

Nonionic Surfactants Product Guide

Cardanol ethoxylate

Kingfine XF-7
Kingfine XF-9
Kingfine XF-10
Kingfine XF-13

ISO-C13 alcohol ethoxylate

Kingfine 1305S	Kingfine 1305M
Kingfine 1306S	Kingfine 1306M
Kingfine 1307S	Kingfine 1307M
Kingfine 1308S	Kingfine 1308M
Kingfine 1309S	Kingfine 1309M

ISO-C10 alcohol ethoxylate

Kingfine 1005M	Kingfine 1005B	Kingfine 1005L
Kingfine 1007M	Kingfine 1007B	Kingfine 1007L
Kingfine 1008M	Kingfine 1008B	Kingfine 1008L
Kingfine 1009M	Kingfine 1009B	Kingfine 1009L

Fatty alcohol polyoxyethylene

Kingfine AEO-3
Kingfine AEO-5
Kingfine AEO-7
Kingfine AEO-9

Technical Bulletin

We committed to the perfect
combination of dyes and auxiliaries
for our global customers

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Ranger Dyestuff (Shanghai) Co., Ltd
Zhejiang Kefeng Silicone Co., Ltd
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Kingfine XF series

Cardanol ethoxylate

The Series of Kingfine XF are alkoxylated plant polyene phenols. The main components are from natural plants, and the biodegradability is very good. It does not contain nonylphenol, nonylphenol polyoxyethylene ether, octylphenol, octylphenol polyoxyethylene Vinyl ethers (NP, OP, NPEOs, OPEOs).

This series of products are widely used in the fields of textile printing and dyeing auxiliaries, leather auxiliaries, papermaking chemicals and other light industrial auxiliaries, as well as industrial cleaning, civil cleaning and other fields.

Properties

Property	Kingfine XF-7	Kingfine XF-9	Kingfine XF-10	Kingfine XF-13
Appearance	Light yellow liquid	Light yellow-brown liquid	Light yellow-brown liquid	Light yellow-brown liquid
Solid content (% , 110°C)	≥99.5	≥99.5	≥99.5	≥99.5
Color shade (Nagad Method)	2-4	2-4	2-4	2-4
pH value	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5
Viscosity (mPa s, 25°C)	210±30	240±30	270±30	270±30
Density (g/cm ³ , 25°C)	1.03±0.02	1.04±0.02	1.05±0.02	1.05±0.02
Cloud point (°C)	46.5±1.5	76.0±1.5	84.5±1.5	92.0±1.5
Hydroxyl Value (mg KOH/g)	81-87	69-76	64-72	59-72
HLB	~11.6	~12.8	~13.3	~13.8

Note: (1) pH value test solution: 1% aqueous solution
(2) Cloud point test solution: 2% aqueous solution

Solubility and Compatibility

This series of products are soluble in water, and the dissolution speed can be greatly accelerated by using hot water or alcohol ether solvent to help dissolve. Not limited by ionicity, this series of products can be mixed with other non-ionic, anionic or cationic products.

Storage/ Shelf Life

This product should be sealed and stored in a cool and dry place to avoid sun and rain. Storage temperature is between 5-40°C. If the storage temperature is lower than 20°C, the product may appear turbid, delaminated or even solidified, but it will not affect the performance of the product. Before use, properly heat and thoroughly mix the contents of the barrel or container to ensure that the product is a homogeneous product before use. Surfactants are hygroscopic, and when the container is opened, the product will absorb moisture from the environment and air will enter the container, which may cause slow oxidation of the product, which may eventually lead to a darkening of the product or a drop in pH. For unopened original packaging products, the shelf life is 12 months from the date of production.

Package

125kg plastic drums and 200kg galvanized drums.

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Kingfine 13 series

ISO-C13 alcohol ethoxylate

The series of products are divided into three categories due to different ISO-C13 alcohol, namely Sasol ISO-C13 alcohol, Mobil ISO-C13 alcohol, and BASF ISO-C13 alcohol.

As a result of the special ISO-C13 alcohol, this series of products has the following properties:

- ✧ Excellent emulsifying behaviour.
- ✧ High surface activity and good hard water stability.
- ✧ Good chemical stability over a wide pH range.
- ✧ Synergistic effects with other surfactants.
- ✧ Favorable environmental characteristics.

Kingfine 13 series can be used as emulsifiers or auxiliaries in various industrial processes, such as scouring agents for textiles, degreasing and fatliquoring auxiliaries in leather processing, metal processing auxiliaries, as well as various detergents, household cleaning agents and industrial and public facilities cleaning agent with excellent penetration, wetting and degreasing.

Sasol ISO-C13 alcohol ethoxylate

Property	Kingfine 1305S	Kingfine 1306S	Kingfine 1307S	Kingfine 1308S	Kingfine 1309S
Appearance at 25°C	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid
Active substance (wt %)	≥99.5	≥99.5	≥99.5	≥99.5	≥99.5
pH (5% water solution)	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0
Cloud Point (°C)	64.0-66.0 ⁽¹⁾	69.0-71.0 ⁽¹⁾	72.0-75.0 ⁽¹⁾	76.0-78.0 ⁽¹⁾	57.0-59.0 ⁽²⁾
HLB	~10.5	~11.4	~12.1	~12.8	~13.3

Note: (1) Cloud point test solution: 10% a.m in 25% BDG solution
(2) Cloud point test solution: 1% a.m in water solution

Mobil ISO-C13 alcohol ethoxylate

Property	Kingfine 1305M	Kingfine 1306M	Kingfine 1307M	Kingfine 1308M	Kingfine 1309M
Appearance at 25°C	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid
Water content (wt %)	≤0.3	≤0.3	≤0.3	≤0.3	≤0.3
pH (1% water solution)	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0
Cloud Point (°C)	~65.0 ⁽¹⁾	~70.5 ⁽¹⁾	~75.0 ⁽¹⁾	~48.0 ⁽²⁾	~56.0 ⁽²⁾
HLB	~10.5	~11.0	~12.0	~13.0	~13.5

Note: (1) Cloud point test solution: 10% a.m in 25% BDG solution
(2) Cloud point test solution: 1% a.m in water solution

Solubility and Compatibility

This series of products are soluble in water, and the dissolution speed can be greatly accelerated by using hot water or alcohol ether solvent to help dissolve. Not limited by ionicity, this series of products can be mixed with other non-ionic, anionic or cationic products.

Storage/ Shelf Life

This product should be sealed and stored in a cool and dry place to avoid sun and rain. Storage temperature is between 5-40°C. If the storage temperature is lower than 20°C, the product may appear turbid, delaminated or even solidified, but it will not affect the performance of the product. Before use, properly heat and thoroughly mix the contents of the barrel or container to ensure that the product is a homogeneous product before use. Surfactants are hygroscopic, and when the container is opened, the product will absorb moisture from the environment and air will enter the container, which may cause slow oxidation of the product, which may eventually lead to a darkening of the product or a drop in pH. For unopened original packaging products, the shelf life is 12 months from the date of production.

Package

125kg plastic drums and 200kg galvanized drums.

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Kingfine 10 series

ISO-C10 alcohol ethoxylate

The series of products are divided into three categories due to different ISO-C10 alcohol, namely Mobil ISO-C10 alcohol, and C10-Guerbet alcohol.

This series of products have low foam, high surface activity, excellent wetting penetration, degreasing, emulsifying and dispersing ability.

This series of products can be widely used in textile, leather, daily chemical, industrial and commercial cleaning, emulsion polymerization and other industries. And those products can be used as emulsifier, dispersant, scouring agent, cleaning agent and wetting agent.

Mobil C10 alcohol ethoxylate

Property	Kingfine 1005M	Kingfine 1007M	Kingfine 1008M	Kingfine 1009M
Appearance at 25°C	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid
Water content (wt %)	≤0.3	≤0.3	≤0.3	≤0.3
pH (1% water solution)	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0
Cloud Point (°C)	~62.0 ⁽¹⁾	~71.0 ⁽¹⁾	~55.0 ⁽²⁾	~68.0 ⁽²⁾
HLB	~11.5	~13.0	~14.0	~14.5

Note: (1) Cloud point test solution: 10% a.m in 25% BDG solution

(2) Cloud point test solution: 1% a.m in water solution

C10-Guerbet alcohol ethoxylate

Property	Kingfine 1005B	Kingfine 1007B	Kingfine 1008B	Kingfine 1009B
Appearance at 25°C	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid
Water content (wt %)	≤0.3	≤0.3	≤0.3	≤0.3
pH (1% water solution)	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0
Cloud Point (°C)	~62.0 ⁽¹⁾	~71.5 ⁽¹⁾	~55.5 ⁽²⁾	~68.5 ⁽²⁾
HLB	~11.5	~13.0	~14.0	~14.5

Note: (1) Cloud point test solution: 10% a.m in 25% BDG solution

(2) Cloud point test solution: 1% a.m in water solution

C10-Guerbet (C) alcohol ethoxylate

Property	Kingfine 1005L	Kingfine 1007L	Kingfine 1008L	Kingfine 1009L
Appearance at 25°C	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid	Clear or slightly hazy liquid
Water content (wt %)	≤0.3	≤0.3	≤0.3	≤0.3
pH (1% water solution)	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0
Cloud Point (°C)	~62.0 ⁽¹⁾	~71.5 ⁽¹⁾	~55.5 ⁽²⁾	~68.5 ⁽²⁾
HLB	~11.5	~13.0	~14.0	~14.5

Note: (1) Cloud point test solution: 10% a.m in 25% BDG solution

(2) Cloud point test solution: 1% a.m in water solution

Solubility and Compatibility

This series of products are soluble in water, and the dissolution speed can be greatly accelerated by using hot water or alcohol ether solvent to help dissolve. Not limited by ionicity, this series of products can be mixed with other non-ionic, anionic or cationic products.

Storage/ Shelf Life

This product should be sealed and stored in a cool and dry place to avoid sun and rain. Storage temperature is between 5-40°C. If the storage temperature is lower than 20°C, the product may appear turbid, delaminated or even solidified, but it will not affect the performance of the product. Before use, properly heat and thoroughly mix the contents of the barrel or container to ensure that the product is a homogeneous product before use. Surfactants are hygroscopic, and when the container is opened, the product will absorb moisture from the environment and air will enter the container, which may cause slow oxidation of the product, which may eventually lead to a darkening of the product or a drop in pH. For unopened original packaging products, the shelf life is 12 months from the date of production.

Package

125kg plastic drums and 200kg galvanized drums.

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Kingfine AEO series

Fatty alcohol polyoxyethylene

This series of products are long carbon chain straight chain fatty alcohol polyethoxylates with high surface activity, excellent wetting and penetrating properties, excellent degreasing, emulsifying and dispersing abilities, non-toxic and environmentally friendly, etc. .

This series of products are widely used in textile, leather, daily chemical, industrial and commercial cleaning, emulsion polymerization and other industries.

Properties

Property	Kingfine AEO-3	Kingfine AEO-5	Kingfine AEO-7	Kingfine AEO-9
Appearance	Clear liquid	Colorless liquid	Light yellow-brown liquid	Light yellow-brown liquid
Water content (% , 110°C)	≤0.1	≤0.1	≤0.1	≤0.1
Color (Pt-Co)	≤30	≤30	≤30	≤30
pH value (1% solution)	5.0-7.0	5.0-7.0	5.0-7.0	5.0-7.0
Cloud point (°C)	~61.5 ⁽¹⁾	~72.0 ⁽¹⁾	~56.5 ⁽²⁾	~79.5 ⁽²⁾
Hydroxyl Value (mg KOH/g)	169.0±4.0	137.0±4.0	111.0±3.0	93.0±3.0
HLB	~8.0	~10.5	~12.0	~13.5

Note: (1) Cloud point test solution: 10% a.m in 25% BDG solution

(2) Cloud point test solution: 1% a.m in water solution

Solubility and Compatibility

This series of products are soluble in water and solvent. Not limited by ionicity, this series of products can be mixed with other non-ionic, anionic or cationic products.

Storage/ Shelf Life

The product should be stored in a cool, dry and ventilated area in tightly closed containers below 40°C, protected from light and moisture. If the product is stored at a low temperature it may turn cloudy, solidify or form layers. It is therefore advisable to heat and thoroughly mix the contents of drums or containers before using in order to obtain a homogeneous product.. For unopened original packaging products, the shelf life is 12 months from the date of production.

Package

200kg plastic drum or steel drum, 1000kg drum or bulk.

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