

# Fellicolor Spa

## APEOs Elimination Investigation Report

*18th January, 2017*

### Fellicolor Spa

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The APEOs Elimination Investigation Report is in fulfillment of the [Fellicolor Spa](#) Commitment to the DETOX solution which were made public on 15<sup>th</sup> March, 2016

Fellicolor Spa supports the Detox solution to ban hazardous chemicals from fashion



This report was prepared on behalf of Fellicolor Spa by Blumine Srl, an independent consulting company specialized in supporting textile and fashion companies in sustainability projects.



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## **1 APEOs in textile processes**

Alkylphenol ethoxylates (APEOs) are a group of nonionic surfactants, the most commonly used being nonylphenol ethoxylates (NPEOs) and octylphenol ethoxylates (OPEOs).

The chemical structure of these molecules has led to a widespread use in textile processes, especially in wet processes, owing to their dispersant, detergent and emulsifying action.

APEOs are hazardous for the environment and for aquatic organisms. Recent research confirms that APEOs are potential endocrine disruptors, as well as being highly bio-accumulative and persistent. APEOs contamination has been detected in riverbeds, water tables and even in the human food chain.

APEOs are already subject to restrictions in Europe since 2005. The EU 2003/53/EG directive has prohibited the use of the main group of APEOs, the NPEOs, in concentrations greater than 0.1% in chemical intermediates. The presence of this group of substances in the processes of European companies and the final products can however be induced by semi-finished and chemicals produced in countries where the use of APEOs is allowed.

**Fellicolor Spa** understands that there are multiple supply-chain pathways for potential APEO contamination, including chemical formulations, and is committed to enhancing both training and auditing of our supply chain to ensure our suppliers have the latest information on APEOs, highlighting where there is a risk that APEOs may enter in the undocumented contamination of chemical supplier formulations.

To safeguard the health and safety of consumers, producers and local communities, **Fellicolor Spa** starting from **March 2016** has introduced the ban on APEOs in the Manufacture Restricted Substances List (M-RSL) that suppliers are required to comply with.

## **2 Overview of Fellicolor Spa processes**

**Fellicolor Spa** is an international leading provider of yarn dyeing and finishings, specialized in mercerization and dyeing of cotton skeins and bobbins.

Thanks to a century of presence in the international textile industry, the Company offers its clients an ever-growing, consolidated know-how when it comes to processing high-quality, complex yarns such as the [filoscozia®](#).

## **3 Risk of APEOs use and contaminations in the Fellicolor Spa processes**

Possible ways APEOs can find their way into **Fellicolor Spa** products are chemical auxiliaries, namely in formulation of lubricants; antistatic agents; dispersants; emulsifiers; silicon based softeners; leveling agents; surfactants; and auxiliaries with high content of dispersants or emulsifiers.

Some of these auxiliaries where APEOs could potentially be used to improve the functional performances, are directly used in **Fellicolor Spa** own processes, although **Fellicolor Spa** selects these chemicals and its suppliers to avoid their use.

Chemicals auxiliaries used by the **Fellicolor Spa** are all supplied in Europe<sup>1</sup>, thus minimizing, but not excluding, the risk of unintentional use of APEOs.

In order to further proceed in this direction, **Fellicolor Spa** has accomplished a total substitution of all detergents used in its processes with a single, surfactants-free detergent (APEOs being part of the category of surfactants).

Compliance with the APEO ban requirement is a key criterion currently adopted by **Fellicolor Spa** to select chemicals suppliers. Constant monitoring and cooperation with suppliers must however complement the declarations of non-use of hazardous chemicals released by suppliers.

## **4 The investigation plan**

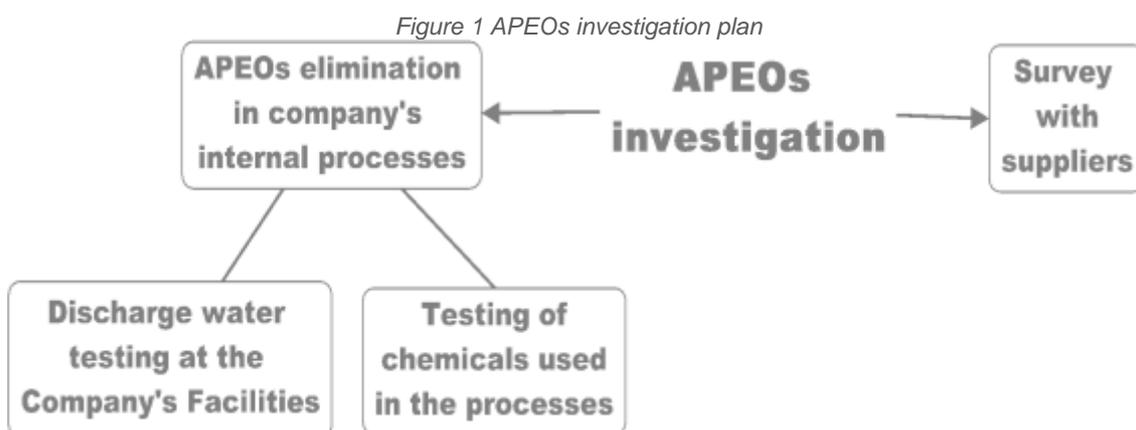
Consistent with the Detox commitments signed in **March 2016**, and as part of a program of work to eliminate from the supply chain the use of APEOs and all hazardous chemicals from its processes and supply chain, **Fellicolor Spa** carried out a fact-finding investigation to check if any APEOs enters, or risk to enter, intentionally or unintentionally, in its processes and products.

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<sup>1</sup> In Europe, the use of NPEO has been banned or voluntarily restricted since 1986. Since 1998, the use of APEO in detergents has been forbidden in Germany – and since [month] 2005 the EU directive 2003/53/ EG has forbidden the use of NPEO in higher concentrations than 0.1% in product formulations.

See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:178:0024:0027:en:PDF> (last seen Nov. 2016)

A further component of the investigation was a questionnaire based survey about the suppliers' awareness of the APEOs toxic features.



The survey played also the role to inform the suppliers about the health risks relevant to APEOs and to reinforce information about the company's APEOs ban policy.

The survey was undertaken at an individual supplier level, and was based on suppliers' self-declaration and self-assessment. All the measures were taken to incentivize the supplier to provide an open and honest evaluation. It is however important to note that the self-assessment nature of the survey brings some limitations to survey results and ensuing conclusions.

## **5 APEOs elimination in the Fellicolor Spa internal processes**

The basis of the investigation was an initial exploration of the company's internal processes through the testing of discharge waters – pre- water effluent treatment – at company's facilities.

### **5.1 Method**

First step was to implement water testing at the **Fellicolor Spa** main facilities by an independent certified lab, to check the presence of the 11 DETOX priority chemical groups, including APEOs, in the facilities' effluent water.

A test is considered "Pass" if the substance is "not detectable" at the specific method LOD. Best testing methods available at independent certified laboratories were used. For all APEOs the LOD is set at 1,0 µg/l. LODs of the other 10 priority groups can be found in the full test reports at [this link](#) in the **Fellicolor Spa** website.

The test was made in **July 2015**.

Results of the APEOs testing are summarized in the following table.

Figure 2 - Test results by product

Sample Type	Substance name	Cas n.	LOD	Pass/ Fail
Waste water	All APEOs	various	1,0 µg/l	Pass

## 5.2 Summary of results and action to be taken

Test was “Non detectable” for all APEOs in the sample. Thus, the test provided evidence that no APEOs are used in **Fellicolor Spa** processes.

✓ Future sampling plan & calendar

A supplement of investigation on the elimination of APEOs in our internal processes, especially on chemicals, will be carried out as part of our ongoing testing activities.

## 5.3 Survey with Fellicolor Spa suppliers

**Fellicolor Spa** recognizes that all suppliers must be involved in the process of the substitution of APEOs from the supply chain. Therefore, an investigation on the use of APEOs by suppliers was launched in October 2016.

### 5.3.1 Method: survey frame

In **October 2016**, **Fellicolor Spa** conducted a global survey with our chemicals’ suppliers to assess the cooperation of suppliers to investigate the presence of APEOs in the supply chain

A survey questionnaire was sent to 18 suppliers accounting for **86%** of relevant **Fellicolor Spa** supplies. All but 2 participated to the survey. The redemption rate was 89%. The 16 respondents account for **71%** of relevant **Fellicolor Spa** supplies.

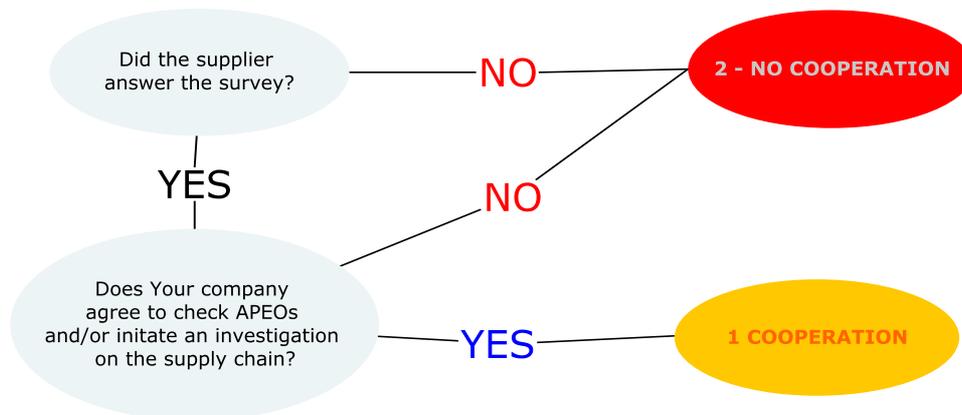
The survey was based on suppliers’ self-declaration, self-assessment. All the measures were taken to incentivize the supplier to provide an open and honest evaluation. It is however important to note that the self-assessment nature of the survey brings some limitations to survey results and ensuing conclusions.

### 5.3.2 Cooperation in investigating APEOs in the supply chain

The suppliers’ level of cooperation was surveyed with two specific questions:

- Q26. Will You agree to initiate an investigation on the presence of APEOs in the cleansing detergents consumed by Your Company and/or by your suppliers?
- Q27. In case APEOs are detected on the products You sell to our company will You agree to initiate an investigation to eliminate them and to have APEOs based detergents substituted with environmentally friendly ones (in your processes and/or by your suppliers)?

Figure 6 APEOs cooperation assessment model of all suppliers, including chemicals'



### ✓ Results

- 2 suppliers involved in the survey did not participate and 2 did not agree to initiate investigations. All 4 are classified “No cooperation”.
- 13 suppliers agreed to initiate an investigation for elimination and substitution in their chemicals and/or with their suppliers, and are classified “High cooperation”; one agreed to initiate an investigation if APEOs were found in the future, and is classified as “Cooperation”.

Thus, 14 “Cooperation” suppliers do not need any further action. The 4 “No cooperation” suppliers will be closely monitored.

## 6 Conclusions from the investigation and Fellicolor Spa next steps

**Fellicolor Spa** understands that there are multiple supply-chain pathways for potential APEO contamination (including chemical formulations) and is committed to enhancing both training and auditing of the supply chain to ensure suppliers have the latest information on APEOs, highlighting where there is a risk that APEOs may enter the undocumented contamination of chemical supplier formulations.

The elimination of APEOs across the supply chain is a key success metric for the individual action plans of **Fellicolor Spa**.

Initiatives are already in progress or implemented to ensure no APEOs can enter **Fellicolor Spa** products at different stages in the supply chain:

- the public M-RSL bans the use of APEOs since **March 2016**
- Supply contracts are being reformulated to reinforce full supply chain compliance with **Fellicolor Spa** APEOs elimination commitment
- An APEOs focused testing program was implemented in **July 2015** on **Fellicolor Spa** waste water

- A questionnaire survey was delivered to relevant suppliers in October 2016, to investigate the cooperation willingness of suppliers to investigate the presence of APEOs in the supply chain

#### Main findings

- No traces of APEOs were found on **Fellicolor Spa** Waste Water, providing no evidence of APEOs being used in the company's processes. We are proud of this result that is the outcome of the effort in the last years to ban APEOs from the chemicals used, through
  - o suppliers' selection;
  - o substitution of all detergents used in our processes with a single, surfactants-free detergent.
- The supplier survey was answered by 16 out of the 18 suppliers contacted, accounting for **71%** of relevant **Fellicolor Spa** supplies.
- The survey found that cooperation for APEOs elimination is satisfactory, with 14 "Cooperation" suppliers and 4 "No cooperation". An action aimed to improve cooperation of the latter will be set up in 2017 to foster risk prevention.

More in general, **Fellicolor Spa** is working to achieve active involvement across the supply chain in order to:

- Disseminate information about APEOs substitutes;
- Identify chemical formulations containing APEOs still in use;
- Identify alternative formulations or substances that guarantee equivalent results in industrial processing;
- Undertake systematic substitution to achieve total elimination across the supply chain.

**Fellicolor Spa**, as part of the Italian DETOXLeader Group together with Canepa Spa, Miroglio Group, Italdenim Spa, Berbrand Srl, Tessitura Attilio Imperiali Spa, Zip Gfd Spa, Ditta Gaetano Lanfranchi Spa, Ongetta Group, Taroni Spa, Mabo Spa, Alesilk Sas, Cottonificio Olcese Spa, Filmar Spa, Filmar Nile Textile S.A.E., Dienpi Srl, Imbotex Srl, Itaclab Srl, Maglificio Ripa Spa and Monticolor Spa, and is fully aware that only with the active participation of the entire fashion industry it is possible to deliver the desired outcomes on a global scale.