

# **AROSURF® Softness solutions for tissue and fluff pulp**



# OUR COMPETENCE FOR YOUR SOFT AND SAFE PRODUCTS

Evonik is one of the world's leading specialty chemicals companies. Our activities focus on the key megatrends health, nutrition, resource efficiency and globalization. We are active in over 100 countries around the world. The continuous expansion of our global presence in growth markets ensures outstanding growth prospects for our specialty chemicals business area. A balanced spectrum of business activities and end-markets is guaranteed by a close collaboration with our customers and a joint search for solutions. These are the key factors to our success.

Our outstanding application and process expertise is based on a broad technology platform of organic specialty surfactants and organomodified siloxanes. Our product range covers a variety of products with specific application profiles, which address almost all needs of the tissue and fluff pulp industry: softeners and debonders under the AROSURF®, VARISOFT®, and REWOQUAT® trade names as well as softeners and pulp and paper defoamers under the TEGOPREN® trade name.

Providing service, state-of-the art quality, and know-how the Tissue Compe-

tency Center in Richmond, Virginia is a global support application and product development laboratory. The Tissue Competency Center provides customers with technical support and application data showing how Evonik products enhance the customer's products performance. The lab can form hand sheets and test them for various properties such as strength, absorbency and softness. In a close face-to-face collaboration, we will find the solution to enhance the value of your products.

**Product Characteristics**

PRODUCT	APPEARANCE AT ROOM TEMPERATURE	COLOR	ODOR	CHEMICAL BASE	SOLVENT	FOOD CONTACT COMPLIANCE (FDA, BFR) OR COSMETIC INGREDIENT (INCI)
AROSURF® PA-777 AROSURF® PA-777 V	liquid	medium	characteristic, strong	fatty quaternary blend	solvent-free	FDA and BfR
AROSURF® PA-780 AROSURF® PA-780 V	liquid	medium	characteristic, strong	fatty quaternary blend	solvent-free	FDA and BfR
AROSURF® PA-852	liquid	light	mild to low	fatty quaternary blend	solvent-free	FDA
AROSURF® PA-844 AROSURF® PA-844 V	liquid	dark	characteristic, strong	fatty quaternary blend	solvent-free	FDA and BfR
AROSURF® PA-842 AROSURF® PA-842 V	liquid	dark	characteristic, strong	fatty quaternary blend	solvent-free	FDA and BfR
AROSURF® PA-858	liquid	clear, slight yellow	slight surfactant odor	non-ionic	propylene glycol (less than 4%)	FDA and INCI
AROSURF® PA-871	liquid	colorless	low	organic nonionic	solvent-free	FDA and INCI
TEGOPREN® 5884-35	liquid	colorless	low	nonionic siloxane	water	FDA, BfR and INCI

V: vegetable

**Application Profile**

PRODUCT	Property highlights (for wet end/spray-on application)			RECOMMENDED TO USE ON (FEEDSTOCK)	Suggestion for Application		
	DEBONDING	LUBRICATION	MAIN EFFECT ON TISSUE		WET END	SPRAY-ON	CONVERTING <sup>1)</sup>
AROSURF® PA-777 AROSURF® PA-777 V	medium to high	medium	medium bulk	fluff pulp	•	•	
AROSURF® PA-780	medium	high	medium bulk, more absorbent debonder for fluff pulp	virgin (medium to high content of long fiber) and/or recycled fiber, fluff pulp	•	•	•
AROSURF® PA-780 V	medium	high	medium bulk	virgin and/or recycled fiber, fluff pulp	•	•	•
AROSURF® PA-842	high	low	high bulk	virgin (medium to high content of long fiber)	•	•	
AROSURF® PA-842 V	high	low	high bulk	virgin (medium to high content of long fiber) and/or recycled fiber, fluff pulp	•	•	
AROSURF® PA-844 AROSURF® PA-844 V	medium	medium	medium/high bulk	virgin and/or recycled fiber	•	•	
AROSURF® PA-852	very low	high	surface smoothness and increased fiber flexibility without lose of strength	virgin (high content of short/eucalyptus and/or long fibers) and/or recycled fiber		•	•
AROSURF® PA-858	no	high	surface smoothness, sheet flexibility	all grades		•	•
AROSURF® PA-871	no	high	surface smoothness	virgin and/or recycled fiber		•	•
TEGOPREN® 5884-35	no	high	surface lubrication	virgin and/or recycled fiber		•	•

<sup>1)</sup> Formulation base and/or concentrate for ready to use converting softeners /lotions

# ABOUT OUR PRODUCTS



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**The product range of Evonik covers a variety of products with specific application profiles which address almost all the needs of the tissue industry**  
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## **PROPERTIES**

- Highly substantive wet end softener/debonders with high, medium and low debonding effect for premium to low sheet bulkiness with all qualities of feedstocks
- Highly substantive softeners with low impact on tensile strength to achieve good machine runnability and excellent surface smoothness of the tissue
- Substantive or non-substantive softeners for topical application on the sheet before the dryer combining moderate bulkiness with good surface softness of the tissue
- Concentrates for converting softeners/lotions

Most of our products are food contact compliant (FDA and/or BfR) or INCI listed (cosmetic ingredients).

## **APPLICATION**

Application on the Tissue Machine  
Our softener/debonders are introduced at several points in the wet end: head-box, stuff box or machine chest. They should be incorporated into the furnish at the point in the wet end which maximizes contact time with the fibers, thus allowing complete and uniform exhaustion of our substantive products.

Alternatively, our softeners and softener/debonders may be applied on the tissue machine before the Yankee by spray on felt techniques.

For spray on felt application, the sprayable dilutions may easily be prepared on-line with a static mixer and applied to the wet sheet by currently

used spray bars. The topical softener needs to be easily dispersible in water, so a longterm emulsion stability is not always necessarily required or desired. Since softeners and softener/debonders may also affect release properties on the dryer, they must be matched to the Yankee coating package to ensure that maximum benefits are achieved by both additives.

## **APPLICATION ON CONVERTING**

Our concentrates recommended for converting may be diluted or further formulated to ready to use softeners/lotions. Due to the variety of specific requirements and application techniques like spray, kiss roll or rotor damping, we offer assistance for the development of customized solutions.

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