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Filmar Spa

APEOs Elimination Investigation Report

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The APEOs Elimination Investigation Report is in fulfillment of the [Filmar Spa](#) commitment to the DETOX solution which were made public on 1st June, 2016.

Filmar Spa supports the Detox solution to ban hazardous chemicals from fashion.



This report was prepared on behalf of Filmar 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.

Filmar 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 its supply chain to ensure that 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 **Filmar Spa**, starting from **June 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 Filmar Spa processes

Filmar Spa produce and sell cotton yarns made of superior quality with a uniquely Italian feel. Since 1958 Filmar have been passionately seeking out the best ways to finish this ancient material, selected in its most valuable variety: 100% Egyptian cotton. Since it first started manufacturing, the company has chosen the philosophy of pursuing excellence in every aspect of work, from raw materials to end-user service. The quality of the 100% Egyptian cotton is pursued right from its origins, in the farms

and cotton cultivation acquired by the company directly in Egypt. Continuous and substantial investments have led to the creation of new production areas with an operational area of 25,000 square meters equipped with cutting edge machinery which ensures an annual production of 2 million kilos of dyed yarn.

HQ and main production plant owned by **Filmar Spa** are in Zocco d'Erbusco (BS, Italy).

No wet processes take place inside **Filmar Spa** premises, thus there is no risk of APEO use in the company's internal operations.

Thanks to a long presence in the international textile industry and the fine quality of raw materials used for production the Company offers its clients an ever-growing, consolidated know-how when it comes to processing high-quality, complex yarns such as the Filoscozia[®]. Filoscozia[®] is a registered trade mark applicable only to gassed and mercerized yarn produced exclusively from the finest, highest extra-long staple quality cotton. The only two authorized Italian producers are **Filmar Spa** and Cotonificio Olcese Spa (both DETOX committed), thus making the Filoscozia production chain a very transparent and traceable one.

3 Risk of APEOs use in the Filmar Spa supply chain

Possible ways APEOs can find their way into **Filmar Spa** products are chemical auxiliaries such as: lubricants, antistatic agents, dispersants, emulsifiers, silicon based softeners, leveling agents, surfactants, and other auxiliaries with high content of dispersants or emulsifiers that can be used by suppliers of grey yarns and fabrics and of finishing services. APEOs can also be found on fibers, due to the large use of detergents for pulping wastes and other natural fibers production, and especially when raw materials are sourced in Countries where the use of APEOs is allowed¹ as APEOs can be found in cotton growing chemicals (for foliar feeding and fertilization), although the company cooperates closely with a selected group of farmers adopting practices with reduced chemical impact, also for the production of organic cotton, under the Cottonforlife Initiative. Moreover, the longstanding presence of **Filmar Spa** in the cotton sector has allowed the company to select a restricted supplier list which includes, in the first place, compliant raw materials suppliers.

¹ 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 2005 the EU directive 2003/53/ EG has forbidden the use of NPEO in higher concentrations than 0.1% in product formulations.

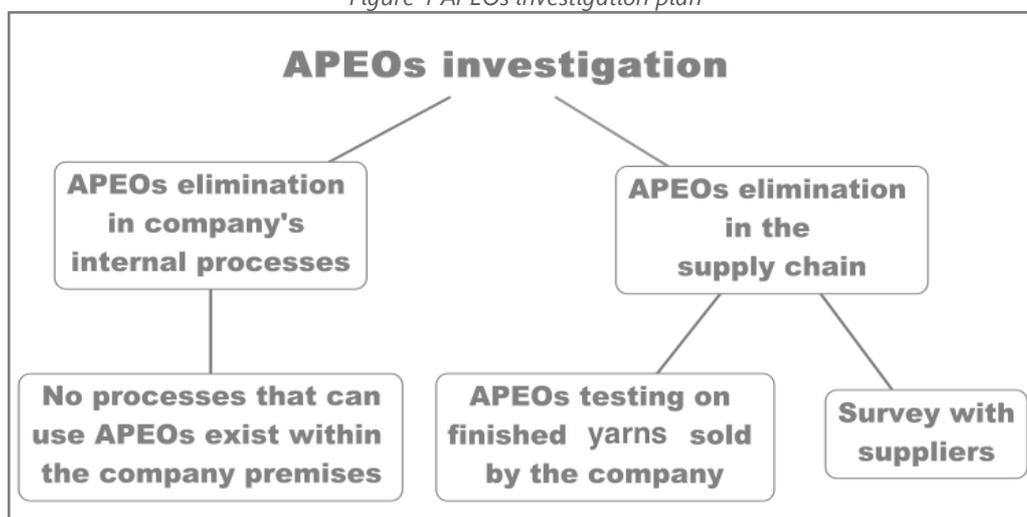
See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:178:0024:0027:en:PDF> (last seen Jan. 2016)

Filmar Spa has chosen to purchase a major share of its yarns, dyeing and finishing services from two Detox committed suppliers, namely **Filmar Nile Textile S.A.E.** and **Fellicolor Spa**.

4 The investigation plan

Consistent with the Detox commitments signed in **June 2016**, and as part of a program of work to eliminate APEOs and all hazardous chemicals, **Filmar Spa** carried out a fact-finding investigation about APEOs use in the supply chain.

Figure 1 APEOs investigation plan



APEOs can also enter the whole supply chain through both the raw materials and the yarn finishing, the best check-point is thus the finished yarn sold by **Filmar Spa**.

A component of the investigation on suppliers was a questionnaire based survey about the suppliers' awareness of the APEOs toxic features, the risk of APEOs. The survey was undertaken at 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.

The survey played also the role to inform the suppliers about the health risks relevant to APEOs and to reinforce information about **Filmar Spa** APEOs ban policy.

5 APEOs elimination in the Filmar Spa supply chain

5.1 APEOs Testing at Filmar Spa

An APEOs testing campaign has been implemented on a sample of finished yarns sold by **Filmar Spa**. Three products were sampled in **March 2016** representing different supply chains as per the below table:

Table 1 – Tested Products

Test Code	Product	Raw material origin	Ennobling origin
16RA02145	Cotton Yarn, M519 Pink	EGYPT	ITALY
16RA02143	Mélange Cotton Yarn, C50141 Mud	EGYPT	EGYPT
16RA02139	Cotton Yarn C50169 Flower	EGYPT	ITALY

The sampled items cover 70% of the company's production in 2016 and 80% of the company's suppliers.

✓ Pass / Fail threshold

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. The LOD is set at 0,7 mg/kg for NPEOs and OPEOs and at 1,0 mg/kg for NPs and OPs. LODs of the other 10 priority groups can be found in the full test reports at this [link](#) in the **Filmar Spa** website.

✓ Results

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

Table 2 - Test results by product

Substance tested	Cas n.	Sample	LOD	Pass/ Fail
NPEO (1-20)	Various	All samples	0,7 mg/kg	Pass
OPEO (1-20)	Various	All samples	0,7 mg/kg	Pass
Nonylphenols	Various	All samples	1,0 mg/kg	Pass
Octylphenols	Various	All samples	1,0 mg/kg	Pass

Test were Pass for all APEOs in all samples, providing no evidence of APEOs being used in the company's supply chain.

5.2 Survey with Filmar Spa suppliers

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

5.2.1 Method: survey frame

In October 2016, **Filmar Spa** conducted a survey with suppliers to assess:

- the risk of APEOs (intentional) use
- the cooperation of all suppliers, including chemicals', to investigate the presence of APEOs in the supply chain

A survey questionnaire was sent to 12 main suppliers, accounting for 80% of relevant **Filmar Spa** suppliers, 9 of the involved suppliers participated: 1 respondent is from Turkey, 4 from Egypt and 4 are from Italy. The survey redemption rate was around 75%.

The survey 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.

5.2.2 Risk of APEOs Intentional use by suppliers

The intentional use of APEOs by suppliers was investigated with a funnel questioning approach:

- Q7. Does Your Company use water in any manufacturing stage?
- Q8. (if yes to Q7) Does Your Company use cleansing detergents?
- Q9. (If yes to Q8) Does Your Company use surfactants?
- Q10. (If yes to Q9) Does Your Company use APEO based cleansing detergents?

The risk assessment model assumes that supplier not using water in the industrial processes makes the potential risk of intentional use of APEOs very low. The model however suffers from a limitation: the supplier (1st tier) can be unaware of APEOs use by its own suppliers (2nd or 3^d tiers), short of information about suppliers' own supply chain the limitation cannot be overcome. The assessment model, shown in Low risk. Action: ask supplier to investigate its own wet processes suppliers

Medium risk. Action: check supplier APEOs awareness, set monitoring plan

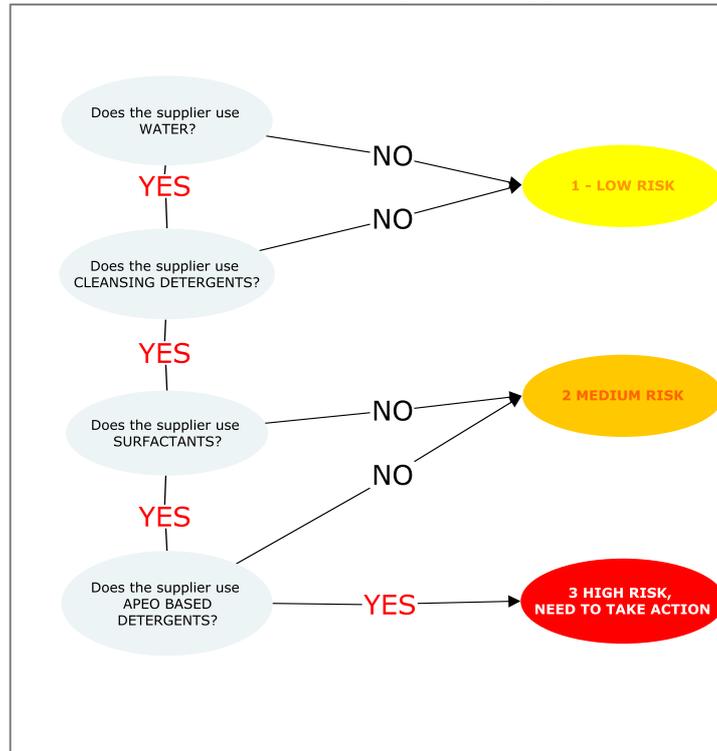
High risk. Action: request the supplier to eliminate APEOs or change supplier

Figure 2 suppliers' APEOs intentional use risk assessment model, identifies three levels of risk and the relevant actions to implement:

- **Low risk.** Action: ask supplier to investigate its own wet processes suppliers

- **Medium risk.** Action: check supplier APEOs awareness, set monitoring plan
- **High risk.** Action: request the supplier to eliminate APEOs or change supplier

Figure 2 suppliers' APEOs intentional use risk assessment model for raw material and wet processes suppliers



✓ Results

- 2 suppliers, **Filmar Nile Textile S.A.E.** and **Fellicolor Spa**, are Detox committed and classified NO RISK. APEOs were absent from last **Filmar Nile Textile S.A.E.** test report available [here](#) and **Fellicolor Spa** test report available [here](#).
- 3 suppliers were classified LOW RISK because not using water (1) or not using cleansing detergents (1), they will all be asked to investigate their wet processes suppliers.
- 4 suppliers were classified MEDIUM RISK because one does not use surfactants and three do not use APEOs, they will all be monitored.

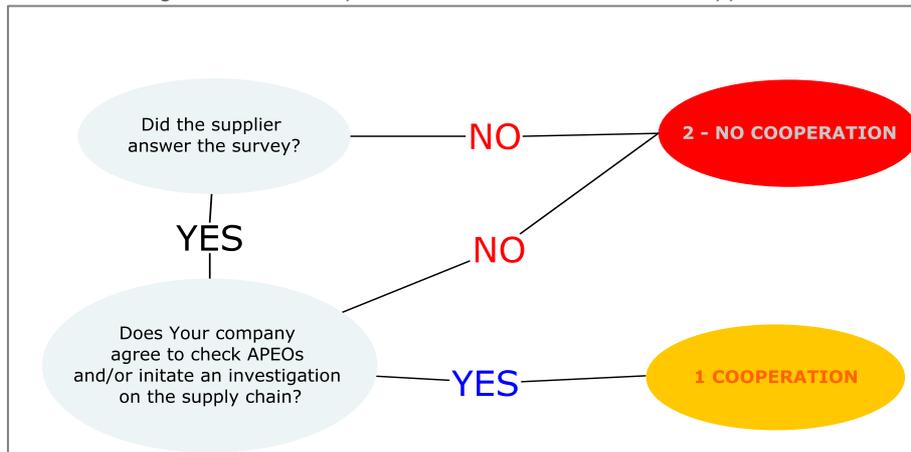
5.2.3 Cooperation in investigating APEOs in the supply chain

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?

Figure 3 APEOs cooperation assessment model of all suppliers



✓ Results

- 3 suppliers involved in the survey were classified as “NO COOPERATION” as they did not participate in the investigation, monitoring will be strengthened for these suppliers.
- 9 suppliers agreed to initiate an investigation on APEOs in any case, all of them were classified as (high) “COOPERATION” and do not need any further action.

6 Conclusions from the investigation and Filmar Spa next steps

Filmar understands that there are multiple supply-chain pathways for potential APEOs 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 the company. Initiatives are already in progress or implemented to ensure no APEOs can enter **Filmar’s** products at different stages in the supply chain:

- The public M-RSL bans the use of APEOs since **June 2016**.
- Supply contracts are being reformulated to reinforce full supply chain compliance with APEOs elimination commitment.

- An APEOs focused testing program was implemented in **March** and **June 2016** on a sample of products sold by the company and on waste water.
- A questionnaire survey was delivered to relevant suppliers in **October 2016**, to investigate:
 - o the risk of APEOs (intentional) use
 - o the cooperation willingness of all suppliers, including chemicals', to investigate the presence of APEOs in the supply chain.

Main findings

- Tests provided no evidence of APEOs being used in **Filmar** processes and supply chain
- The survey was answered by 9 of the 12 involved suppliers in the survey
- The survey highlighted an overall low risk of APEOs intentional use in the supply chain, with 2 NO RISK, Detox committed supplier, **Filmar Nile Textile S.A.E.** and **Fellicolor Spa**, 3 LOW RISK suppliers that will be asked to investigate their own wet processes and chemicals suppliers, and 4 MEDIUM RISK suppliers which monitoring will be strengthened.
- The survey found that cooperation for APEOs elimination is satisfactory with 9 suppliers classified (high) "COOPERATION", and 3 "NO COOPERATION". An action aimed to improve cooperation of the latter will be set up in 2017 to foster risk prevention.

Filmar 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.

Filmar, as part of the Italian DETOXLeader Group together with Canepa Spa, Miroglio Group, Italdenim Spa, Besani Srl, Berbrand Srl, Tessitura Attilio Imperiali Spa, Zip Gfd Spa, Cotonificio Olcese Spa, Ditta Gaetano Lanfranchi Spa, Fellicolor Spa, Mabo Spa, Itaclab Srl, Taroni Spa, Alesilk Sas, Dienpi Srl, Filmar Nile Textile S.A.E., Imbotex Srl, Italtexil Sarata Srl, Maglificio Ripa Spa, Monticolor Spa, Ongetta Srl, 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.