

LK-ASF TEXTILE FINISHING FLUIDS

LK- ASF TEXTILE FINISHING FLUIDS are non-reactive amino modified silicone fluids that give excellent softness with durability.

FEATURES

- Gives an excellent soft handle
- Resistant to washing and abrasion
- Non-Reactive
- Readily form micro emulsions that are dilution stable
- Amino functional silicone
- Compatible with other finishing agents
- 100% active
- Emulsion stable in up to 600-ppm hard water and 0.1% electrolyte.

APPLICATIONS

LK- ASF non-reactive fluids can be easily converted into micro emulsion by using non-ionic emulsifiers. These emulsions can be used in textiles & leather to generate soft handle, suppleness & silky finish that is capable of withstanding repeated washing cycles. They are especially useful for cottons, sarees, suiting, etc to impart softness and body to the fabric. Choice of fluid depends on type and degree of softness required and coloration.

PRODUCT SELECTION GUIDE

LK- ASF 09 are non-reactive amino modified silicone fluids that give excellent surface smoothness along with softness and durability. **LK-ASF 50** gives the best inner softness and **LK-ASF 55** should be used if yellowing is a concern. If yellowing is not of concern (dark fabrics), the best softness is achieved by **LK-ASF 60 / ASF-75** use of different combination formulation for better modified effects

PRODUCT CHART ¹						
Product Name	Specific Gravity	Refractive Index	Amine Value (mg KOH/gm product)	Viscosity 25°C in cps (Brookfield Viscometer)	Appearance	Volatile Content (110°C /1 hr)
LK ASF 09	0.97	1.408	8.0	12500	Clear to slight hazy	<6%
LK ASF 50	0.97	1.408	30	150	Clear to slight hazy	<12%
LK ASF 55	0.97	1.408	15	150	Clear to slight hazy	<12%
LK ASF 60	0.97	1.408	35	1000	Clear to Faint Yellow slight hazy liquid	<6%
LK ASF 75	0.97	1.408	60	100	Clear to Faint Yellow slight hazy liquid	<12%

Typical Values – Should not be considered as specifications.

SUGGESTED APPLICATION METHOD AND FORMULATION

Micro-emulsions are recommended for usage and are suitable for padding. The most suitable diluents for the micro emulsion are Water. For macro-emulsification processes please contact our technical staff.

Suggested micro-emulsification process for LK ASF 50/60:

- | | | |
|-------------------------|-------|---|
| 1. LK-903 | :8 | % |
| 2. LK-ASF 50/60 | :12 | % |
| 3. Acetic Acid (98%) -1 | :0.1 | % |
| 4. Water-1 | :4 | % |
| 5. Water-2 | :74 | % |
| 6. Acetic Acid (98%) -2 | :0.17 | % |

(*Maintain emulsion mixture temperature below 50°C)

1. Charge LK-903 non-ionic emulsifier, Acetic Acid-1 and then LK-ASF 50/60 in a suitable mixer (preferably with hanging saw tooth blade agitator) and mix for 10 minutes.
2. Add Water – 1 and stir for 60 minutes.
3. Add Water – 2 and stir for 60 minutes.
4. Add acetic Acid –2 and stir for 30 minutes or until homogenous product is obtained. Filter if necessary. This gives a 20 ± 2 % micro emulsion.

Suggested micro-emulsification process for LK ASF 55:

1. LK-903 :8 %
2. LK-ASF 55 :12 %
3. Acetic Acid (98%) :0.27 %
4. Water-1 :2 %
5. Water-2 :78 %

(*Maintain emulsion mixture temperature below 50°C)

1. Charge LK-903 non-ionic emulsifier in suitable mixer (preferably with hanging saw tooth blade agitator)
2. Start mixing and add Water -1 and Acetic Acid-1. Stir for 10 minutes
3. Add LK-ASF 55 and stir for 60 minutes ensuring there is no oily build up on the wall.
4. Add Water – 2 and stir for 90 minutes. Filter if necessary. This gives a 20 ± 2 % micro emulsion.

Suggested macro-emulsification process for LK ASF 09

1. LK-906 : 10 %
2. LK-ASF 09 : 10 %
3. Acetic Acid (98%) : 0.2 %
4. Water : 80 %

(*Maintain emulsion mixture temperature below 50°C)

1. Charge LK-906 non-ionic emulsifier in suitable mixer (preferably with hanging saw tooth blade agitator)
2. Mix Acetic Acid and stir for 10 minutes.
3. Add LK-ASF-09 and stir for 60 minutes.
4. Add Water and stir for 90 minutes or until homogenous product is obtained. This gives a 20 ± 2 % micro emulsion. Filter if necessary.

*LK-ASF- 09 gives a slightly hazy to translucent emulsion.

Padding: An amount equivalent to 0.2 to 2 grams per liter active LK ASF fluid (1 liter of 20% micro emulsion in 100 liters water gives 1.2 grams active or 2 grams solids per liter) should be added to the padding bath depending on the fabric and feel desired for 15-20 minutes. Fabric should then be dried and cured at 160-180°C for 40-60 seconds.

PRODUCT PROPERTIES							
Product Name	Feel	Non-Yellowing	Body	Softness	Bounce	Durability	Substrates ³
LK ASF 09	High Surface smoothness	***	***	****	*****	***	C, V, B
LK ASF 50	Inner softness and silky	**	*	****	*	***	C, V, P, CV, B
LK ASF 55	Inner softness and silky.	****	*	***	*	***	C, V, P, B
LK ASF 60	Super softness with luster	*	*****	*****	**	*****	C, V, P, CV
LK ASF 75	Super softness with luster	*	*	*****	*	*****	C, V, P, CV

Ratings are relative to each other and other ELKAY Textile finishing fluids (*****-Best) (*-worst)

³(C-Cotton, V-Viscose, P-Polyester, CV-Cotton/Viscose, B-Blends)

PACKING

50 kg H.D.P.E. carboys and 200-kg drums.

SHELF LIFE

Nine months in the original container.

STORAGE & HANDLING

It is recommended that normal safety precautions (hand gloves & safety goggles) be taken while handling the product. The material should be stored in original ELKAY containers in a cool place and protected from direct exposure to sunlight.

The information provided to the customers in this data sheet is intended as a guideline and is provided in good faith. The information is believed to be accurate. Changes may occur from system to system as methods of use and conditions are beyond our control, hence **users are requested to evaluate the recommendations before actual application to get desired performance.**

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Internal References PS/Ref/03/01 DX30101.