



KELONG SHARES



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 LIAONING KELONG FINE CHEMICAL CO.,LTD

BROCHURE

PRODUCT BROCHURE

**FINE CHEMICAL
PRODUCTS SERIES**

**ADVOCATES OF
GREEN CHEMICAL INDUSTRY**

**STOCK ABBREVIATION
KELONG SHARES**

**STOCK CODE
300405**



KELONG SHARES

GREEN BUILDING MATERIALS ENTREPRENEUR

INTRODUCTION



SINCE 2002

LIAONING KELONG FINE CHEMICAL CO.,LTD

Liaoning Kelong Fine Chemical Co.,Ltd was founded in 2002, consisting of over 500 staffs by now,which 30 of them are research specialists with master and doctor degree.

The company is a fine chemical supplier based on the ethylene oxide and has satisfied perfect product lines of polycarboxylate -based superplasticizer, cutting fluid of silicon for solar energy, multifunctional finishing agent, coating additives and SCR industrial denitration catalyst production. Its products have been widely used in daily, medicine, spinning and textile printing, coating, printing ink, oil exploitation, metal processing, building and IT industries.

Liaoning Kelong Fine Chemical Co.,Ltd. was an integration of scientific research, production, sales and application of high-tech enterprise. Our products have been passed CRCC certification by China railway production. Company successfully listed on the Shenzhen stock exchange (Kelong shares Stock Code: 300405) on October 30, 2014.

The company comes out among the best suppliers of polycarboxylate-based superplasticizer in domestic, and has customers across the country and products well sold in the United States, Brazil, Russia, Turkey, India, Thailand, South Korea, Vietnam, Malaysia, South Africa, Tunis, etc. We had 8 offices set throughout the country and aim to better serve our customers with the best and quickest quality products and technical supports.

ADVOCATES OF
GREEN
CHEMICAL INDUSTRY

FINE CHEMICAL PRODUCTS SERIES

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COATING AUXILIARIES

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KL-EPH

PRODUCT INTRODUCTION

Chemical name: Phenoxyethanol

Chemical formula: $C_8H_9OCH_2CH_2OH$

Molecular weight: 138.17

Synonym(s): 2-Phenoxyethanol Phenyl cellosolve

Ethylene glycol monophenyl ether

CAS No.: 122-99-6

PRODUCT APPLICATION

- 1 KL-EPH can be served as the solvent for acrylic resin, nitrocellulose, cellulose acetate, ethyl cellulose, epoxy resin, phenoxy resin.
- 2 It is generally used as the solvent, and improving agent for paints, printing ink, and ballpoint ink, as well as the infiltrating and bactericide in the detergents, and film-forming aids for water-based coatings.
- 3 As a dyeing solvent, it can improve the solubility of the PVC plasticizer, the properties that enable the cleaning of printed circuit board and surface treatment of plastic, and become an ideal solvent for methyl hydroxybenzoate.
- 4 It is an ideal preservative in pharmaceuticals and cosmetic industry.
- 5 It is used as an anesthetic and fixative for perfume.
- 6 It's as an extractor in petroleum industry. It can be used in UV curing agent and carrier liquid of liquid chromatography.

PACKAGE & STORAGE

- 1 200kg plastic drum/iso tank.
- 2 It is nonhazardous and should be stored in cool and ventilated place away from sunlight.
- 3 The shelf-life is normally one years.

TECHNICAL PARAMETER

Item	Unit	Industrial grade	Pharmaceutical grade
Appearance	—	Little yellow liquid	Colorless liquid
Assay	%	≥90.0	≥99.0
Phenol	ppm	—	≤25
PH	—	5.0~7.0	5.5~7.0
Color	APHA	≤100	≤30



KL-PPH

PRODUCT INTRODUCTION

Chemical name: Propylene glycol phenyl ether

Synonym(s): 1-phenoxy-2-propanol

Propylene phenoxetol

CAS No.: 770-35-4

PRODUCT USAGE

It is recommended that the KL-PPH is added before emulsion or when pigments are ground, so that it can easily couple with other substances in the formulation, and achieve better emulsifying and dispersing effect, while having no effects on the stability of pigments, etc.

Generally speaking, KL-PPH is added 3.5~6% in purified acrylic ester photopolymer emulsions, 2.5~4.5% in vinyl acetate-acrylic ester emulsions, 2~4% in styrene-acrylic ester copolymer emulsions.

PRODUCT APPLICATION

KL-PPH is nontoxic and environmental and has remarkable impacts on reducing the VOC of the coatings. It's a strong solvent for alkyd resin, epoxy resin, acrylic resin, etc. Because of high boiling point, good miscibility, moderate evaporation rate, good coalescing and coupling ability, KL-PPH can provide excellent flow and leveling, luster, while helping prevent coating defects such as pinholing, orange peel, cracking and popping. KL-PPH can substitute for isophorone, anone, dibasic ester, benzyl alcohol, ethylene glycol ether, other propylene glycol ether, etc. On the same condition, such as luster, fluidity, color-folding properties, cleaning resistance, etc, the usage of KL-PPH is decreased to 30~50% as compared with common film-forming auxiliaries. Because of excellent coalescing ability, KL-PPH can make the comprehensive film-forming efficiency increase 1.5~2 fold and remarkably reduce the production cost, KL-PPH is added 3.5~5% in most of emulsions and minimum film-forming temperature (MMFT) can reach to -1°C.

KL-PPH is widely used in top-grade automobile coatings, automobile repair coatings, electrophoresis coatings, shipping and container coatings, architecture coatings, furniture coatings. It is also used as protective agent in printing ink, paint remover, adhesives, insulated materials, cleaning agent, perfumes for soap and cosmetics, coupling agent for dissolving of dye.

PACKAGE & STORAGE

- 1 200kg plastic drum/iso tank.
- 2 It is nonhazardous and should be stored in cool and ventilated place away from sunlight.
- 3 The shelf-life is normally one years.

TECHNICAL PARAMETER

Model	Appearance	Assay %	Color APHA	PH 1% aq. solution
KL-T860	Light yellow to colorless liquid	≥90.0	≤100	5.0~7.0
KL-T850	Colorless liquid	≥99.0	≤50	6.0~8.0

AUXILIARIES OF TEXTILE, PRINTING AND DYEING

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LIAONING KELONG FINE CHEMICAL CO.,LTD
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SYNTHETIC FIBRE HYDROPHILIC FINISHING AGENT (KLP-059)

COMPOSITION

Hydrophilic polyester copolymer

CHARACTERISTICS

It is a compound of polyester, polyether and high molecular hydrophilic polymer and be mixed with water, nonionic, anionic and cationic. It contains ester structure similar to polyester, in the course of finishing process, the structure makes one end of antistatic molecule embed into polyester molecules and form eutectic crystal or eutectic mixture with polyester, which can endow polyester with excellent washing resistance.

It endows the fabric with good stain resistant, soil-releasing and hydrophilic properties. KLP-059 can solve efficiently partial stain of organic electroconductive fibre and have no influence on color of final products. It can mix with hydrophilic amino silicon oil or amino silicon oil for improving softness and wrinkle resistant.

PREPARING METHOD

- 1 Moisture pick-up and quick drying finishing: 20%-30% content, the dosage for printing and dyeing factories is 10-20g/l.
- 2 Antistatic finishing: 15%-20% content, the dosage for printing and dyeing factories is 10-30g/l.
- 3 Hydrophilic finishing: 8%-15% content, the dosage for printing and dyeing factories is 20-40g/l.
- 4 Leveling agent of oligomer retardant at high temperature and pressure: 15%-20% content, the dosage for printing and dyeing factories is 2-4% (relative to fabrics).
- 5 Preparing auxiliaries for water absorbent softener, easily soil-release finishing agent, stain resistant agent of white area, etc.

USAGE

Eg: Preparing 20% solution

- 1 Adding 20g samples in 15-20g water, then increasing temperature to melt at 80-90°C and stirring till no granule appear.
- 2 Adding 15-20g water again, temperature keeps at 80-90°C and stirring uniformly.
- 3 Adding 15-20g water again, keeping the same temperature and stirring uniformly, then the remained water will be added totally and stirring uniformly to cool.
- 4 Cooled product is milk white cream, if used, should be warmed to liquid at 40°C.

PACKING & STORAGE

- 1 20kg bag.
- 2 It is nonhazardous and should be stored in cool and ventilated place.

TECHNICAL PARAMETER

Item	Specification
Appearance	Light yellow solid
Stability (10% aq.solution)	Clear milk white liquid(No demixing within 12 hours)
Viscosity (20% aq.solution at 60°C)	≥60 (mpa.s)



LOW FOAM REFINING AGENT

COMPOSITION

Fatty alcohol polypropylene polyethylene

CHARACTERISTICS

It is nonionic surfactants and used as low foam auxiliaries in textile printing&dyeing industries,such as low foam soaping agent,low foam leveling agent and all-in-one low foam refining agent.It can also used as low foam scouring agent directly and low foam emulsifier.

PACKING & STORAGE

- 1 200kg iron or plastic drum.
- 2 Keep container tightly sealed.
- 3 Store in cool, dry and well-ventilated area.



HYDROPHILIC MODIFIER FOR AMINO SILICON OIL (KL-08)

CHARACTERISTICS

KL-08 is a hydrophilic nonionic surfactant with high active reaction group. It is specialized in hydrophilic modifier for amino silicon oil. Amino silicon oil modified by this product imparts good hydrophilicity, moisture-absorbing, air-conducivity to the fabric, which make the fabric comfortable and loose for wearing. When reacting with amino silicon oil, any catalyst needn't be added. The proportion between amino silicon oil and KL-08 is 1.2-1.8:1 (by weight). It is suitable for hydrophilic modifier of low viscosity amino silicon oil. We should consider relation of amino equivalent and yellowing, softness when choosing amino silicon oil. Tetramethyl ammonium hydroxide must be used in the producing process amino silicon oil.

PROCEDURE

After adding KL-08 in amino silicon oil, any catalyst won't be added any more, only putting appropriate solvent and reacting by increasing temperature. We suggest the proportion between amino silicon oil and KL-08 is 1.2-1.8:1 (by weight), then adding isopropyl alcohol (27%) by total weight of silicon oil and KL-08, increasing temperature to 85-95°C and stirring 6 hours, remained isopropyl alcohol doesn't influence on usage. When using hydrophilic amino silicon oil, directly take 20g modified amino silicon oil in 80g 60°C water and stir 15 minutes, thus get semi-transparent solution, then adding proper ice acetic acid to adjust PH value at 4-5, solution will be clear, then directly dilute to required concentration by water for finishing.

USAGE

After mixing with amino silicon oil, adding proper isopropyl alcohol (IPA) as solvent, increasing to 85-95°C, stirring about 6 hours and getting hydrophilic amino silicon oil series.

PACKING & STORAGE

- 1 200kg iron drum or plastic drum.
- 2 It is nonhazardous and should be stored in cool and ventilated place.

TECHNICAL PARAMETER

Appearance (20-30°C)	PH(1%aq.solution)	Cloud point° C (1%aq.solution)	Color (APHA)
Colorless to yellowish clear liquid	5.0-7.0	26-30	≤100

QUALITY SPECIFICATION

Appearance	PH	Moisture%	Color APHA	EO value
Colorless to light yellow clear liquid	5 - 7	≤0.5	≤100	≥1.76

AMINO SILICON OIL EMULSIFIER

COMPOSITION

Nonionic surfactant polyoxyethylene ether compound

CHARACTERISTICS

It is suitable for producing all kinds of O/W amino silicon microemulsion.

- 1 Enhancing adhesion and infiltration between amino silicon oil and fabrics.
- 2 Not including APEO, environmental, easily to be biodegraded.
- 3 Achieving amino silicon oil micro emulsification for different amino value(0.1-1.0) and viscosity (500-6000cst).
- 4 Just using general mechanical stirrer, not using high cutting machine.
- 5 Good compatibility with anionic, cationic and nonionic auxiliaries.
- 6 It maybe turbidity or delamination at low temperature, you can increase temperature or stir for uniformity.
- 7 Be used as raw material of oil solution for improving effect of oil removing and emulsifying.

QUALITY SPECIFICATION

Appearance	PH
Colorless or light yellow liquid	6.0~8.0

PROCEDURE

It is suitable for making below 30% amino silicon oil microemulsion.
Eg: 20% amino silicon oil (by increasing temperature)

- 1 Putting 10% emulsifier and 20% in reactor, stirring 10 minutes.
- 2 Adding 20% water, increasing temperature to $70 \pm 5^\circ\text{C}$, stirring 10 minutes.
- 3 Adding 05% glacial acetic acid, stirring 10 minutes at $70 \pm 5^\circ\text{C}$, emulsion becomes clear and viscous.
- 4 Adding 49.5% cold water, stirring 20-30 minutes to uniform, then reduce temperature to below 40°C . The appearance should be clear liquid with blue fluorescence. PH should be 5.6-6.5.
- 5 If emulsion viscosity is overhigh, please add some 10% diluted sodium acetate solution to reduce.
- 6 Filtering and packing.

PACKING & STORAGE

- 1 200kg plastic or iron drum.
- 2 It is nonhazardous and should be stored in cool and ventilated place.

NONIONIC QUICK PENETRATING AGENT

COMPOSITION

Linear & branched fatty alcohol polyetheroxy ether

PACKING & STORAGE

- 1 200kg iron drum or plastic drum.
- 2 It is nonhazardous and should be stored in cool and ventilated place.

CHARACTERISTICS

- 1 Easy to dissolve in water, excellent penetrating power in water, especially penetrating power can remain 2.0 sec. maximum when concentration is 3g/L.
- 2 Cost is lower than that of general penetrating agent.
- 3 Good compatibility with all kinds of auxiliaries. Widely used for sizing, desizing, bleaching, emulsifying, degreasing, cleaning in textile printing & dyeing, leather, paper-making, etc.

NOTE:

1# can be added directly as additive and can't be raw material for phosphatic ester.

2# can be used directly and be raw material for phosphatic ester.



QUALITY SPECIFICATION

Product code	Appearance	PH	Penetrating power(second)
1#	Colorless clear	5.0~7.0	3g/L $\leq$ 2.0
2#	liquid		5g/L $\leq$ 2.0

ISOTRIDECANOL ETHOXYLATED

Product code	Appearance 20-30℃	Cloud point ℃(1% aq.solution)	Color APHA	Hydroxyl value mgKOH/g	PH (1% aq.solution)
MO-3	Colorless liquid	---	≤60	170±5	5.0~7.0
MO-4				149±5	
MO-5				134±5	
MO-6				120±5	
MO-7				110±4	
MO-8		47±3		100±4	
MO-9	Clear liquid (≥25℃)	73±3	≤50	91-99	6.0~7.5
MO-10	White Cream	57-59	-	88±3	5.0~7.0

POLYOXYETHYLENE GLYCERYL ETHER

Product code	Appearance 20-30℃	Moisture%	Color APHA	Hydroxyl value mgKOH/g	PH (1% aq.solution)
G-18	Colorless or light yellow liquid	≤0.5	≤100	182-192	5.0~7.0
G-15	Colorless viscous liquid			136-146	

Application: As efficient auxiliaries of high temperature leveling agent for textile, printing and dyeing

PHOSPHATE ESTER

Product code	appearance	Acid value mgKOH/g	PH	Refractive index
P-10	Colorless to light yellow liquid	≤2	1.5~2.5	1.4761-1.4820
JFC-D-P	Yellowish to light yellow clear liquid	138-158	<4.0	---
Isotridecanol ether phosphate ester	Yellowish to light yellow viscous liquid	180-200	---	Monoester 40-50% Diester 25-40% Phosphate ester 19-24%
Isotridecanol ether PK	Colorless to Yellowish clear liquid	---	6.0~8.0	1.445-1.449

FATTY AMINE POLYOXYETHYLENE ETHER

Product code	appearance	Total amine mgKOH/g	PH	Terary amine mgKOH/g	HLB
1815	Yellow oily or cream	55-65	9.0~11	55-65	14-15



POLYETHER

FINE CHEMICAL PRODUCTS SERIES

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KLM-Q IN WATER-BASED QUENCHING FLUID

PRODUCT INTRODUCTION

KLM-Q is an environmental quenching fluid without mineral oils, nitrate and any hazardous component. Quenching rate can be adjusted by changing the concentration of solution. KLM-Q is suitable for quenching of steel piece and non-ferrous metal, especially for induction heat quenching of carbon steel and low alloy steel.

COMPOSITION

polyoxyethylene-polyoxypropylene random copolymer

CHARACTERISTICS

- 1 No flash point: It will not occur flammability phenomenon.
- 2 Inverse point: When solution temperature exceeds reverse point, polymer was separated from solution and avoid the distortion of workpiece.
- 3 High viscosity: The viscosity of the product can get 16000-18000cst. Viscosity can be controlled by varying the proportion of KLM-Q which blends with water. Therefore, based on the same concentration, the more powerful of cooling rate, the more suitable as quenching media.
- 4 Block type: The product adopts advanced block technology to produce. It is more representative compared to traditional high molecular polyether, which makes workpiece have quick cooling rate when high temperature, slow cooling rate when low temperature, so it reduces heat induction tremendously. Reducing surface tension of media and losing of working piece.

BENEFITS

- 1 High brightness performance of working parts surface without cleaning after quenched. You can go on further next process or backfire directly.
- 2 Reducing the vacant of tap water and oil quenching through controlling concentration and adjusting cooling rate required.
- 3 Excellent anti-rust performance & No-corrosion function for workpiece, quenching system and cooling system.
- 4 Excellent biodegradable and direct displacement performance.

PACKAGE & STORAGE

- 1 200kg iron drum.
- 2 It is nonhazardous and should be stored in cool and ventilated place.

TECHNICAL PARAMETER

Product name	KLM-20Q	KLM-45Q	KLM-80Q	KLM-165Q(G)
Appearance	Clear to yellow viscous liquid	Clear to yellow viscous liquid	Clear to yellow viscous liquid	Clear to yellow viscous liquid
Cloud point °C (1%aq.solution)	74±2	74±2	74±2	80±2
kinematic viscosity (100°C)CST	3000±1000	8000±1000	12000±1500	17500±1500
PH	6.0-10.0	6.0-10.0	6.0-10.0	6.0-10.0



Polyether APE-30 IN FIRE-RESISTANT HYDRAULIC FLUIDS

COMPOSITION

Polyoxyethylene-polyoxypropylene random copolymer

PHYSICAL & CHEMICAL PROPERTY

- 1 200kg Iron drum.
- 2 It is nonhazardous and should be stored in cool and ventilated place.

APPLICATION

It enjoys the property of little foam, lubricating, dispersing, emulsifying and anti-corrosive. Also it has good compatibility in oil, water and salt solution. It is excellent additive for oil-based and water-based lube oil, hydraulic fluid, cutting oil (fluid), tensile oil, calender oil, etc. It can be used in fire-resistant hydraulic fluids, lube oil, other special oil and high effective thickener. Water-glycol fire-resistant hydraulic fluids is one of the fire resistance hydraulic fluids which are used in largest amount. And our polyether product as the most important additive—thickener, it has many advantages such as good solubility and shear stability. Because the viscosity after shearing merely decrease by 1.6 to 2.7 percent, the polyether produced by our company really is a very good thickener.

PHYSICAL & CHEMICAL PROPERTY

- 1 It is non-toxic by and large, by proper operation and under suitable circumstances, the possibility of stimulation and sensitivity by contacting with polyether is very slim, hence, no special protection measure is needed.
- 2 It must be used in breezy place in condition that the temperature is high in order to prevent breathing polyether steam and its oxide for long time.
- 3 With good biodegradability, not consuming oxygen in water, and not forming harmful oil film, it does not bring about the question of pollution.

TECHNICAL PARAMETER

Product Code	Appearance 20~30℃	Viscosity index	Kinematic viscosity mm ² /s	Cloud point/℃	PH 1%aq.solution
APE30-1	Light yellow viscous liquid	>200	65±2	78~82	7.0~10.0
APE30-2		—	70±2	72~76	

POLYOXYETHYLENE-POLYOXYPROPYLENE BLOCK COPOLYMER

Product name	Appearance	Hydroxyl value mgKOH/g	Cloud point/℃	PH	Moisture %
L-60	Light yellow clear liquid	280~290	—	—	—
L-61	Light yellow viscous liquid	53~63	22~28	5.0~7.0	≤0.5
L-62	Light yellow viscous liquid	46~56	27~33		
L-64	Light yellow viscous liquid	35.5~44.5	Actual test		

APPLICATION

Used in low toxicity, irritancy and foams, widely used in petroleum chemicals, textiles and printing & dyeing, coatings and paintings, rubber, plastic, papers and metal processing, etc.



NONIONIC SURFACTANTS

FINE CHEMICAL PRODUCTS SERIES

LIAONING KELONG FINE CHEMICAL CO.,LTD
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POLYETHYLENE GLYCOL

Product Code	Appearance 20-30℃	Hydroxyl value mgKOH/g	Kinematic viscosity mm ² /s (1%aq. solution 40℃)	Color APHA (50%aq. solution)	moisture %	PH 3%aq. solution	Application
PEG-200	Colorless clear liquid	540-580	--	≤80	≤0.5	5-7	diffusant, lubricating oil, metal processing, paint
PEG-400		255-312	23-27	≤50			Cosmetic additive, medicine auxiliary, lubricant, medicine auxiliary
PEG-600		170-208	--	--			finishing oil monomer, medicine auxiliary
PEG-1000	White cream	107-117	--	--			wetting agent, Thickening agent, medicine auxiliary
PEG-1500	White flake	72-78	3.0-4.0	--			softening agent diffusant, medicine auxiliary
PEG-2000	White flake	53-59	4.0-5.0	--			
PEG-4000	White flake	25-31	8.0-11	≤60	≤0.7	4.0-7.0 5%aq. solution	wetting agent, Thickening agent, medicine auxiliary
PEG-6000	White flake	--	11-16	--			
PEG-8000	White flake	14.9-13.2	--	--			
PEG-10000	White flake	8.2-14.2	Actual measurement (40℃ 25%aq. solution)	--			wetting agent, Thickening agent, medicine auxiliary
PEG-12000	White flake	--	25-30 40℃ 25%aq. solution	--	--		



POLYETHYLENE GLYCOL 20000

CHARACTERISTICS

- 1 No corrosion & toxicity.
- 2 As medicine auxiliary, lubricant, antistatic agent.
- 3 As thickener in cosmetics, printing and chemical fibre oil solution.
- 4 Greatly improving gloss of electroless deposition for silicon surface.

Packing & Storage

- 1 20kg bag.
- 2 It is nonhazardous and should be stored in dry, cool and ventilated place.

Product Code	Polyethylene glycol 20000
Appearance	White flake
Kinematic viscosity mm ² /s (25%aq. solution 40℃)	40-55
Color APHA (25%aq. solution)	≤30
Transparence (25%aq. solution)	Clear
PH (5%aq. solution)	4.5-7.0



CASTOR OIL ETHOXYLATE

Product Code	Appearance 20-30℃	Hydroxyl value mgKOH/g	Acid value mgKOH/g	Cloud point ℃	moisture %	PH
EL-10	Brown liquid	118-128	≤3.0	—	≤0.5	5.0-7.0
EL-36	Light yellow clear liquid	64-69	—	—		
EL-40	Light yellow oily liquid	59-63	—	—		
EL-80	Light yellow cream	35-41	≤3.0	73-80 (10%NaCl)		
EL-125	Yellowish cream	—	—	75-77 (3%NaCl)		
EL-140	Yellowish cream	—	—	84-86 (3%NaCl)		

Application: Used in synthesis fiber textile thread oil of Dracon and polyacrylonitrile, emulsifier in spinning and pharmaceutical industry; ingredient of synthetic fiber oil and industrial emulsifier; As emulsifier, can be used in wool spinning, mao-oil, printing ink, pharmaceutical and emulsifier for agriculture pesticide. Used as chemical fiber agent in textile industry and emulsifier for agriculture pesticide.



SORBITAN FATTY ACID ESTER

Chemical name	Appearance 20-30℃	Hydroxyl value mgKOH/g	Saponification value mgKOH/g	Acid value mgKOH/g	moisture %
Sorbitan monolaurate(S-20)	Light yellow viscous liquid	330-358	158-175	≤8.0	≤1.0

Application: Be used in medicine, cosmetics as water/oil emulgator, wetting agent and mechanical industry.

Sorbitan monostearate(S-60)	White to gray wax	240-270	145-160	≤10.0	≤1.0
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Application: Used on medicine, cosmetics, food, pesticide, plastic industry as emulgator and stabilizer agent.

Sorbitan monooleate(S-80)	Amber viscous clear liquid	190-220	140-160	≤8.0	≤1.0
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Application: Be used as emulsifier, thickener, dispersing agent and antirusting agent in medicine, cosmetics, food, emulsified explosive, petroleum, etc.

Sorbitan trioleate(S-85)	Amber viscous clear liquid	60-80	165-185	≤10.0	≤1.0
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Application: Be used as thickener, dispersant in medicine, cosmetic and agriculture pesticide.

Polyoxyethylene sorbitan monolaurate(T-20)	Light viscous yellow liquid	90-110	39-52	≤2.0	≤2.0
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Application: As solubilizing agent, dispersing agent, stabilizer agent, lubricant.

Polyoxyethylene sorbitan monostearate(T-60)	yellow liquid to cream	80-100	45-55	≤2.0	≤2.0
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Application: As emulsifier, dispersing agent, stabilizer agent; and oil treating compound, acrylic fibres processing, etc.

Polyoxyethylene sorbitan monooleate(T-80)	Orange clear liquid	65-82	43-55	≤2.0	≤2.0
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Application: Used as emulsifier, dispersing agent, lubricant in medicine, pesticide.

Polyoxyethylene sorbitan sorbitan trioleate(T-85)	Amber liquid	39-52	80-90	≤2.0	≤2.0
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Application: As emulsifier, dispersing agent, stabilizer agent, lubricant in medicine, pesticide, etc.

POLYETHYLENE GLYCOL OLEATE ESTER

Product name	Appearance 20-30℃	Acid value mg KOH/g	Saponification value mgKOH/g	PH
Oleat-9	Yellow or brown clear liquid	≤2.0	78-88	≤8.0

Application:It is soluble in benzene and isopropanol. In water it is distributed and can be used as lubricative agent, cleaning media, viscosity stabilizer of vinyl plastic collosol, softening and lubricative agent of textile. In addition, it can be used in the production of dry cleaner and oil-based cutting fluid equilibrium emulsifier.

Oleate-10.5	Yellow or brown clear liquid	≤1.0	70-80	≥8.0
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Application:It is soluble in water and enjoys sound property of laundry, emulsification and lubrication. Used as emulsifier in cosmetic products, levelling agent and dispersant and softening agent in metal processing. Also it can be used in the acid cleaning of water-soluble dope and printing circuit board.

Oleate-13	Light yellow or yellow cream	≤2.0	62-69	5.0-7.0
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Application:It is soluble in mineral and vegetation oil, while in water it is distributed. It can be used as W/O emulsifier, solubilize agent, kerosine emulsifier and industrial lubricative agent.



POLYETHYLENE GLYCOL LAURATE ESTER

Product name	Appearance 20-30℃	Acid value mg KOH/g	Saponification value mgKOH/g	PH
PEG260ML	Slightly yellow clear liquid	≤2.0	121±5	5.5-7.5

Application:It makes a cloudy liquid while distributed in water with mineral and vegetable oil. Used as antifoaming agent in water-based coating; As viscosity control agent in hair-dyeing; As softening agent in paper-making.

PEG400ML	Colorless clear liquid	≤2.0	90-105	5.5-7.5
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Application:It is soluble in water and enjoys sound property of laundry, emulsification and lubrication. Used as emulsifier in cosmetic products, levelling agent and dispersant and softening agent in metal processing. Also it can be used in the acid cleaning of water-soluble dope and printing circuit board.

POLYETHYLENE GLYCOL STEARATE ESTER

Product name	Appearance 20-30℃	Acid value mg KOH/g	Saponification value mgKOH/g	PH
SG-9	White solid	≤2.0	85±3	5.5-7.5

Application:Used as emulsifier, softening agent, lubricative agent in textile; In cosmetic industry and the processing of metal as cleaning agent, lubricative agent and brightener.

