

TECHNICAL NOTICE - SORTING

Detectability of AVIENT CORPORATION / PE94000844 colorant solution at sorting centers

APPLICATION DESCRIPTION

General information

APPLICANT	AVIENT CORPORATION
APPLICATION DATE	2025
REFERENCE OF THE COLORANT SOLUTION	PE94000844
MAX LIMIT FOR CONCENTRATION OF THE COLORANT SOLUTION	6%

Description of colorant solution

COLOR	Black
SOLUTION SUITABLE FOR	PP rigid packaging

Purpose of the application

To test the detectability at French sorting centers of the black colorant solution PE94000844, which is provided by AVIENT CORPORATION and use to colour PP rigid packaging.

This Notice relates to the detectability of the colorant solution and not to its whole behaviour in a French sorting center, nor on its recyclability.

TECHNICAL CONCLUSIONS

Given the evidence provided to COCET, and in view of the results presented in the test reports from optical sorting (O.S.) equipment manufacturers, AVIENT CORPORATION black colorant solution PE94000844 is detectable by optical sorting in conditions representative of the technology used in French household packaging waste sorting centers. Use of a 6% of this colorant solution in PP rigid packaging will enable it to be detected and channeled to the PP packaging stream with a satisfactory level of performance.

Although COCET is issuing a positive opinion regarding the detectability of AVIENT CORPORATION black colorant solution PE94000844, this opinion provides no indication of the recyclability of the packaging as a whole.

This notice is valid when the colorant solution:

- Is used in the manufacture of PP rigid packaging;
- Has a proportion of 6%;
- Is not used with production scrap, other colorant solutions or recycled materials potentially containing carbon black.

COCET reserves the right to review its opinion if the company modifies the packaging composition of the colorant solution.

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.

AVIENT CORPORATION black colorant solution PE94000844 used to colour PP rigid packaging offers an alternative to undetectable colorant solutions. 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 COCET procedure were positive. The PP rigid packaging containing 6% of black colorant solution PE94000844 was detected and channeled to the PP stream with the same level of performance (quality, capture rate) as other rigid PP 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.

AVIENT CORPORATION undertook to :

- Use the sorting procedure provided by COCET ("COCET optical sorting test procedure for assessing the detectability of dark packaging at optical sorting stages" - version of July 2024);
- Perform tests on the premises of two O.S. manufacturers representative of existing sorting facilities in France;
- Submit test reports to COCET for its analysis and opinion;
- Offer a colorant solution that :
 - o Meets the essential requirements of the Packaging and Packaging Waste Directive (92,5/62/EC).
 - o Does not alter the density of the packaging: the density of packaging mainly consisting of PP or PE must be < 1 and > 1 for packaging mainly consisting of PET or PS (excluding PSE, XPS).

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

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

Paris, 09/06/2026.

