

## APYROL PES NEW

<b>Characterization</b>	Wash fast flame-retardant agent for 100 % polyester, 100 % polyamide and their blends
<b>Chemical Structure</b>	Alkyl phosphonate
<b>Supplied Form</b>	Clear, yellow liquid
<b>Ionic Character</b>	Non-ionic
<b>pH Value (in a 10 % Solution)</b>	1.4 – 3.7
<b>Stabilities</b>	APYROL PES NEW is sensitive to frost to a certain extent; changes occurring at low temperatures disappear again after warming up the product and stirring it thoroughly.
<b>Storage</b>	Store protected from frost and not above 40 °C in closed original containers; with a proper storage the product will hold for at least 12 months.

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The above given values are product describing data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

### Properties

Auxiliary for the flame-retardant finishing of 100 % polyester, 100 % polyamide and their blends with the following effects:

- no impact on the strength and stability of the substrate
- excellent fastnesses to washing and dry cleaning
- minimum influence on the bleeding and staining of the substrate
- minimum influence on the light fastnesses
- minimum impact on the handle

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### Application Technique

APYROL PES NEW can be applied by padding. Depending on the fabric weight and texture as well as on the liquor pick-up (squeezing effect) the required application amount is between 50 and 200 g/l.

The flame-retardant effect that can be achieved later is highly influenced by a thorough pre-cleaning of the substrate to be finished. All traces of size, oil and other finishing agents have to be removed completely.

Pre-trials for determining the required application amount are indispensable.

## **Processing Technique**

### **Application on PES Articles in the Padding Process**

#### Polyester Materials

After having padded APYROL PES NEW the material should be dried in an air drier or with a heated cylinder drier at 110 – 130 °C and subsequently heat-set at 190 – 205 °C for 2 - 1 min. It is good practice to dry and heat-set in one passage. After having finished heat-setting the material should be rinsed cold and dried.

When finishing pre-dyed polyester material shade variations may occur because of the heat-setting. The extent and type of these variations depend on the following:

- the shade and colour depth of the applied material and the sensitivity to sublimation of the disperse dye in use
- the temperature rate during heat-setting

A change in shade can be prevented in most cases by buffering the liquor with disodium hydrogen phosphate ( $\text{Na}_2\text{HPO}_4$ ) to pH 5.5 – 6.5. Simultaneously, possible corrosion problems on the finishing machines are avoided.

The shade variations can be controlled by working in a reproducible manner.

#### Polyamide Materials

After having padded the fabric drying is also effected at 110 – 130 °C, then the material is fixed at 160 – 180 °C for 60 – 40 sec. Afterwards, the material should be rinsed cold and dried. On PA fabrics we also recommend the use of disodium hydrogen phosphate.

#### **Hints for Handling with Prepared Liquors:**

If the liquors are not buffered with disodium hydrogen phosphate, we recommend the use of containers made of stainless steel or plastic to reduce corrosion problems caused by the low pH value of the liquor.

**We reserve the right to modify the product and technical leaflet.**

**Our department for applied technique is always at your service for further information and advice.**

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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