



ZERO WASTE CITY



# Mandatory Packaging Reporting (MPR)

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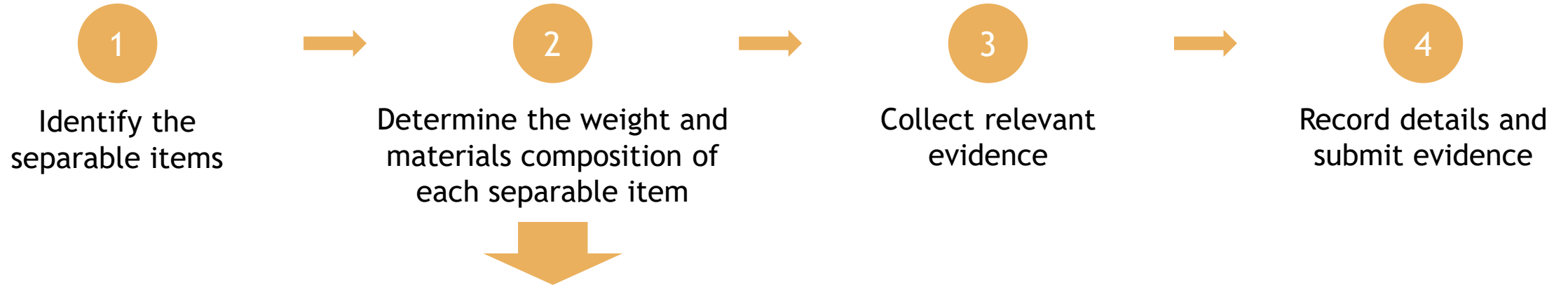
Methodology for  
data collection

11 September 2021

# Overall process



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Method name	Description	Prerequisites
<a href="#">#1 Physically weigh each packaging</a>	Measure the weight of each materials for each separable items using a calibrated scale.	A calibrated scale
<a href="#">#2 Calculate weight from supplier documentation</a>	Calculate the weight of a single separable item by using the total weight and total number of items written on vendor document such as shipping labels, purchasing receipt, certificate of conformity...	Vendor documentation
<a href="#">#3 Use internal product specifications</a>	Record the weight of each materials and separable items using internal product specifications sheets such as bill of materials or existing database	Up-to-date internal specifications sheet
<a href="#">4# Calculate average material weight per packaging</a>	The weight of packaging materials such as stuffing for shoes can vary from one product to another. Using purchasing records of raw packaging materials and the total number of outgoing goods, determine the average weight of the loose packaging item per outgoing product.	Internal purchasing and selling records
<a href="#">5# Mix of the above</a>	Any combination of the above methods.	



- **Which method should I use?**
  - Use whichever method is the most efficient for you.
- **What is a separable item?**
  - Separable items means parts of packaging which are designed to be separated by the consumer. For instance, a plastic water bottle has two separable items: the bottle and the cap.
- **What packaging should I report?**
  - All packaging related to an individual sales unit and related to the description of the imported product
- **What accuracy is required?**
  - Ideally,  $\pm 0.1\text{g}$  per each material and separable item.

Number of goods supplied to Singapore	<1,000	<10,000	<100,000	<1,000,000	>1,000,000
Accuracy of weigh per packaging item	$\pm 100\text{g}$	$\pm 10\text{g}$	$\pm 1\text{g}$	$\pm 0.1\text{g}$	$\pm 0.01\text{g}$

# Method #1: Physically weigh each packaging (Example: Plastic bottle)

(Example: Plastic bottle)



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## 1 Identify the separable items

The plastic bottle has two separable items:

- 1x bottle
- 1x cap



Note the bottle has two secondary materials:

- Neck ring
- Label

## 2 Determine the weight and materials composition of each separable item



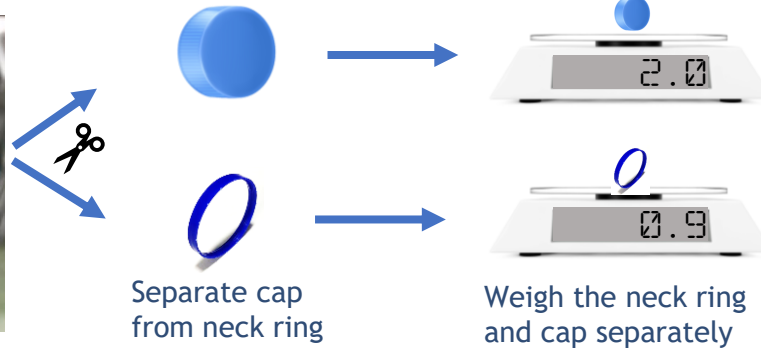
Take a sample cap



Take a sample label



Take a sample bottle



Weigh the label



Weigh the bottle

## 3 Collect relevant evidence

Ideally evidence should prove the weight, material type, and accuracy. Such evidence can include:

- Pictures of each item on the weighing scale
- Calibration certificate of the scale
- Specification sheet showing the material type
- Statement from manufacturer vouching for the quality and accuracy of information provided

## 4 Record details and submit evidence

In the MPR Portal, fill the tables as shown below for each separable item.

Item	Primary	Secondary 1	Secondary 2
<b>Description</b>	Bottle	Neck ring	Label
<b>Material</b>	PET	HDPE	LDPE
<b>Weight (g)</b>	25.0	0.9	3.2

Item	Primary
<b>Description</b>	Cap
<b>Material</b>	HDPE
<b>Weight (g)</b>	2.0



# Method #2: Calculate weight from supplier documentation (Example: Vacuum bags)



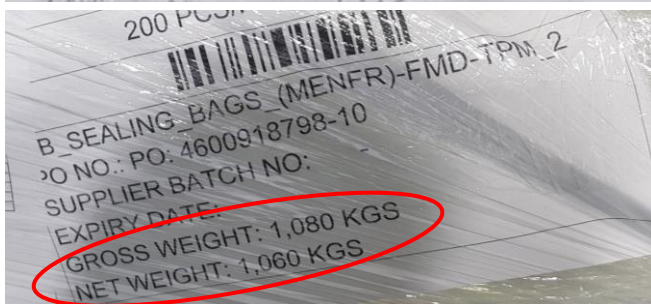
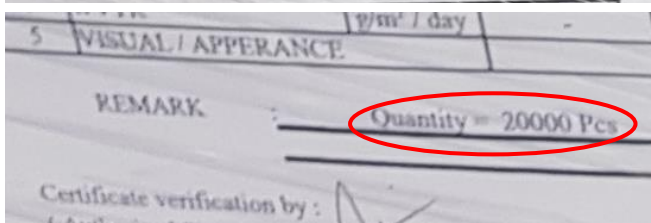
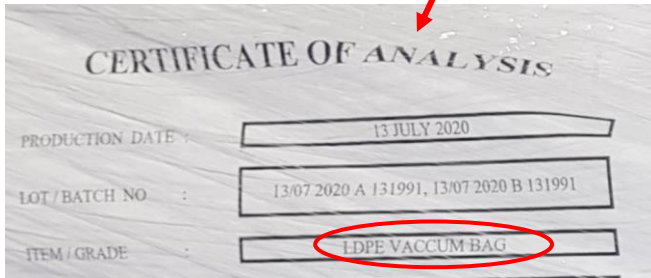
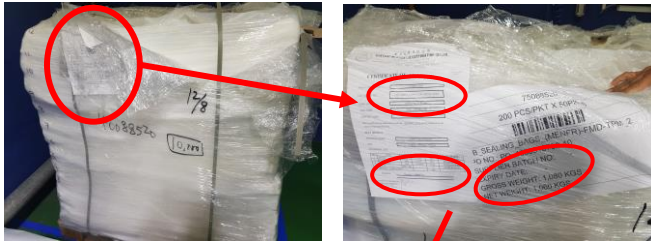
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## 1 Identify the separable items

The plastic vacuum bag is made of a single item.



## 2 Determine the weight and materials composition of each separable item



Extract key details from supplier documentation such as shipping labels, purchasing receipt, certificate of conformity...

LDPE Vacuum Bag  
Quantity: 20,000 bags  
Gross Weight = 1,080 kgs  
Net Weight = 1,060 kgs



**Calculations:**  
Average weight of one piece of LDPE vacuum sealing bag  
= Net weight/total quantity  
= 1,060 kgs/20,000 = 0.053 kg  
= 53.0g

## 3 Collect relevant evidence

Ideally evidence should prove the weight, material type, and accuracy. Such evidence can include:

- Copy of supplier documentation
- Spreadsheet used for calculation if relevant
- Statement from manufacturer vouching for the quality and accuracy of information provided

## 4 Record details and submit evidence

In the MPR Portal, fill the tables as shown below for each separable item.

Item	Primary
Description	Bag
Material	LDPE
Weight (g)	53.0

# Method #3: Use internal product specification records (Example: Shoe box)



## 1 Identify the separable items

The shoe box has eight separable items:

- 1x box
- 2x wrapping
- 2x stuffing (one for each shoe), written as “toe tissue”
- 3x labels



## 2 Determine the weight and materials composition of each separable item

Review internal product specification sheet

Internal Specification Sheet					
Product code	100005				
Colour	Blue/white				
Season	Spring 2018				
Factory	ABC factory				
Country of Origin	China				
Date of delivery	1/6/2021				
Total quantity supplied in 5 months	4980				
Component Type	Component Specification	Supplier	Measurement	Unit	Quantity
<b>Upper</b>					
Heel lining	Visa terry + 4687EGYS7	ZYX factory	NA	NA	NA
Shoe lace	Fabric	ZYX factory		0.5 m	2
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
<b>Outsole</b>					
Outsole tip stitching	Bonded nylon	PMH factory	NA	NA	NA
Footbed	Cold pressed	PMH factory	NA	NA	NA
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
<b>Packaging</b>					
Tissue paper	Wrapper	KLY factory		10 g	2
Shoe box	2016 Cardboard box	KLY factory		200 g	1
Label	Plastic - White	KLY factory		2 g	3
Toe tissue	Stuffing	KLY factory		10 g	2



## 3 Collect relevant evidence

Ideally evidence should prove the weight, material type, and accuracy. Such evidence can include:

- Copy of product specifications
- Spreadsheet used for calculation if relevant
- Statement from manufacturer vouching for the quality and accuracy of information provided

## 4 Record details and submit evidence

In the MPR Portal, fill the tables as shown below for each separable item.

Item name	Sub items
Box	1
Wrapping	2
Stuffing	2
Label	3

Item	Primary
Description	Box
Material	Paperboard
Weight (g)	200

Item	Primary
Description	Stuffing
Material	Paper
Weight (g)	10

Item	Primary
Description	Wrapping
Material	Paper
Weight (g)	10

Item	Primary
Description	Label
Material	HDPE
Weight (g)	2

# Method #4: Calculate average material weight per packaging (Example: Plastic wrapping)



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## 1 Identify the separable items

The plastic wrapping around pallets is a single item



Note the plastic wrapping may have secondary materials such as:

- Labels

## 2 Determine the weight and materials composition of each separable item

The weight of plastic wrapping may change between pallets based on the dimensions of the pallets. When it is not possible to determine the standard size for specific pallets or products, you can calculate the average weight of plastic film per outgoing pallet.

### Steps:

- Extract records of purchase of plastic film rolls over a period of time (in this example 6 months)
- Determine the weight of plastic film per roll (supplier specifications)
- Determine the number of outgoing pallets based on sales inventory for the same period of time.
- Calculate the average weight of plastic film per pallet.

	A	B	C
1	Date	Description	Qty
2	5/1/2021	Machineroll Stretch Film (LLDPE) 3" core 500mm x 1402m x 20mics	15
3	12/2/2021	Machineroll Stretch Film (LLDPE) 3" core 500mm x 1402m x 20mics	20
4	28/2/2021	Machineroll Stretch Film (LLDPE) 3" core 500mm x 1402m x 20mics	14
5	1/4/2021	Machineroll Stretch Film (LLDPE) 3" core 500mm x 1402m x 20mics	5
6	15/5/2021	Machineroll Stretch Film (LLDPE) 3" core 500mm x 1402m x 20mics	6
7	16/6/2021	Machineroll Stretch Film (LLDPE) 3" core 500mm x 1402m x 20mics	25
8			

Net weight of roll	12.9 kg	<a href="#">URL to supplier specification sheet</a>
Total number of rolls	85	
Total weight of film	1,096.5 kg	
Total number of outgoing pallets	7,200	
Average weight of film per pallet	152.3 g	

## 3 Collect relevant evidence

Ideally evidence should prove the weight, material type, and accuracy. Such evidence can include:

- Spreadsheet used for calculation if relevant
- Statement from supplier vouching for the quality and accuracy of information provided

## 4 Record details and submit evidence

In the MPR Portal, fill the tables as shown below for each separable item.

Item	Primary
Description	Wrapping
Material	LDPE
Weight (g)	152.3

# Method #5: Mix of methods (Methods #1 and #3) (Example: Wine bottle)



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## 1 Identify the separable items

The wine bottle has three separable items:

- 1x bottle
- 1x seal
- 1x cork



Note the bottle has one secondary material:

- Label

## 2 Determine the weight and materials composition of each separable item



[1]



Take a sample seal



Weigh the seal



Take a sample cork



Weigh the cork

	A	B	C
1	Specifications sheet		
2			
3		Net weight of one label roll (without cardboard)	Number of labels made
4	Length of one label roll		
5	25m	320g	100
6			
7			
8			
9			

Check specifications of the roll of labels

### Calculations

Net weight of one roll of label = 320g  
 Number of labels per roll = 100  
 Average weight of one label = Net weight/Number of labels  
 = 320g/100  
 = 3.2g



Take a sample bottle



Weigh the bottle

## 3 Collect relevant evidence

Ideally evidence should prove the weight, material type, and accuracy. Such evidence can include:

- Pictures of each item on the weighing scale
- Calibration certificate of the scale
- Specification sheet showing the material type
- Spreadsheet used for calculation if relevant
- Statement from manufacturer vouching for the quality and accuracy of information provided

## 4 Record details and submit evidence

In the MPR Portal, fill the tables as shown below for each separable item.

Item	Primary	Secondary 1
Description	Bottle	Label
Material	Glass	Paper
Weight (g)	500	3.2

Item	Primary	Item	Primary
Description	Seal	Description	Cork
Material	Aluminium	Material	Other
Weight (g)	2.0	Weight (g)	6.0

[1] image credit – YouTube video <https://youtu.be/-53mE509YQo?t=151>





<https://zerowastecity.com/mpr-portal-support/>

