



GSE ONLINE SDN BHD

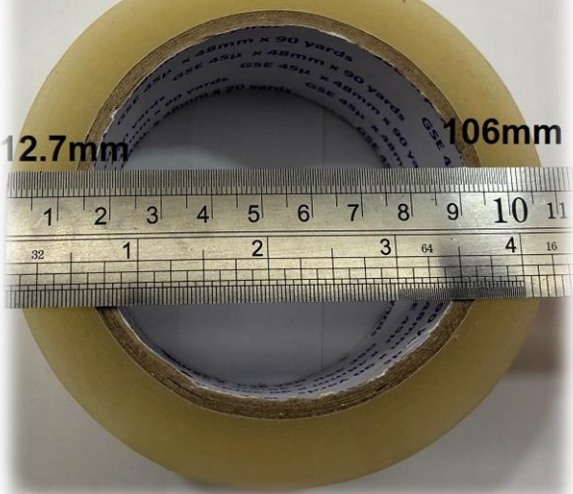
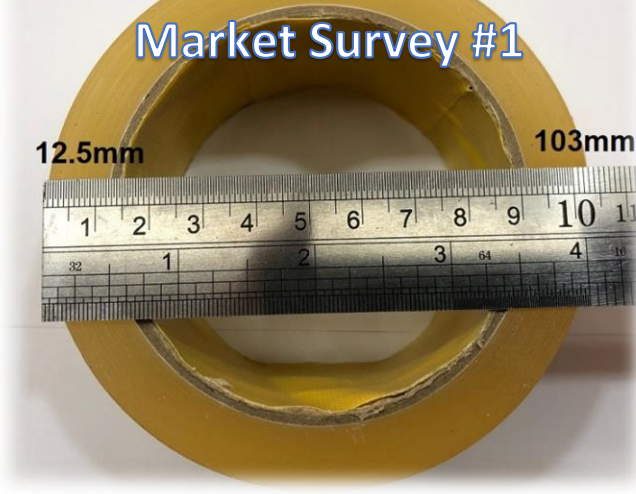

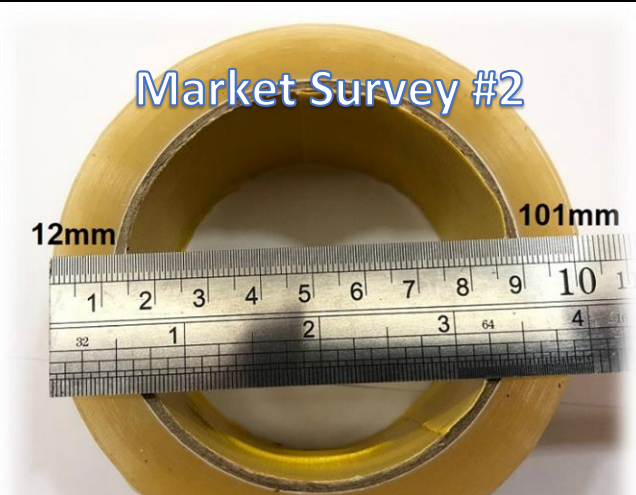
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1116968-P

GSE ®

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OPP TAPE FOR SEALING

| | |
|---|--|
| <p style="text-align: center;">Brand : GSE</p> <p style="text-align: center;">(Diameter More Than $\geq 105.43\text{mm}$)</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">Tape Thickness ≥ 12.70</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">More than ≥ 282 Tape turns</p> | <p style="text-align: center;">Brand : X in the market</p> <p style="text-align: center;">(Diameter Less Than $\leq 105.43\text{mm}$)</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">Tape Thickness $< 12.70\text{mm}$</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">Less than < 282 Tape turns</p> |
| <p style="text-align: center;">45μm Thick x 48mm Width x 90 yards Length / Roll</p> | <p style="text-align: center;">45μm Thick x 48mm Width x 90 yards Length / Roll</p> |
| <p style="text-align: center;">Check your purchased OPP Tape today according to the formula below</p> | |
|  <p style="text-align: center;">Market Survey #1</p> |  <p style="text-align: center;">Estimated Length of 80.33 yards (73.4m) (Shortage of / Less 10.74 % than Described)</p> |
|  | <p style="text-align: center;">Market Survey #2</p>  <p style="text-align: center;">Estimated Length of 72.55 yards (66.3m) (Shortage of / Less 19.38 % than Described)</p> |



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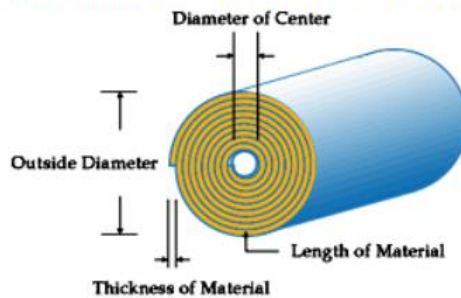
Case Study 1)

for 45µm Thick x 48mm Width x 90 yards Length / Roll

If a supplier claimed that their OPP is 45µm Thick x 48mm Width x 90 yards Length / Roll (with diameter of center holes paper core of 76mm + Paper Core Thickness 2mm each side) , In order to get 90 yards , The Outer Diameter of the Tape **MUST NOT BE LESS than 105.43mm . (According to calculation below)**



Calculator for Outside Diameter of Roll of Material



| Entered Values | | | Calculated Values |
|-------------------------|--------------------------------|-------------------------|--|
| Length of Material (yd) | Thickness of Material (micron) | Diameter of Center (mm) | Outside Diameter of Rolled Material (mm) |
| 90 | 45 | 80 | 105.43 |

2 scenerios might occur if their Outer Diameter is less than the proposed standard below ,
 (a) the overall thickness is thinner than 45µm and poorer strength and adhesion
 (b) the Length is shorter than 90yards. ie , shorter of ~3mm of Outer Diameter may result around ~18 yards shorter OR (up to 19% Length Shorter in some market survey)
 Most Suppliers did not mention clearly Specifications in their Products , ie , Only stated 45µm OPP Tape or OPP Tape



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OPP TAPE FOR SEALING

Brand : GSE

(Diameter More Than $\geq 110.29\text{mm}$)

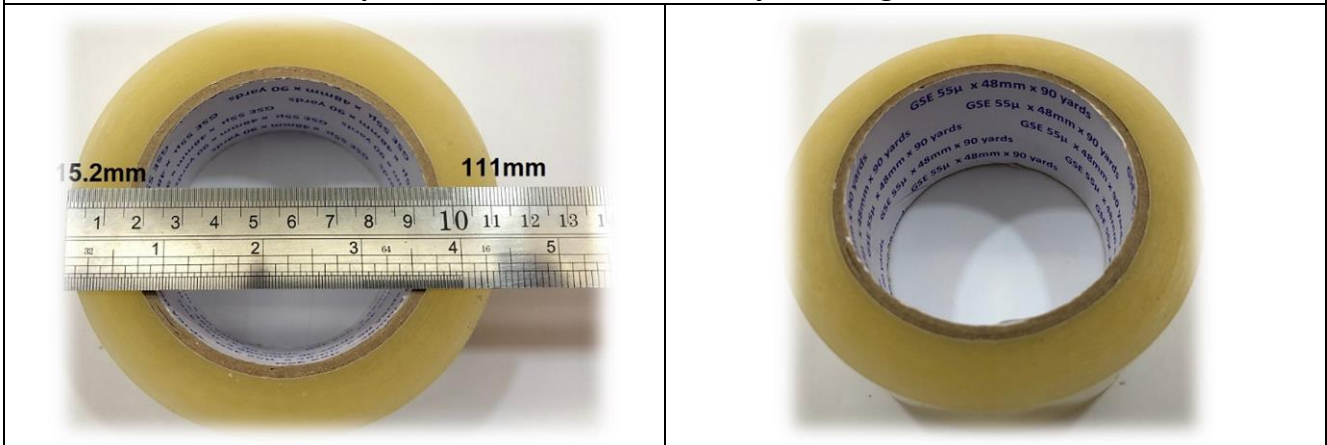
OR

Tape Thickness $\geq 15.15\text{mm}$

OR

More than ≥ 275 Tape turns

55 μm Thick x 48mm Width x 90 yards Length / Roll

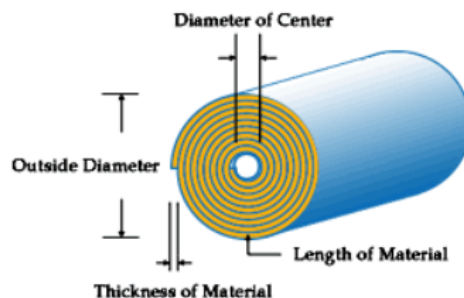


Case Study 2)

55 μm Thick x 48mm Width x 90 yards Length / Roll

If a supplier claimed that their OPP is 55 μm Thick x 48mm Width x 90 yards Length / Roll (with diameter of center holes paper core of 76mm + Paper Core Thickness 2mm each side) , In order to get 90 yards , The Outer Diameter of the Tape **MUST NOT BE LESS than 110.29mm . (According to calculation below)**

Calculator for Outside Diameter of Roll of Material



| Entered Values | | | Calculated Values |
|-------------------------|--------------------------------|-------------------------|--|
| Length of Material (yd) | Thickness of Material (micron) | Diameter of Center (mm) | Outside Diameter of Rolled Material (mm) |
| 90 | 55 | 80 | 110.29 |



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OPP TAPE FOR SEALING

A) Product Name

What are OPP Tapes ?

GSE OPP Tape , Oriented PolyPropylene Tape is an economic acrylic tape made with quality polypropylene material commonly used in Household and Industrial applications.

B) Raw Material

OPP packaging tape is made of bi-axially oriented polypropylene (BOPP) film coated with water based acrylic emulsion adhesive , it is best for long term storage and excellent clarity.

C) Purpose

Ideal for use for Medium to heavy duty carton sealing, wrapping, enclosing, and bundling to prepare items for handling, storage, or shipping.

D) Characteristics

1) High tacky adhesive assures a tight bond of carton boxes

E) Specification

1) Adhesive type : coated with water base acrylic emulsion adhesive

2) 2 Types available :-

a) Economy Pack (Most commonly use)

Film Thickness 25µm + Adhesive Thickness 20µm =

~45um x 48mm x 90 yards / roll x 6pcs/bundle x 10 bundles/box

b) Thick Pack

Film Thickness 30µm + Adhesive Thickness 25µm =

~55um x 48mm x 90 yards / roll x 6pcs/bundle x 10 bundles/box

Reference Test Data

| Item | Unit | Standard | Test Data | |
|--------------------|---------|----------|---------------|---------------|
| Total Thickness | micron | ± 2 | 45 | 55 |
| Color | -- | -- | Clear / Brown | Clear / Brown |
| Film Thickness | micron | ± 1 | 25 | 30 |
| Adhesive Thickness | micron | ± 1 | 20 | 25 |
| Initial Tack | # | ≥ 17# | 20# | 23# |
| Tensile Strength | Kg/25mm | MD | 9 | 11 |
| | | TD | 19 | 22 |
| Elongation | % | MD | 160 | 165 |
| | | TD | 70 | 75 |