

GENERAL NOTICE
Technical Sheet

SUBJECT

Effect of a non-opacifying colouring master batch for PET on PET bottle recycling.

IMPACT SUMMARY TABLE

Recycling stage	Impact	Description	Consequences
Pre-washing (optional)	∅		
Sorting of bottles		Detection of 1 bottle of unwanted colour for an application ⇨ up to 5 bottles ejected	<ul style="list-style-type: none"> • Higher losses ➤ Increase in waste to be processed
Grinding	∅		
Washing	∅		
Flake floating and separation	∅		
Tri sur paillettes <i>optional</i>		1 unwanted colour flake detected ⇨ up to 100 flakes ejected	<ul style="list-style-type: none"> • Higher losses ➤ Increase in waste to be processed
Granulation (optional)		The product's colour result depends on the colour of the master batches used and their colouring strength.	
Recycling	∅	<ul style="list-style-type: none"> ▪ The black fibre application is not sensitive to the colours in the incoming stream ▪ The colour fibre application (currently with green colour result) is sensitive to some colours in the incoming stream ▪ Finished green-coloured strapping and bottle products, currently in a minority, are highly sensitive to colour variations and more restrictive. 	<p>Either the unwanted bottles are ejected upstream:</p> <ul style="list-style-type: none"> • Higher losses ➤ Increase in waste to be processed <p>Or applications are limited:</p> <ul style="list-style-type: none"> • Economic efficiency of system affected.

Caution ∅ No impact ⌚ Under examination ➤ **Environmental consequences**

GENERAL OPINION

The PET coloured stream with green output has specific applications for coloured products.

In the current state of equipment and techniques used and available in Europe, the appearance of new colours is likely to substantially change this basic colour by turning it browner or darker. The consequence will be the impossibility of obtaining the right colour of finished products for strapping and bottle applications. In these cases, recyclers will have to systematically remove some colours from the flow and the bottles coloured in this way will not be recycled.

A detailed study by colour has been carried out. It gives the impacts on the current coloured PET stream (Q5). This study is the subject of data sheet 33.

Given the results of this study and in order to reduce losses and maintain the system's economics, COTREP recommends systematically studying any new colour's impact on the colour result of recycled products.