline inspection is a supplement method to check the print defects on the foil, and quite useful for many orders.



07 Bag Making Operation

Laminated foil will be processed into kinds of types of premade pouches against customer requirements, and further tests will be performed to make sure the package is fine for application, such as drop test, retort pasteurization.





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QC Test & Report

Tests are performed based on our regular basis and customer preference. And later on, there will be QC report issued against each order for customer reference.

QC& TEST REPORT

CUSTOMER:Richard Stewart
PI Number: TLPI2022052688
DATE: June 14, 2022



Carton & Palletization

Cartons, labeling and palletization will be done in a robust way, to make sure goods well protected all the way along.





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4. Agreed Standards

We will come to an agreed standard with the customers on each order including below contents

- Properties & Customer Requirements
- Test Standard
- Packaging & Delivery
- Payment Terms
- Lead Time

This agreement would be much helpful to straighten up the cooperation between the two parties, and any helpful advice is highly appreciated to incorporate into the agreement.



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Agreed Standard on Order

Customer: Chris Seah
Product: 250g stand zipper pouch with laser score
Date: Feb 26,2020

Last Updated: Feb 26, 2020



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5. Food Safety

Food safety is always out top priority to produce the packages for our customers, and here we guarantee all the materials used are certificated human food grade, with report listed as below.

Serial	Aspect	Property Item	Description	View
1	Film Materials	BOPP Film	Biaxially orientated polypropylene film	SGS RoHS2 FDA Rohs2
2		PET Film	Biaxially orientated Polyester or polyethylene terephthalate Film	SGS
3		Aluminum Foil	Thin aluminum foil metal sheet food grade	FDA
4		PA Film	Biaxially orientated polyamide film	SGS
5		LDPE Film	Low density polyethylene film	China Certificate
6		PLA+PBAT Film	POLY(LACTIC ACID) +PBAT (Polybutylene Adipate Terephthalate) film produced in blown craftsmanship	TUV Certificate DIN Certificate
		BOPLA Film	Biaxially poly lactic acid film	TUV
7		PT Film	Cellulose or cellophane film	Kompostierbar Sign DINCERTCO Sign
8	Print Inks	Polyurethane inks	Print inks applied in flexible packaging and printing	Rohs SGS MSDS
9	Adhesive	Bi-component Polyurethane adhesive	Solvent type and solvent-free type	Test Report FDA

Learn more here <http://www.valuepackaging.cn/human-food-grade/>





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Substrate Films

6. Test of materials

There are many types of substrate film materials applied in flexible packaging , and we are applying a series of test in our workshop, to make sure the film materials we use are on a sustainable and reliable basis.

NO.	ITEM	STANDARDS	UNIT	TYPICAL VALUE	LEARN MORE
1	Thickness	ASTM-D-374	microns		View
2	Grammage	ASTM-D-4231	g/m2		View
3	Tensile Strength	MD	Mpa		View
		TD	Mpa		View
4	Elongation	MD	% @23°C		View
		TD	% @23°C		View
5	Tear Strength	MD	N/m		View
		TD	N/m		View
6	COF	Outer	@23°C		View
		Inner	@23°C		View
7	Gloss	ASTM-D-003-61	%		View
8	Haze	ASTM-D-003-61	%		View
9	Wetting Tension	ASTM F 904	N/15mm		View
10	Corona Treated	INTERNAL	#		View
11	Seal Strength	ASTM-F-88	N/15mm		View
12	Sealing Conditions	Celsius degree for Seconds			View
13	Thermal Shrinkage	GB/T 34848-2017	cm		View
14	WVTR	ASTM-F-1249	g/m2/24hr		View
15	OTR	ASTM D 3985	cc/m2/24hr		View





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6. Test of materials

Print Inks

Every customer would like to get his artwork printed 100% loyal to its original artwork.

Frankly, this is not easy work.

The colors for the inks fluctuates as of raw materials supply, produce, and outside conditions.

So, in our workshop, we will have to apply coating test for each batch of inks bought, which is considered as a reliable way to achieve better color control.



It will be a quite big and professional thing to keep the artwork well printed for the customers, please leave this thing to us, the only thing you need to do is to provide your artwork design.





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7. Workshop Operation

Every necessary step for the workshop operation will be recorded in our system, from the print, lamination to bag-making.

Bag-Making Operation Recording

印刷机生产原始记录														
产品号	BA1-332-21721			条四号	—————			版号	W21040379		2022年2月27日			
订单号	FUND20220222F99			品名称	500g 激光线拉封袋			时间	开机时间: 10 时 停机时间: 13 时					
材料名称	PET12		原厂家	康辉		规格	650mm		计划用量	16000m				
注册事项	印刷条码对吗? (<input checked="" type="checkbox"/>) 规格对吗? (<input checked="" type="checkbox"/>)						报告事项		余料: 6kg					
	是否有共用版? (<input checked="" type="checkbox"/>) 印刷条形码 无													
原膜记录	编号	长度	宽度	厚度	厂家	重量	确认	印刷膜成品	编号	长度	附着力	重量	印刷面确认	
	1	6000x650x12mm				65.5kg	✓		1	6000m	163	76.5	✓	外
	2	6000x650	12mm			65.2kg	✓		2	6000m		76.5	✓	外
	3	6000x650	12mm			65.0kg	✓		3	5000m		72.7	✓	外
	合计	16000				196.4	✓		合计	16000			211.5	
油墨溶剂	色序	颜色	版号	牌号	粘度	浓度比例	溶剂							
	1	黑	W21040379-1	ECO-STAR P12	12		固化剂	#H20220222						
	2	李加	-2	R507	12			#DY20220221						
	3	李加	-3	GDF407	12									
	4	白	-4	GD F709	11.5		溶解比例							
	5	白	-5	GD F709	11.5									
	6	清洗	-6	GD F801	12									
	7													
	8													
9														
工艺参数	单元	设定温度℃	实际温度℃	印压压力	印压实际压力	计划	实际	备注						
	1	45	45	0.3	0.3	送膜张力	3 kg	3 kg						
	2	45	45	0.3	0.3	供给张力	3 kg	3 kg						
	3	45	45	0.3	0.3	输出张力	3 kg	3 kg						
	4	45	45	0.3	0.3	卷曲张力	3 kg	3 kg						
	5	45	45	0.3	0.3	刮刀压力	0.3 kg	0.3 kg						
	6	45	45	0.3	0.3	湿度	60%							
	7	45				室温	18℃							
	8	45				车速	120 m/min							
	9	45												
注意	必须把原膜标签贴在背面				机长签字: 周文健		车间主任: 赵可富		统计签字: 崔磊鹏					



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7. Workshop Operation

Bag-Making Operation Recording

制袋生产记录												
											2022年3月5日	
产品号: DA1-332-21721			产品名称: 50g 激光线拉绳袋					订单号: FUND20220222F59				
开机时间:		停机时间:		接班时间:		材质结构: PET14/A10xPET14/PP2110		数量: 80,000个				
注意事项	密切注意吐光划痕					报告事项	报告生产进度, 客户联系					
热封温度 ℃	热封刀序号											
		1	3	4	5	7	11	13				
计划		210	215	220	220	210	215	210				
实际												
车速	计划	80		封口时间	80		制袋开机确认					
	实际	80 次/分钟		封口时间	80		机长: 孙彦昌 班长: 张天保 质检: 孙彦昌					
成品参数	机台:	#5		确认	新裂口	有	无	确认	开闭条确认	设备锁定确认		
	成品规格	(26750) x 188mm			形状	U	V	1	圆孔架	✓		
	热封位置	下左右			位置	易横折线处		2	撕裂口架	✓		
	尺寸mm	10mm			内圆角	有	无	3	横刀	✓		
	圆孔				尺寸			4	小刀	✓		
	透气孔刀				外圆角	有, 无	吸珠 (开/关)	5	超声波	✓		
	形状及数量				开闭条	有	无	6	横刀	✓		
	开口方向	上开口			位置	35mm		7	开闭条刀	✓		
					检品度:	\		分切度:	\	8	充电	✓
		装箱方式: 1100 枚/箱			调机度:	400		胶带度:	200	9		
									10			
刀片: 开机 1 枚; 交接 1 枚; 枚; 枚; 完成 1 枚;												
生产完毕确认:		数量: 6000 枚		3 件		确认人: 孙彦昌		机长: 孙彦昌				



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8. QC & Test

QC & Tests will have to be performed on each order before it is actually delivered.

It is performed against the agreed standards that is signed with the customer.

In this part, we are going to share some of the actual tests we are performing on our daily work basis.

These tests will make up to more than 80% of the package property required by the customer, and of course, we will make further test whenever there is needed for the customers.

Serial	Property Item	Description	View
1	Print Inspection	Check on print quality	View
2	Dimension Test	To check dimension tolerance	View
3	Airtight Property Test	No air leakage is allowed for any package	View
4	Retort Treatment Test	Retort at 100~125 Celsius for certain minutes to check the materials will well perform	View
5	Solvent Left Test	Check the solvents left in the foil	View
6	Seal Strength Test	To check the sealing strength after the package is sealed	View
7	Zipper Re-Seal Test	To make sure zipper works well after repeatedly close-and-open	View
8	Drop Test	To check package strength, which prevents breakage when fall off from good shelf	View
9	Anti-pressure Test	To check package strength	View
10	COF Test	Coefficient of friction for the inner side of foil	View





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9. QC & Test Report

There will be QC & Test report issued against each order before delivery.

This report is a recording of the work we done under the agreed standards with the customer, to make sure everything is going on well as expected.



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QC& TEST REPORT

CUSTOMER: Chris Seah

PI Number: TLPI20220221B63

DATE: March 28, 2022

※ This document is only intended to report on the QC work and tests taken against the customer order performed in Qingdao Tongli Packaging Products Co., Ltd

※ Videos in this document are published unlisted on youtube, which can only be checked by link, so do not worry about divulging.