

Gunze Kobunshi

Specification details the quality, testing and packaging

1. Scope

This specification details the quality, testing and packaging of the heat shrinkable clear film “Pure Wrap” (Hereinafter referred to as “the film”), distributed by Gunze Kobunshi (Hereinafter referred to as “GK”), supplied to _____ (Hereinafter referred to as “_____”).

2. Type

The following grade and thickness are applied.

Grade: HBX

Thickness: 0.075 mm

3. Specification and Inspection Methods

3-1. Physical properties

The standardization of physical properties is as below.

Table 1

Item	Unit	Data		Method
Haze	%	Less than 5.0		ASTM D-1003
Tensile Strength	Mpa	MD	34±8	ASTM K-7105
		TD	100±15	
Elongation	%	MD	360±50	Ditto
		TD	75±15	
Puncture Strength	N	More than 0.6		JIS Z-1707
Impact Resistance	J	More than 0.6		Impact Tester
Coefficient of Friction	-	Outside Static	0.25±0.10	ASTM D-1894
		Outside Kinetic	0.25±0.10	
		Inside Static	0.32±0.15	
		Inside Kinetic	0.32±0.15	
Heat Shrinkage	%	MD	7 ~ 13	70C@30sec (Water Bath)
		TD	7 ~ 13	
		MD	13 ~ 19	80C@30sec (Water Bath)
		TD	13 ~ 19	
		MD	23 ~ 32	95C@30sec (Water Bath)
		TD	23 ~ 32	

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3-2. Measurements and tolerance

Table2

Item	Unit	Tolerance		Method
		Maximum	Minimum	
Thickness	Micrometers	Maximum	75+2	1/1000 Dial gauge *
		Minimum	75-4	
Lay Flat Width	Millimeters	Maximum	Nominal+2.0	Stainless ruler
		Minimum	Nominal-1.0	
Length	Meters	Maximum	Nominal x 1.02	Wheel Tachometer
		Minimum	Nominal	

Note* Thickness shall be tested in accordance with Method ISO 4593-1993.

3-3. Appearance

3-3-1. Appearance of film

Table.3

Item	Quality Standard	Test Methods
Streaks	There is no remarkable one	Visual
Scratches	ditto	Ditto
Dirt	ditto	Ditto
Wrinkles	ditto	Ditto

3-4. Inspection and Test methods

3-4-1. Physical Properties

(1) Percentage of heat shrinkage

Cut test specimens of 100mm X 100mm, immerse the specimens in the water bath at the desired temperature for exactly 10seconds. Measure the specimens and calculate the shrink percent

(2) The others test methods are show in table 1. Be tested under 23C X 50%RH.

3-4-2. Measuring

(1) Measuring of thickness

Measure the thickness of the specimens at points 50mm apart along the length of the specimen, and keep record of the data up to 0.001mm.

(2) Measuring of width

Put the specimen on plane surfaces, measure both slit sides at right angles.

(3) Measuring of length

Measure the length by wheel tachometer after slitting the film.

4. Packaging

4-1. Paper core

Table5

Total Length	Inside diameter(mm)	Wall(mm)	Length(mm)
500m	76(3 inches)	12	Minimum: Same as product width Maximum: Product width+10mm

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4-2. Packaging

4-2-1. Inside Packaging

The film shall be wound on the paper core and wrapped with waxed paper.

Attached corepads to edges of the roll by inserting plastic plugs into core.

4-2-2. The method of packaging

Table6

Total Length	Packaging
500m	(1)Packaging with paper core (2) Packaging in hank (See figure of packaging)

5. Identification

The product label shall be conspicuously on each roll.

Attach the product label on the side of roll, inside the paper core and on the side & upper side of packaging.

6. Guarantee and Storage Condition

6-1. GK guarantees the quality of the packed film for a period of 6 months from the date of acceptance of the film by _____.

6-2. Adverse storage conditions will damage the performance and life of film.

Maximum storage and transportation temperature is 25C (77F).

6-3. Avoid damaging the film as follows:

Throwing down, rolling, falling and loading the palletized cartons on the others.

6-4. Avoid direct sunlight, high moisture and water.

7. Retaining Sample

GK retains sample for a period of 24 months from the date of manufacture per each master roll.

8. Handling of Unusual Products

If _____ had unusual products, GK would take the appropriate treatment after confirming and discussing the issue with _____.

9. Appendix

This document can be revised in the case of inconvenience after deliberation from both parties.

This document applies to _____.

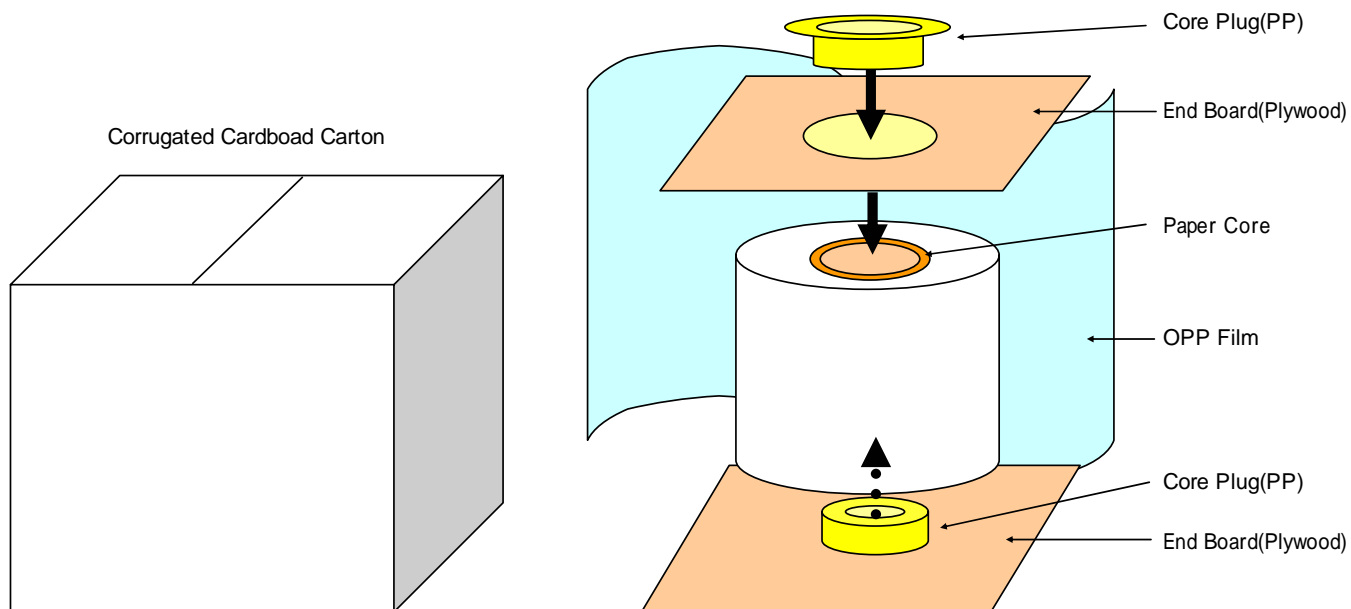
10. Effectiveness

This document becomes effective by the approval of _____.

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[Figure of packaging]

(1) Packaging with paper core



(2) Packaging in hank

