



TECHNICAL NOTICE - SORTING

Detectability of SILVER PLASTICS / XPS PRODUCTS packaging at sorting centers

APPLICATION DESCRIPTION

GENERAL INFORMATION	
APPLICANT	SILVER PLASTICS
APPLICATION DATE	2024
PACKAGING BRAND - ITEM	XPS PRODUCTS
DESCRIPTION OF PACKAGING	
PACKAGING TYPE	Tray
COLOR	Black
THICKNESS	Min 220 g/m ²
MATERIALS	
BODY	PS, 4,5% black colorant Details of the colorant used are confidential. The exact reference of the colorant was provided to COTREP to enable it to issue this notice.



PURPOSE OF THE APPLICATION	
To test the detectability at French sorting centers of the dark packaging XPS PRODUCTS, which is provided by SILVER PLASTICS.	

This notice relates to the detectability of the packaging and not its recyclability.



TECHNICAL CONCLUSIONS

Given the evidence provided to COTREP, and in view of the results presented in the test reports from optical sorting (O.S.) equipment manufacturers, SILVER PLASTICS XPS PRODUCTS black packaging is detectable by optical sorting in conditions representative of the technology used in French household packaging waste sorting centers. This packaging can therefore be detected as PS packaging with a satisfactory level of performance.

Although COTREP is issuing a positive opinion regarding the detectability of SILVER PLASTICS XPS PRODUCTS black packaging, this opinion provides no indication of its recyclability.

Moreover, COTREP reserves the right to review its opinion if the company modifies the packaging composition, e.g. by:

- modifying the resin¹;
- using recycled materials/production scrap potentially containing carbon black;
- modifying the colorant solution and/or its proportions.

¹ The term "resin" is understood to mean the type of polymer used, i.e. "PP", "PS", "PET" or "HDPE". The notice remains valid if the supplier of the type of polymer tested changes.



FIND OUT MORE

The extension of sorting guidelines to all plastic packaging has led to the modernization of sorting centers in France. In particular, centers are automating their processes and acquiring optical separators using near infrared technology.

This step in the sorting process is critical to separating plastic packaging. It enables packaging to be sorted by resin and color.

At this step in the sorting process, undetectable packaging is rejected by sorting centers and sent for energy recovery.

Carbon black pigment, which is currently widely used for dark-colored packaging, absorbs infrared light emitted by the optical sorting equipment and returns no signal. Consequently, the packaging is not detected and therefore neither sorted nor recycled.

SILVER PLASTICS packaging is a black PS packaging using an alternative colorant solution to carbon black at a concentration of 4,5%. Details of the colorant used are confidential. The exact reference of the colorant was provided to COTREP to enable it to issue this notice. The results of static and dynamic tests performed at the test centers of the two O.S. manufacturers (PELLENC SA and TOMRA) according to the COTREP procedure were positive. The SILVER PLASTICS PS packaging were detected and channeled to the PS stream with the same level of performance (quality, capture rate) as other rigid PS household packaging waste.

The conclusions set out in this notice are based on a set of commitments undertaken by each of the parties indicated below.

SILVER PLASTICS undertook to:

- use the sorting procedure provided by COTREP ("COTREP optical sorting test procedure for assessing the detectability of dark packaging at optical sorting stages" - version of November 2021²);
- perform tests at the test centers of the two O.S. manufacturers representative of existing sorting facilities in France;
- submit test reports to COTREP for its analysis and opinion;
- offer a colorant solution that:
 - o meets the essential requirements of the Packaging and Packaging Waste Directive (94/62/EC).
 - o does not alter the density of the packaging: the density of packaging consisting of PP or PE must be < 1 and > 1 for packaging consisting of PET or PS.

The O.S. manufacturers made an undertaking to COTREP to:

- follow the procedure in its entirety;
- perform tests using technologies and machine settings representative of those used in current sorting centres and under normal operating conditions.

Paris, May 29th 2024

² Available on COTREP's website : <https://www.cotrep.fr/content/uploads/2019/02/2024-cotrep-protocole-test-tri-optique-emballages-sombres-v1-3-en.pdf>