BI-IONIC FATLIQUOR

THE NEW BI-IONIC PULCRA FATLIQUOR FAMILY

Pulcra Chemicals
The solution specialist

Pulcra Chemicals has launched 3 new members of their bi-ionic fatliquor family. The new products are:

SIRIAL® WKC	concentrated bi-ionic fatliquor for superior softness, uniformity and mill pattern
SIRIAL® WKN	Bi-ionic fatliquor with good whiteness and softness
SIRIAL® AWK	bi-ionic fatliquor with reduced emissions for application in car-upholstery leather, including wet-white, e.g., with Pulcra Natur Tanning®

WHY CHOOSE BI-IONIC FATLIQUORS?

Bi-ionic fatliquors are synthetic products that offer a unique combination of anionic fatty molecules and cationic organic lubricating agents. This innovative formulation aims to achieve optimal performance in leather applications. After neutralization, the anionic component of the bi-ionic fatliquor penetrates uniformly throughout the entire cross-section of the leather, while the cationic component remains concentrated in the grain area. This distribution provides enhanced elasticity and a pleasing tactile experience. The extensive expertise in developing bi-ionic fatliquors ensures that the surface-active components are carefully matched to achieve optimal results. Depending on the intended application, these fatliquors deliver exceptional softness by harnessing the benefits of differently charged components. Additionally, they offer superior resistance to heat and light, achieving the highest possible levels of durability. The use of longer-chain molecules in products like Sirial AWK improves emission values, making it highly effective in fogging tests and VOC/FOG measurements according to VDA278 standards.

WHAT PROMPTED THE DEVELOPMENT OF NEW PRODUCTS?

The introduction of these new bi-ionic products stems from a combination of factors. Despite their synthetic nature, Pulcra Chemicals places great emphasis on incorporating natural raw materials into their formulations. Consequently, the new products feature a higher proportion of renewable rawstock-based materials. Additionally, the ever-evolving landscape of chemical legislation necessitates continuous formulation adjustments to meet new requirements. Some components of the existing products have undergone changes in their hazard classification, prompting Pulcra Chemists to modify these components to ensure the future usability of their fatliquors. Extensive testing has been conducted on the new products, both at Pulcra's application laboratories and in large-scale tannery trials, confirming their viability and effectiveness.

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WHAT LEADS TO **CHANGES IN THE HAZARD CLASSIFICATION** OF CHEMICALS?

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The hazard classification of chemicals undergoes changes due to ongoing scrutiny by chemical authorities, particularly in the European Union (EU), with a focus on ensuring safety. Extensive testing, including tests conducted on living animals, provides valuable insights into various aspects of chemicals, such as potential effects on reprotoxicity or sensibilization. As regulations governing harmful substances become increasingly stringent, there is a continuous need to replace substances that were previously considered harmless. Pulcra Chemicals firmly believes that managing chemicals is essential for maintaining high standards of workplace safety and ensuring consumer security for those using leather products.

RESULTS APPLICATION BI-IONIC PRODUCTS

	Condition	% (*)	Requirement	SIRIAL® WKC	SIRIAL® WKN	SIRIAL® AWK
Heat Yellowing	144h/100°C	16	> 4	**4.3**	**4.5**	**4.5**
	400h/100°C		≥ 3	**3.8**	**4.0**	**3.8**
Light Fastness	Suntest 48h		≥ 3	**4.0**	**4.3**	**4.0**
Emulsion	Pickle		n.a.	++	++	++
	60dH		+	++	++	++
Fogging on wb	Grav. 16h/100°C	2x6	< 2mg			**1.6**
	Refl. 6h/75°C		> 80%			**85**
Emission VDA 278	VOC		< 200 ppm			**50**
	FOG		< 3.000 ppm			**250**

(*) amount of applied product, on shaved wet-blue (wb)

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