



TONGKUN GROUP

—Stock code:601233—

PRODUCT INTRODUCTION



TONGXIANG HENGLONG CHEMICAL CO.,LTD.
NO.299 DESHENG ROAD ZHOUQUAN INDUSTRY ZONE
TONGXIANG ZHEJIANG CHINA

TONGXIANG HENGYUAN CHEMICAL CO.,LTD.
NO. 328 YONGAN ROAD PUYUAN INDUSTRY ZONE TONGXIANG
ZHEJIANG CHINA

ZHEJIANG HENGXIANG NEW MATERIAL CO., LTD.
NO.588 CHANGQIAN ROAD THE ECONOMIC DEVELOPMENT
ZONE OF HAIYAN JIAXING CITY ZHEJIANG PROVINCE CHINA

Export Sales: Mandy Chan

Mob/Wechat/WhatsApp: 86 15268336410

TEL: 0086 573 81888899

Email: mandychanbiz@tongkunchina.com

TONGXIANG HENGLONG CHEMICAL CO.,LTD.
TONGXIANG HENGYUAN CHEMICAL CO.,LTD.
ZHEJIANG HENGXIANG NEW MATERIAL CO., LTD.

Group Profile

Tongkun Group Co., Ltd. located in Tongxiang City, the hinterland of Hangjiahu Plain, is a large shareholding listed enterprise that invests in petroleum refining and mainly engages in PTA, polyester and polyester fiber manufacturing. The Enterprise was formerly known as Tongxiang Chemical Fiber Factory, founded in 1981. Over more than forty years of development, the Company currently possesses a total asset of more than RMB 100 billion, administers 3 directly affiliated factories and more than 80 holding enterprises and possesses more than 30,000 employees. In May 2011, Tongkun Group (601233) was successfully launched onto the capital market, and then the Company became the first enterprise that was listed onto the mainboard since the share reform in Jiaxing City.

The Company currently can process 10 million tons of crude oil, 10.2 million tons of PTA, 10 million tons of polymers and 10.5 million tons of PFY annually. The leading product of the Company is "GOLDEN COCK" brand and "Tongkun" brand PFY and PET chips. PFY includes six series of more than 1,000 types of products such as POY, FDY, DTY, compound yarn, compound yarn, middle tenacity yarn, etc. PET chips include bright chips, semi dull chips, cationic chips, etc. "Tongkun" products have been very popular at domestic market and have been sold to more than 60 countries and regions like South America, Europe, the Middle East, South Africa, South Korea, Vietnamese, etc. Tongkun products are very popular at home and

abroad. The global market share is about 14%, and the domestic market share is about 22%.

Over forty years of development, Tongkun Group has stayed true to its original aspiration: developing itself into a strong and big chemical fiber company. The Company has been successively rated as National Large Enterprise and National Key High-tech Enterprise. The Company has won many honorary awards like National "May Day" Certificate of Merit, National Civilized Unit, National Harmonious Labor Relationship Model Enterprise, National Enterprise with Advanced Quality Management, Second Prize of the National Scientific and Technological Progress Award, etc. In 2022, the Company ranked at the 223rd place among Chinese top 500 enterprises, the 75th place among Chinese top 500 private enterprises, the 20th place among national top 500 Zhejiang enterprises and the 12th place among Zhejiang top 100 private enterprises.

Engage in fiber business to benefit the national economy and the people's livelihood. Looking into the future, Tongkun will insist on the dream of "Forging Tongkun into a Century-old Company and Realizing Sustainable Development" and build itself into a large-scale, differential, integrated and intensive advanced manufacturing enterprise, whole industry chain enterprise and green intelligent enterprise to make unremitting efforts for the take-off of the Chinese chemical fiber industry and the revitalization of the national industry!

Corporate Culture:

The Company adheres to the spirit of "Unity, Struggling, Pragmatism and Innovation", relies on the abundant back-up resources of Tongkun Group and aims to "Forge a Century-old Tongkun and Realize Sustainable Development".

Enterprise Tenet: attach importance to talents and quality; insist on "Continuous Improvement and User Upmost";

Core Idea: insist on technological innovation, create first-class products and provide sincere services;

Value Concept: create value for the society, for customers, for the enterprise and for employees.

Corporate Spirit:

Unity, Struggling, Pragmatism, Innovation;

Corporate Mission:

Engage in fiber business to benefit the national economy and the people's livelihood;

Corporate Objective:

Forge a century-old Tongkun and realize sustainable development;

Core Value:

Respectable enterprise and popular partner;

Moral Philosophy:

Honest, Good Faith, Loyalty, amiability;

Business Philosophy:

Good faith first, win-win situation;

Management Philosophy:

People based, good faith oriented;

Talent Philosophy:

Everyone is talented and their talent should be exerted;

Motivation Theory:

Excellent performance, fair assessment;

Service Philosophy:

Enthusiastic, active, quick and professional;

Cost Philosophy:

Efficient work, save cost;

Working Philosophy:

Lean management in production, excellent for sustainable development;

Quality Philosophy:

Put quality at the top priority to seek survival;

Development Philosophy:

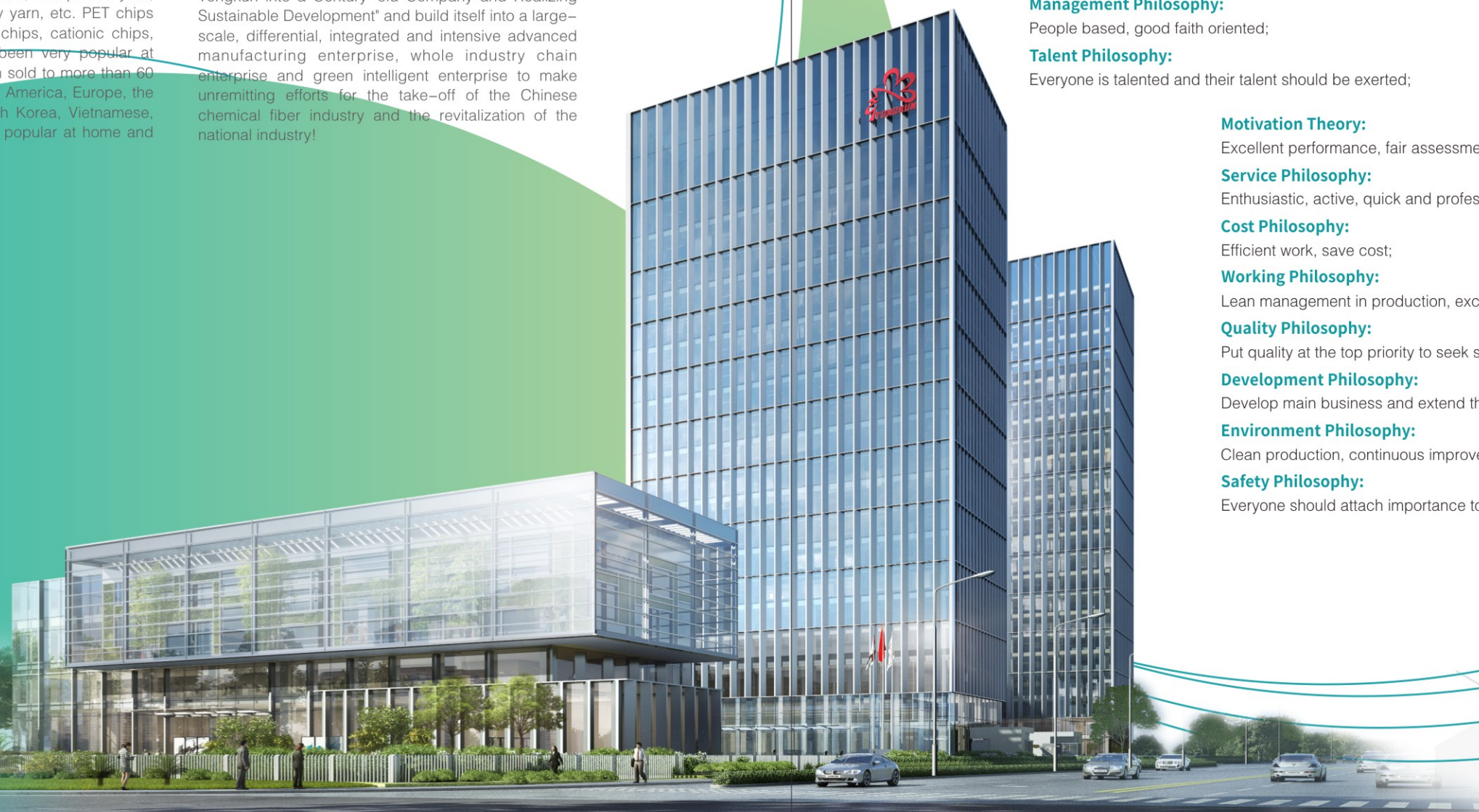
Develop main business and extend the industry;

Environment Philosophy:

Clean production, continuous improvement;

Safety Philosophy:

Everyone should attach importance to safety to create a safe working environment.



Company Profile

Zhejiang Hengxiang New Material Co., Ltd., Tongxiang Henglong Chemical Industry Co., Ltd. and Tongxiang Hengyuan Chemical Industry Co., Ltd. belong to Tongkun Group. The Company is located in Jiaxing City, Zhejiang Province. The Company is a fine chemical engineering enterprise specialized in R&D and production of chemical fiber oil and surfactants. The Company can produce 200,000 tons of chemical fiber oil and 200,000 tons of surfactants annually. There are more than one hundred types of products. Especially its the POY spinning oil is an exclusively developed product in China and can totally replace imported hi-tech products.

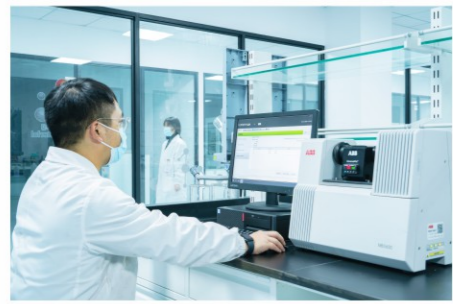
The Company has won many honorary awards like National Hi-tech Enterprise, Provincial R&D center, Zhejiang Enterprise Technology Center, First Prize of Zhejiang Scientific and Technological Progress Award, Jiaxing "Gazelle Company" Cultivation Object, Tongxiang Top Ten Enterprises with the Highest

Average Tax Revenue/mu, Zhejiang "Hidden Champion Cultivation" Enterprise, "First Prize of Zhejiang Scientific and Technology Progress Award", "Little Giant Featuring Specialization, Refinement, Differentiation, Innovation", Competitive Products Made in Zhejiang, etc.

Relying on the abundant back-up resources of Tongkun Group, we will adhere to the spirit of "unity, struggling, pragmatism and innovation", insist on technological innovation and customer satisfaction, continuously develop new products and improve the process centering on the novel, differential, series of, functional and green development idea. In terms of differentiation of production devices, we can provide customized EO/PO products according to the demand of customers. The Company aims to become a domestic leading enterprise specialized in production of chemical fiber oil and surfactant.







• TECHNOLOGY

The pioneering one wins great honor. The Company has always followed the development frontier information of the industry. We attach importance to development and research of new products and new technologies, have over 20 years of experience in R&D of nonionic surfactant and chemical fiber oil. We have successfully developed the chemical fiber oil that can totally replace the imported products, solving the bottleneck problem. The Company possesses a provincial enterprise research institute and a provincial enterprise technology center, keeps exploring the practical application field of products and provides a solid technological platform for the globalization of the enterprise.

• SECURITY

Build a safe factory and a harmonious enterprise. The Company adheres to the safety philosophy that everyone should attach importance to safety to create a safe working environment, carries forward the idea of "life upmost and safety prevention", always insists on people oriented to push safety construction, continuously creates an outstanding and standardized safety production enterprise and builds the first-class safety management image to benefit both the economy and the society.

• SERVICE

The Company adheres to the idea of "customer first", provides customized services according to the demand of customers, provides customers with technological services for product innovation and solutions to a series of problems, provides integrated services to improve the customer satisfaction, improve their product quality and help them win the market.

• ENVIRONMENT PROTECTION

The Company adheres to the development outlook of "green, low-carbon, energy-saving and environment-friendly development", follows the environmental protection philosophy of "clean production and continuous improvement", adopts the efficient, advanced, low-energy consumption and low-emission green and environment-friendly process technique and insists on the green development path characterized by resource saving, environmental protection and harmonious relationships to promote sustainable development of the Company.





POY spinning finish oil series

TK-3518, TK-3588

◆ Usage

For POY production.

◆ Technical data

1. Vist Insp (25° C): Colorless or light yellow transparent liquid
2. PH Value(1% aqueous solution):5-7.5
3. 90.0 ± 2.0% Active ingredients (%): 90.0 ± 2.0%
4. Ionic type: anionic/nonionic

◆ Instructions

Make this oil agent into a 10-15% emulsion, and use the nozzle oiling method to oil the yarn in the spinning process. Recommended oil content: 0.3-0.4%.

◆ Emulsion formulation

1. In the fully stirred deionized water, add 300-500PPM preservative, and stir evenly for 10-20 minutes.

2. Slowly add POY oil while stirring, and continue stirring for 30-60 minutes after the oil is completely dissolved.

3. Recommended temperature conditions: oil temperature 20-30° C, water temperature 25-30° C;

Allowable temperature conditions: oil temperature 20-40° C, water temperature 20-40° C.

4. Water quality: recommended below 2 μ s/cm, below 10 μ s/cm acceptable

◆ Packaging and Storage

200KG iron/plastic drum, 50KG plastic drum, IBC, flexi bag, tank car.

It is transported as non-toxic and non-dangerous goods, and stored indoors around 20-30° C. First come first use. The storage period does not exceed two years.

FDY spinning finish oil series

TK-1259

◆ Usage

For FDY production (emulsion oiling)

◆ Technical data

1. Vist Insp (25° C): Light yellow transparent liquid
2. PH value (1% aqueous solution): 6.0-9.0
3. Active ingredient: 90.0 ± 2.0%
4. Ionic type: anionic/nonionic

◆ Instructions

Make this oil agent into a 10-20% emulsion, and use the nozzle oiling method to oil the yarn in the spinning process. Recommended oil content: 0.8-1.2%.

◆ Emulsion formulation

1. In the fully stirred deionized water, add 300-500PPM preservatives and

stir evenly for 10-20 minutes

2. Slowly add FDY oil while stirring, and continue stirring for 30-60 minutes after the oil is completely dissolved.

3. Recommended temperature conditions: oil temperature 20-30° C, water temperature 25-30° C;

Allowable temperature conditions: oil temperature 20-40° C, water temperature 20-40° C.

4. Water quality:recommended below 2 μ s/cm, allowable below 10 μ s/cm.

◆ Packaging and Storage

200KG iron/plastic drum, 50KG plastic drum, IBC, flexi bag, tank car.

It is transported as non-toxic and non-dangerous goods, and the storage period is two years.

TK-1009TM

◆ Usage

For FDY production (FDY oil directly).

Applicable machine: TMT-IBOX equipment

◆ Technical data

1. Vist Insp: yellow transparent liquid
2. PH value: 7.0-9.5
3. Active ingredients (%) 92.0 ± 2.0

◆ Oil composition

Refined mineral oil,synthetic smoothing agent, nonionic surfactant, anionic surfactant.

◆ Instructions

The oil is applied directly to the yarn through the oil pump and nozzle without mixing. Recommended oil content: 0.8-1.2%.

◆ Packaging and Storage

200KG iron/plastic drum, 50KG plastic drum, IBC, flexi bag, tank car.

Transported as non-toxic and non-dangerous goods. The storage period shall not exceed two years. The storage temperature should not be lower than 10° C. If it is frozen, the product should be preheated at 20-25° C for one week before use.



DTY coning oil series

TK-3182A, TK-3182B

◆ Usage

Coning oil for polyester and nylon yarn, oil for post-processing of polyester yarn.

◆ Technical data

1. Vist Insp: colorless or light yellow transparent liquid
2. PH value: 6.0-8.0
3. Active ingredients: ≥98.5%
4. Ionic type: anionic/nonionic

◆ Instructions

Directly use DTY oil roller oiling process. The oil content can be adjusted according to different items, ranging from 2.0-6.0%.

◆ Oil properties

1. Good emulsification, easy to remove completely in subsequent refining and bleaching process.

2. The DTY oil has low viscosity and temperature, strong permeability, uniform and stable oiling, and ensures good collection property.

3. Good antistatic property, ensuring the smooth progress of texturing and weaving processes.

4. Strong adhesion.

◆ Packaging and Storage

200KG iron/plastic drum, 50KG plastic drum, IBC, flexi bag, tank car.

Net weight 850kg. It is transported as non-toxic and non-dangerous goods, and the storage period is two years.

◆ Precautions for oil use

1. Please confirm with us in advance if you use this oil for other purposes, or use this oil under conditions not recommended by our company. Without our pre-confirmation, we cannot provide corresponding solutions to possible problems and do not assume any responsibility.

2. When changing from other oil agents to this oil agent, please use a small amount of oil agent to adjust the process conditions first, and then expand the use after confirming the spinning process and dyeing effect.

◆ Oil storage

1. The recommended storage conditions are indoor storage at 20-30° C, and indoor storage below 40° C is allowed. When the oil is stored at low temperature, the oil will be muddy. Sometimes the upper part of the oil in the drum is transparent in Vist Insp, but part of the oil at the bottom of the drum is muddy. The emulsion formulated under this condition may produce precipitates, the emulsion permeability will decrease, and the post-processing performance of yarn will deteriorate.

2. When it is found that the oil has been stratified (not completely transparent), move the oil to a place with a relatively high temperature in the factory (around 35-40° C), store it for a week and use it (confirm that the oil is completely transparent). If the oil is not uniform and transparent, please stir until it is uniform and transparent before use.

◆ Stirring speed and time

1. When the stirring speed is too fast and the stirring time is too long, a large amount of foam will be generated in the blending tank, and a large amount of air will be mixed into the emulsion, which will easily generate air bubbles in the emulsion pipeline and affect the oiling uniformity of the tow (in the case of nozzle oiling). In addition, a large amount of dust and bacteria in the air will also be mixed into the emulsion, making corruption more likely to occur.

2. If the injection speed of the oil agent is too fast and the stirring speed is too short, the emulsification effect of the oil agent will not be good. It may lead to the precipitation of oil components, the decrease of emulsion transmittance or even opacity and other abnormal phenomena.

◆ Water for emulsion preparation

1. Please use distilled water or ion exchanged water. Poor water quality and high electrical conductivity may lead to precipitates in the emulsion, increased spoilage in the emulsion tank and pipeline, and poor post-processing performance of yarn.

2. When the water temperature is too low, normal emulsion cannot be made. Abnormal phenomena such as precipitation of oil components and low emulsion permeability may occur.

◆ Preservative

1. When formulating emulsion, please be sure to use preservatives.

2. When preservatives are used improperly, problems such as emulsion separation, decreased transmittance, increased shedding, and even emulsion pipeline blockage may occur due to the corruption of the emulsion.

3. Because bacteria will gradually develop adaptability to preservatives, long-term use of the same preservative will lead to problems that are gradually difficult to control, so it is necessary to use more than two preservatives (in rotation).

4. It is recommended to regularly clean the emulsion pipeline with 3% hydrogen peroxide. At least twice a year, increase the frequency of cleaning when the corruption is serious.

◆ Yarn storage

Avoid direct sunlight, high temperature and high humidity environment. Yarn kept in bad environment (high temperature, high humidity, ambient air polluted by exhaust gas), regardless of whether there is oil attached or not, may lead to deterioration of yarn quality, such as yarn discoloration, mildew, and deterioration of physical and chemical indicators of yarn, etc.



DTY oil emulsifier

HL-005

◆ **Chemical composition:** Anion and non-ionic surfactants

◆ **technical indicators:**

Vist Insp: yellowish liquid

PH: 6.0~10.0(1% in water)

◆ **Performance and Application:**

1.This product is soluble in oil and general organic solvents, dispersed in water, and has good emulsifying properties.

2.This product has a good emulsifying effect on white oil and machine oil. The DTY oil emulsified with this product has a transparent Vist Insp, high stability and good emulsifying effect

3.This product can also be used as a component of oil emulsifier in other industries.

4.Add the emulsifier into the mixed oil of white oil and machine oil and stir for 1-2 hours, the amount of emulsifier is 5-8% of the amount of oil, it can be heated to 30-40° C in winter (for reference).

◆ **Packaging, storage and transportation:**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage.It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

Emulsifier AEO Series

◆ **Composition** Fatty alcohol and ethylene oxide

◆ **English name** Fatty alcohol polyoxyethylene ether

◆ **Type** Non-ionic

◆ **Performance and Application**

1. AEO-3, AEO-4, and AEO-5 are easily soluble in oil and polar solvents, diffuse in water, have good emulsifying properties, and can be used as w/o emulsifiers used for mineral oil and aliphatic solvents. The emulsification of polyvinyl chloride plastisol, the viscosity reducer of polyvinyl chloride plastisol, is widely used in chemical fiber oils, AEO-3 is the main raw material for the

production of AES, and AEO-4 can be used as an emulsifier for silicone and hydrocarbons, and dry cleaning agents.

2. AEO-7 and AEO-9 are easily soluble in water and have excellent emulsifying, cleaning, and wetting properties. They are used as a wool cleaning agent and degreasing agent, fabric scouring agent, and cleaning agent in the wool spinning industry. They can be used as liquid washing agents which is an important part of the agent. Used as an emulsifier in the production of cosmetics and ointments, it has excellent emulsifying, dispersing, and wetting properties for mineral oil, animal, and vegetable oils; it can also be used as an emulsifier for glass fiber spinning oil.

3. AEO-15, AEO-20, AEO-23 are used as wool degreasing agent, fabric cleaning agent, liquid detergent, hydrocarbon solvent and general industrial emulsifier, essential oil solubilizer, wetting agent of antistatic agent, electric ferry industry brightener in. AEO-20 is used as a leveling agent in the printing and dyeing industry, with remarkable effect and good scouring performance. Adding this auxiliary agent in the dyeing industry can not only achieve the purpose of slow dyeing and level dyeing, but also enhance the fastness of dyeing Degree, bright coloring, beautiful.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage.It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

SPEC.	Vist Insp (25°C)	Color Pt-Co	Cloud point °C (1%aqueous solution)	Hydroxyl value mgKOH/g	Water wt (%)	PH 1% in water	HLB
AEO-3	Clear liquid	≤20	—	170~180	≤1.0	5.0~7.0	6~7
AEO-4	Clear liquid	≤20	—	150~160	≤1.0	5.0~7.0	9~10
AEO-5	Clear liquid	≤20	—	130~140	≤1.0	5.0~7.0	10~11
AEO-7	Clear liquid	≤20	50~60	—	≤1.0	5.0~7.0	12~13
AEO-9	Milky paste	≤20	75~85	—	≤1.0	5.0~7.0	13~14
AEO-15	Milky paste	≤20	80~88*	—	≤1.0	5.0~7.0	15~16
AEO-20	Milky solid	≤20	89~93*	—	≤1.0	5.0~7.0	16~17
AEO-23	Milky solid	≤20	>100	—	≤1.0	5.0~7.0	17~18

Note: * measured in 5%NaCl solution

Emulsifier HEL Series

◆ **Composition** Alkylphenol ethoxylates

◆ **English name** Ethoxylated hydrogenated castor oil

◆ **Type** Non-ionic

◆ **Performance and Application**

SPEC.	Performance and Application
HEL-7	1.Soluble in most organic solvents, dispersed in water, with excellent emulsification and diffusion properties.
HEL-16	2.In the textile industry, it is used as the main component of polyester, polyacrylonitrile, polyvinyl alcohol and other synthetic fiber spinning oils. It has emulsifying and antistatic effects, can make slurry soft and smooth, and reduce broken ends. It can be used as a soft and smooth chemical fiber slurry agent and eliminate foam in synthetic pulp liquid.
HEL-20	3.In the pharmaceutical industry, it is used as an emulsifier. Used in the manufacture of liniments, creams, emulsions, etc.
HEL-40	4.It can be used as pesticide emulsifier, emulsion polymerization emulsifier, used to prepare water-soluble metal cutting fluid and household cleaning products.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage.It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.



Emulsifier TX Series

◆ **Composition** Alkylphenol ethoxylates

◆ **English name** Ethoxylated nonylphenol

◆ **Type** Non-ionic

◆ **Performance & Applications**

1. TX-3, TX-4 soluble in oil and other organic solvents, with good emulsifying properties, as lipophilic emulsifiers, used to prepare w/o type emulsion; In some organic synthesis reactions, as the reaction medium, can shorten the reaction time, improve the reaction conversion rate, such as in the polymerization of plastic polyvinyl chloride, as a whole agent, not only can make the polyvinyl chloride diluted forming pellets uniform, but also can eliminate the reaction sticking pan. It can also be used as a dry cleaning detergent.

2. TX-7 is diffused in water and mineral oil, has excellent emulsification and cleaning performance, and is used as an emulsifier in general industry. TX-7 is used as a detergent in the wool spinning, synthetic fiber industry and metal processing processes. Such as it can be used as a washing and soaping agent before and after dyeing polypropylene dyeing, and can be made into cations leveling agent for dyes.

3. TX-9, TX-10 are easily soluble in water, have excellent emulsification and cleaning ability, are one of the important components of synthetic detergents, can prepare various detergents, and have strong cleaning ability for animal oil,vegetable oil and mineral oil. It is one of the components of synthetic fiber industrial oil, in addition to showing emulsification performance, and has the effect of removing static electricity. As a softener in synthetic fiber staple fiber blended yarn slurry, it can improve the smoothness and elasticity of the serous film, and the emulsion has a protective effect on the colloid. General industry as emulsifier, preparation of emulsion stable, used as preservative, wetting agent, battery corrosion inhibitor. Additives used in the printing and dyeing industry for homogenization, diffusion, wetting, washing and other purposes have good efficacy. It is used as a leveling agent for the new process of low-temperature dyeing of wool. It is used as an emulsifier in the pesticide, pharmaceutical and rubber industries, and can be used as an emulsifier for emulsified asphalt in the construction industry, and is one of the important components of metal water-based cleaning agents, wetting agent, foaming agent, mud active treatment agent for oilfield.

4. TX-12 is easily soluble in water, and can be used as a high-efficiency detergent for unprocessed wool in a wide PH range, and a low-foaming lotion with heavy scale.

5. TX-15 is easily soluble in water, has excellent emulsification, dispersion, wetting and permeation properties, and is used as a high-temperature emulsifier, a high electrolyte concentration detergent, a wetting agent, a stabilizer for synthetic latex, a special oil emulsifier, and a pesticide emulsifier.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage.It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

SPEC.	Vist Insp (25°C)	Color Pt-Co	Water wt (%)	PH 1% in water	Hydroxyl value mgKOH/g	Cloud point (1%)
TX-4	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	140±5.0	53-59
TX-6	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	115±5.0	65-71
TX-7	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	106±5.0	69-75
TX-8	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	98±5.0	72-78
TX-8.6	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	93±5.0	38-44
TX-9	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	91±5.0	50-58
TX-10	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	85±5.0	60-68
TX-12	Clear or yellowish liquid	≤50	≤0.5	5.0~7.0	75±5.0	78-84
TX-15	Clear or yellowish liquid or paste	≤50	≤0.5	5.0~7.0	63±5.0	76-84

Note: The turbidity point configuration method of TX-4, -6, -7 and -8 is 10% sample with 25% concentration of diethylene glycol monobutyl ether solution. The turbidity point of TX-15 is 1% sample adding 5% concentration of sodium chloride solution

Emulsifier OP Series

◆ **Composition** octylphenol ethoxylate

◆ **English name** Polyoxyethylene octylphenol ether

◆ **Type** Non-ionic

◆ **Performance and Application**

SPEC.	Performance and Application
OP-4	1.Soluble in oil and other organic solvents, dispersed in water, with good emulsifying properties, generally used as W/O emulsifier in industry.
OP-7	2.It is generally used as a cleaning agent in the textile and metal processing industry, a soaping agent for polypropylene, leveling agent for cationic dyes, and an antistatic agent for conveyor belts of plastic products.
OP-9	1.Soluble in water, resistant to acid, alkali, salt and hard water, has good emulsification, leveling, wetting, spreading and cleaning properties. It can be mixed with various surfactants and dye initials.
OP-10	2.Used as a leveling agent and diffusing agent for printing and dyeing, degreasing agent for leather and wool, emulsifier for crude oil and fuel oil, Penetrating agent for extracting oil, styrene-butadiene latex, emulsion polymerization emulsifier, glass fiber textile lubricant, emulsifier. Used as emulsifying, washing, penetrating, and wetting agent in cosmetics.
OP-13,OP-15	1.It is easily soluble in water, resistant to acid, alkali, salt and hard water, and has good emulsifying, wetting, diffusing and solubilizing properties.
OP-20,OP-30	2.Used as oil field emulsifier, solubilizer, preservative, demulsifier, synthetic latex stabilizer, high concentration electrolyte wetting agent, cosmetic emulsifier.
OP-40,OP-50	

SPEC.	Vist Insp (25°C)	HLB	Water wt (%)	PH 1% in water	Hydroxyl value mgKOH/g	Cloud point (1% aqueous)
OP-4	Clear or yellowish oily substance	8-8.6	≤1.0	5.0~7.0	147±5	-
OP-7	Clear or yellowish oily substance	11.5-12.5	≤1.0	5.0~7.0	110±5	-
OP-9	Clear or yellowish oily substance	12.7-13.4	≤1.0	5.0~7.0	93±3	60-65
OP-10	Clear or yellowish oily substance	13.3-14	≤1.0	5.0~7.0	87±5	68-78
OP-13	Milky or yellowish paste	~14	≤1.0	5.0~7.0	72±3	87-92
OP-15	Milky or yellowish solid or paste	~15	≤1.0	5.0~7.0	65±3	94-99
OP-20	Milky or yellowish solid or paste	~16	≤1.0	5.0~7.0	52±3	>100
OP-30	Milky or yellowish solid	~17	≤1.0	5.0~7.0	37±3	>100
OP-40	Milky or yellowish solid	~18	≤1.0	5.0~7.0	31±3	>100
OP-50	Milky or yellowish solid	~18.5	≤1.0	5.0~7.0	24±2	>100



◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

Emulsifier EL Series

- ◆ **Composition** Castor oil polyoxyethylene ether
- ◆ **English name** Polyoxyethylene castor oil ether
- ◆ **Type** Non-ionic

SPEC.	Vist Insp (25°C)	Hydroxyl value mgKOH/g	Cloud point (1% aqueous solution)	Water wt (%)	PH 1% in water	HLB
EL-10	Yellowish oily substance	110 ~ 130	—	≤ 1.0	5.0 ~ 7.0	6 ~ 7
EL-12	Yellowish oily substance	110 ~ 120	—	≤ 1.0	5.0 ~ 7.0	6.5 ~ 7.5
EL-20	Yellowish oily substance	90 ~ 100	≤ 30	≤ 1.0	5.0 ~ 7.0	9 ~ 10
EL-30	Yellowish oily substance to paste	70 ~ 80	≥ 45	≤ 1.0	5.0 ~ 7.0	11.5 ~ 12.5
EL-40	Yellowish oily substance to paste	57 ~ 67	70 ~ 84	≤ 1.0	5.0 ~ 7.0	13 ~ 14
EL-60	Yellowish paste to solid	—	85 ~ 90	≤ 1.0	5.0 ~ 7.0	14 ~ 15.5
EL-80	Yellowish paste to solid	30~40	70~80 (1% in 5% NaCl solution, °C)	≤ 1.0	5.0~7.0	15.5~16.5

◆ Performance and application

SPEC.	Performance and application
EL-10 EL-12 EL-20	1. Soluble in most organic solvents, dispersed in water, with excellent emulsification and diffusion properties. 2. In the textile industry, it is used as the main component of polyester, polyacrylonitrile, polyvinyl alcohol and other synthetic fiber spinning oil agents, which has emulsifying and antistatic effects, which can make the sizing yarn soft and smooth, and reduce the yarn break. It can be used as a soft smoothing agent in chemical fiber slurry and can eliminate foam in synthetic slurry liquid. HEL-20 also features low coking at high temperatures. 3. In the pharmaceutical industry, it is used as an emulsifier for the manufacture of liniments, creams, emulsions, etc. 4. It can be used as pesticide emulsifier, emulsifier of emulsion polymerization, used to prepare water-soluble metal cutting fluid and household washing products.
EL-30 EL-40	1. Easily soluble in water, fatty acids or other organic solvents, with excellent emulsifying properties 2. Ink and pharmaceutical industry used as emulsifier. 3. It can be used as an emulsifier for organophosphorus pesticides. 4. As O/W emulsifier, used for the emulsification of vegetable, animal and mineral oil. 5. EL-40 is used as a component of wool and crude oil and chemical fiber oil in the textile industry, which has both emulsifying effect and antistatic effect, and has better effect when mixed with other antistatic agents, and can also be used to prepare slurry to eliminate foam in synthetic slurry. EL-40 has excellent diffusion and protective colloidal effect, and is easy to wash off as a crude oil monomer in the wool textile industry, and has good resistance to hard water. 6. Used as crude oil dehydrating agent in oilfield. 7. Used in the metal processing industry to prepare water-soluble metal cutting fluid.
EL-60	1. This product is an O/W emulsifier. 2. It can be used as chemical fiber oil agent and crude oil component. 3. Pesticide emulsifier. 4. As a demulsifier for crude oil dehydration. 5. Ink, printing paste emulsifier. 6. Various vegetable, animal and mineral oil emulsifiers. 7. Used as emulsifier, superfatting agent and emollient in the cosmetics and pharmaceutical industries. 8. Used in the manufacture of shampoo foam bath, skin care products, medicines, etc. 9. Used to prepare metal cutting fluid in the metal processing industry.
EL-80	1. Soluble in water, excellent emulsification performance; 2. In the textile industry, acrylic, vinylon, polypropylene and other chemical fiber oil agent components, with antistatic and emulsifying effect, increase the smooth and soft performance of fiber, conducive to light yarn twisting, clear opening, easy to weave; 3. As organophosphorus pesticide emulsifier; 4. As a demulsifier for crude oil dehydration; 5. Ink, printing paste emulsifier; 6. As O/W type emulsifier, used for the emulsification of various animals, plants and mineral oils.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.



Emulsifier LAE Series

- ◆ **Composition** Polyoxyethylene
- ◆ **Laurate English name** Polyoxyethylene laurate
- ◆ **Type** Non-ionic

SPEC.	Vist Insp (25°C)	Color Pt-Co	Hydroxyl value mgKOH/g	Water wt (%)	PH 1% in water	HLB
LAE-3	Clear oily substance	≤ 60	165 ~ 185	≤ 1.0	5.0 ~ 7.0	8 ~ 9
LAE-4	Clear oily substance	140~160	45~55	≤ 1.0	5.0 ~ 7.0	9 ~ 10
LAE-7	Yellowish oily substance	100~120	60~70	≤ 1.0	5.0 ~ 7.0	12 ~ 13
LAE-9	Clear oily substance or milky paste	≤ 60	Cloud point: 30~45	≤ 1.0	5.0 ~ 7.0	13 ~ 14
LAE-24	Milky paste	≤ 20	42 ~ 48	≤ 1.0	5.0 ~ 7.0	16 ~ 17

◆ Performance & Applications

SPEC.	Performance and application
LAE-3 LAE-4	1. Soluble in alcohols, oleic acid, etc., dispersed in water. Stabled in medium acid, lye and multiple electrolytes, with good emulsification, wetting, solubilization, dispersion and plasticizing properties. 2. It is used as an emulsifier, solubilizer and dispersant in the pharmaceutical industry, a solubilizer and emulsifier for aromatic oil in the fragrance industry, an emulsifier and detergent in cosmetics, and can also be used as a pesticide emulsifier and wetting agent.
LAE-7	Used as wool degreasing agent, fabric detergent, liquid detergent, hydrocarbon solvent and general industrial emulsifier, essential oil solubilizer, antistatic agent wetting agent, brightener in the electroplating industry. In the printing and dyeing industry as a leveling agent, and has good boiling performance, in the dyeing industry to add the additive can not only achieve the purpose of slow dyeing, level dyeing, but also enhance dyeing fastness, coloring bright, beautiful.
LAE-9	1. Soluble in water, with good emulsification and cleaning performance. 2. In the textile industry, as one of the components of textile finishing oil, it has good bundling, holding, softness, smoothness and antistatic properties. 3. Used as emulsifier and detergent in general industry.
LAE-24	Soluble in alcohol and water, mainly used as fragrance solubilizer, can also be used as emulsifier, dispersant, wetting agent.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

PEG

- ◆ **Composition** ethylene oxide condensate
- ◆ **English name** Polyethylene glycol
- ◆ **Type** Non-ionic

SPEC.	Vist Insp (25°C)	Color Pt-Co	Hydroxyl value mgKOH/g	Molecular Weight	Freezing point °C	Water wt (%)	PH 1% in water
PEG-200	Clear liquid	≤ 20	510~623	180~220	—	≤ 1.0	5.0 ~ 7.0
PEG-300	Clear liquid	≤ 20	340~416	270~330	—	≤ 1.0	5.0 ~ 7.0
PEG-400	Clear liquid	≤ 20	255~312	360~440	4 ~ 10	≤ 1.0	5.0 ~ 7.0
PEG-600	Clear liquid	≤ 20	170~208	540~660	20 ~ 25	≤ 1.0	5.0 ~ 7.0
PEG-800	Milky paste	≤ 30	127~156	720~880	26 ~ 32	≤ 1.0	5.0 ~ 7.0
PEG-1000	Milky paste	≤ 40	102~125	900~1100	38 ~ 41	≤ 1.0	5.0 ~ 7.0
PEG-1500	Milky solid	≤ 40	68~83	1350~1650	43 ~ 46	≤ 1.0	5.0 ~ 7.0
PEG-2000	Milky solid	≤ 50	51~63	1800~2200	48 ~ 50	≤ 1.0	5.0 ~ 7.0

◆ Performance & Applications

- Polyethylene glycol series products can be used for pharmaceuticals. Relatively low molecular weight polyethylene glycol can be used as solvent, co-solvent, o/w emulsifier and stabilizer, used to make cement suspension, emulsion, injection, etc., also used as water-soluble ointment matrix and suppository matrix, relatively high molecular weight solid waxy polyethylene glycol is often used to increase the viscosity and solidification of low molecular weight liquid PEG, as well as compensation for other drugs. For drugs that are not easy to dissolve in water, this product can be used as a carrier of solid dispersion to achieve the purpose of solid dispersion, PEG4000, PEG6000 is a good coating material, Wrap hydrophilic polishing material, membrane and capsule, plasticizer, lubricant and drop pill matrix, used in the preparation of tablets, pills, capsules, microcapsules, etc.
- Polyethylene glycol series products can be used as raw materials for ester surfactants.
- PEG-200 can be used as a medium for organic synthesis and a heat carrier with high requirements, and is used as a wetting agent, inorganic salt solubilizer and viscosity modifier in the daily chemical industry. Used as a softener and antistatic agent in the textile industry. It is used as a wetting agent in the paper and pesticide industry.
- PEG-400, PEG-600, PEG-800 are used as substrates for medicine and cosmetics, lubricants and wetting agents for rubber industry and textile industry. PEG-600 is added to electrolyte in the metal industry to enhance the grinding effect and enhance the gloss of the metal surface.
- PEG-1000 and PEG-1500 are used as substrates or lubricants and softeners in the pharmaceutical, textile and cosmetic industries; Used as a dispersant in the coating industry, improve the water dispersibility and flexibility of the resin, the dosage is 20~30%. The ink can improve the solubility of the dye and reduce its volatility, especially suitable in wax paper and ink pad, and can also be used in ballpoint pen ink to adjust the ink viscosity; In the rubber industry as a dispersant, promote



vulcanization, used as a dispersant of carbon black filler.

7. PEG-2000 is used as metal processing casting agent, metal wire drawing, stamping or forming lubricant and cutting fluid, grinding cooling lubricant, polishing agent, welding agent, etc. It is used as a lubricant in the paper industry, and also as a hot melt adhesive to increase rapid rewetting capacity.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

PPG

◆ **Composition** Propylene oxide condensate

◆ **English name** Poly propylene glycol

◆ **Type** Nonionic

◆ **Performance and Application**

1. PPG series are soluble in toluene, ethanol, trichlorethylene and other organic solvents. PPG200, 400, 600 are soluble in water and have lubricating, solubilizing, defoaming and antistatic properties. PPD-200 can be used as a dispersant for pigments.

2. In cosmetics, PPG-400 is used as emollient, softener and lubricant.

3. Used as antifoaming agent in paint and hydraulic oil, antifoaming agent in synthetic rubber and latex processing, refrigerant and coolant for heat transfer fluid, viscosity improver.

4. Used as an intermediate in esterification, etherification reaction and polycondensation reactions.

5. Used as a release agent, solubilizer, additive for synthetic oils, additive for water-soluble cutting fluids, roller oils, hydraulic oils, high-temperature lubricants, internal and external lubricants for rubber.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

Propylene glycol block polyether

◆ **Composition** Polyoxyethylene, polyoxypropylene block polymer

◆ **English name** Propylene glycol block polyether

◆ **Type** Nonionic

◆ **Performance & Applications**

1. As a low-foam detergent or defoamer, L61, L64, F68 are used to prepare low-foam, high-detergent synthetic detergents. L61 is used as a defoamer in the paper or fermentation industry, F68 is used as a defoamer during blood circulation in an artificial heart-lung machine to prevent air from entering.

2. Polyether has very low toxicity and is often used as a drug excipient and emulsifier. It is often used in the mouth, nasal sprays, eyes drops, ear drops, and shampoos.

3. Polyether is an effective wetting agent, can be used for fabric dyeing, photographic development and electric crossing acid margin. More sugar can be obtained in the sugar factory using F68 due to increased water permeability.

4. Polyether is a useful antistatic agent, and L44 can provide long-lasting electrostatic protection against synthetic fibers.

5. Polyether is used as a dispersant in emulsion coating. F68 is used as an emulsifier during the polymerization of polyvinyl acetate emulsion. L62 and L64 can be used as pesticide emulsifiers, coolants and lubricants in metal cutting and grinding. It is used as a lubricant when rubber is vulcanized.

6. Polyether can be used as crude oil demulsifier. L64 and F68 can prevent the hard-scale formation in oil pipelines and recover secondary oil.

7. Polyether can be used as a papermaking auxiliary, and F68 can effectively improve the quality of the coated paper.

8. F38 can be used as an emulsifier, wetting agent, defoamer, demulsifier, dispersant, antistatic agent, dust collector, viscosity modifier, foam control agent, leveling agent, gelling agent, etc., for the production of agricultural chemicals, cosmetics, drugs, it is also used in metal processing and cleaning, pulp and paper industry, textile processing (textile, finishing, dyeing, soft finishing), water quality treatment. It is also used as a bleaching aid.

9. P65 is mainly used in the wool industry, as a wool protection agent. Adding about 0.3% to the wool carbonization process can reduce wool scale damage, enhance the strength of single fiber by 10%, and reduce the yarn breakage rate by 10%.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

SPEC.	Vist Insp (25°C)	Color Pt-Co	Hydroxyl value mgKOH/g	Molecular Weight	Acid Value Mgcok/g	Water wt (%)	PH 1% in water
PPG-200	Clear clear oily substance Thick liquid	≤20	510-623	180-220	≤0.5	≤0.5	5.0~7.0
PPG-400	Clear clear oily substance Thick liquid	≤20	255-312	360-440	≤0.5	≤0.5	5.0~7.0
PPG-600	Clear clear oily substance Thick liquid	≤20	170-208	540-660	≤0.5	≤0.5	5.0~7.0
PPG-1000	Clear clear oily substance Thick liquid	≤20	102-125	900-1100	≤0.5	≤0.5	5.0~7.0
PPG-1500	Clear clear oily substance Thick liquid	≤20	68-83	1350-1650	≤0.5	≤0.5	5.0~7.0
PPG-2000	Clear clear oily substance Thick liquid	≤20	51-62	1800-2200	≤0.5	≤0.5	5.0~7.0
PPG-3000	Clear clear oily substance Thick liquid	≤20	34-42	2700-3300	≤0.5	≤0.5	5.0~7.0

SPEC.	Vist Insp (25°C)	Average molecular weight	Viscosity (25°C CPS)	Cloud point (1% aqueous solution)	Melting point (°C)	Water wt (%)	PH (1% in water)	HLB
L31	Clear liquid	1100	200	37	—	≤1.0	5.0~7.0	3.5
L35	Clear liquid	1900	320	70-85	—	≤1.0	5.0~7.0	18.5
F38	White solid	5000	—	>100	45	≤1.0	5.0~7.0	30
L42	Clear liquid	1630	250	37	—	≤1.0	5.0~7.0	8
L43	Clear liquid	1850	310	42	—	≤1.0	5.0~7.0	10
L44	Clear to yellowish liquid	2200	140-190	45-60	—	≤0.5	5.0~7.0	12
L45	Clear liquid to paste	2400	—	75-85	—	≤1.0	5.0~7.0	15
L61	Clear to yellowish liquid	2000	100-150	35-45 (10% in 25% BDG)	—	≤0.5	5.0~7.0	3
L62	Clear to yellowish liquid	2500	180-230	35-45 (10% in 25% BDG)	—	≤0.5	5.0~7.0	7
L63	Clear liquid	2650	550	34	—	≤1.0	5.0~7.0	11
L64	Clear to yellowish liquid	2900	200-250	55-65	—	≤0.5	5.0~7.0	13
P65	Milky paste	3500	—	75-85	29.5	≤1.0	5.0~7.0	15
F68	White flake solid	8350	—	>100	50	≤1.0	5.0~7.0	29

*P65 is L65



Additive AC-1800 Series

◆ **Composition** Aliphatic amine polyoxyethylene ether

◆ **English name** Fatty amine polyoxyethylene ether

◆ **Type** Nonionic

SPEC.	Vist Insp (25°C)	Color (Gardner Color Scale)	Total amine value	Tertiary amine value	Active ingredients
1802	Yellowish or yellow liquid or wax	≤10#	150-160	150-160	≥99.5%
1810	Yellowish or yellow liquid or wax	≤10#	75-85	75-85	≥99.5%
1812	Yellowish or yellow liquid or wax	≤10#	65-75	65-75	≥99.5%
1815	Yellowish or yellow liquid or wax	≤8#	55-65	55-65	≥99.5%
1825	Yellowish or yellow liquid or wax	≤8#	35-45	35-45	≥99.5%
1830	Yellowish or yellow liquid or wax	≤8#	30-40	30-40	≥99.5%
1835	Yellowish or yellow liquid or wax	≤8#	25-35	25-35	≥99.5%
1860	Yellowish or yellow liquid or wax	≤8#	15-25	15-25	≥99.5%

◆ **Performance and application**

SPEC.	Performance and application
1802	This product is insoluble in water and soluble in organic solvents. It is used as an antistatic agent inside plastics and as an additive in the textile industry.
1810 1812	This product is soluble in water and soluble in organic solvents. Used as a reducing acid dye leveling agent. Used as corrosion inhibitor for petroleum cracking plant. Used as a lubricant, emulsifier and dispersant in pesticide, textile, papermaking and leather industries.
1815 1825 1830 1835	1. This product is soluble in water, non-ionic in alkaline or neutral medium, and cationic in acidic medium, with excellent uniform dyeing and diffusion performance. 2. It is mainly used as a leveling agent for acid metal complex dyes, which can reduce the amount of sulfuric acid in the dyeing bath, reduce the strong damage to the fabric, and can also be used as a neutral dye and vat dye leveling agent. It effectively controls the transient dye loading rate and dye drift, and facilitates rapid staining at high temperatures. 3. As a leveling agent in wool, hemp, silk and synthetic fiber, increasing the concentration is a good stripping agent. As a stripping agent for wool and nylon fabrics, it is used for wool stripping and uniform dyeing and finishing, which can improve the Vist Insp of the fabric, and improve the abrasion resistance of the fabric in the dyeing and printing of ice dyeing 4. In the production of viscose fiber cord, it is used as an additive to improve the strength of the cord, improve the filterability and processing technology of the viscose, improve the monofilament strength of the cord, and reduce the exchange rate of the spinning nozzle by about 20-40% compared with the original. 5. Used as an emulsifier, antistatic agent and dispersant in textiles.
1860	In the textile industry, it is used as a leveling agent for silk printing fabrics to prevent stains on a white background and increase brightness; In the daily chemical industry, it is used in shampoos to increase hair shine.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

Additive AC-1200 Series

◆ **Composition** Aliphatic amine polyoxyethylene ether

◆ **English name** Fatty amine polyoxyethylene ether

◆ **Type** Non-ionic

◆ **Performance & Applications**

1. AC-1203 is used as a dispersant, antistatic agent, and soft finishing agent on textiles, and can also be used as a latex stabilizer and acid corrosion prevention agent.

2. AC-1202, AC-1205, AC-1210, AC-1215 are used in pesticides to prepare insecticides and herbicides, and are used as emulsifiers for antistatic agents and lubricants in the textile industry, and can also be used as oiliness additives for water-based inks and cosmetics.

3. AC-1210 is especially suitable for ship electrostatic spraying additive, which can reduce resistance, replace high-pressure painting and improve working conditions. In viscose textile, it is used as a dispersant for inorganic salts and as an emulsifier for fats and greases in industrial lubrication.

4. When AC-1215 is used for artificial fiber, adding this product to the spinning bath can prevent the deposit of silt on the nozzle and improve the transparency of alkaline fibers.

◆ **Packaging, storage and transportation**

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

SPEC.	Vist Insp (25°C)	Color (Gardner Color Scale)	Total amine value	Tertiary amine value mgKOH/g	PH 1% in water
AC-1201	clear liquid	—	220-245	—	5.0~7.0
AC-1202	Clear liquid	—	190-220	190-200	
AC-1203	Yellow sticky liquid	≤10	168-178	168-178	
AC-1205	Yellow sticky liquid	≤10	130-141	130-141	
AC-1210	Yellow sticky liquid	≤8	82-92	82-92	
AC-1215	Yellow sticky liquid	≤8	60-70	60-70	



Polyethylene Glycol Laurate

- ◆ **Composition** Polyethylene glycol laurate
- ◆ **English name** Polyethylene glycol laurate
- ◆ **Type** Non-ionic

SPEC.	Vist Insp (25°C)	Acid value mgKOH/g	Saponification value mgKOH/g	Content (%)	HLB
PEG200ML	Clear to yellowish liquid	≤ 5	140 ~ 155	≥99%	9.5
PEG200DL	Clear to yellowish liquid	≤ 10	195 ~ 210	≥99%	8
PEG400ML	Clear to yellowish liquid	≤ 5	90 ~ 110	≥99%	13
PEG400DL	Clear to yellowish liquid	≤ 10	130 ~ 155	≥99%	10.5

◆ Performance and application

SPEC.	Performance and application
PEG200ML	Dispersed in water, and minerals, vegetable oil forms a turbid liquid. Water-based coatings as defoamers. Vinyl plastisol as a viscosity reducer, hair dye paste as a viscosity control additive, and also used as a paper softening additive, metalworking lubricant and textile lubricant emulsifier, coupling agent and solubilizer.
PEG200DL	Soluble in isopropanol, acetone, carbon tetrachloride, and other solvents, dispersed in water, used as a self-emulsifying auxiliary emulsifier and lubricant, mold release agent, viscosity control agent.
PEG400ML	Dispersed in water, with emulsification, and lubrication properties, latex paint as a lubricant, fiber processing as a lubricant and leveling agent, can also be used as a pigment grinding and dispersing agent, oil solvent solubilizer, vinyl plastic sol anti-blocking agent, cosmetics and pharmaceutical emulsifier.
PEG400DL	Dispersed in water, with good bundling, antistatic, soft, smooth performance. Chemical fiber oil agent as an oil-soluble emulsifier, softener, lubricant, and antistatic agent. In the textile industry as a coupling agent, and lubricant. Metal processing as a degreaser, and coolant additive, can also be used as a paper release agent, and industrial or civil detergent.

◆ Packaging storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

Polyethylene Glycol Oleate

- ◆ **Composition** Polyethylene glycol oleate
- ◆ **English name** Polyethylene glycol oleate
- ◆ **Type** Non-ionic

SPEC.	Vist Insp (25°C)	Acid value mgKOH/g	Saponification value mgKOH/g	Active ingredients (%)	HLB
PEG400MO	Amber liquid	≤ 5	75 ~ 95	≥99%	11 ~ 12
PEG400DO	Amber liquid	≤ 10	100 ~ 130	≥99%	7 ~ 8
PEG600MO	Amber liquid	≤ 5	60 ~ 75	≥99%	13 ~ 14
PEG600DO	Amber liquid	≤ 10	85 ~ 105	≥99%	10 ~ 11
PEG-264 Oleate	Yellow liquid	≤ 2	115 ~ 125	≥99%	-

◆ Performance and application

SPEC.	Performance and application
PEG400MO	Soluble in benzene, isopropanol, and dispersed in water. Used as industrial special lubricant, industrial degreasing agent, vinyl plastisol viscosity stabilizer, textile softener, lubricant. Prepare dry cleaning agent, oil-based cutting fluid balance emulsifier. Antistatic agent and dispersant for plastics. biodegradable.
PEG400DO	PEG400DO: Soluble in mineral and vegetable oil, dispersed in water. Used as W/O emulsifier, solubilizer, kerosene emulsifier, industrial lubricant.
PEG600DO PEG600MO	1. Soluble in water, has good washing, emulsifying and lubricating properties. 2. Cosmetic species as O/W emulsifier. Used as leveling agent, dispersant and softener in textile industry. Used as a lubricant in metal processing. It can be used as an emulsifier for insecticides in pesticides, and can also be used for pickling of water-soluble paints and printed circuit boards.
PEG-264 Oleate	1. It is easily soluble in oil and organic solvents, and has good smoothing and emulsifying effects. 2. Widely used as an emulsifier in the manufacture of synthetic fibers, it has the characteristics of low freezing point, good viscosity-temperature properties, low volatility, and good oxygen resistance.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.



Glycerol ethoxyethylene ether series

- ◆ **Composition** Glycerol, polymer with ethylene oxide
- ◆ **English name** Glycerol polyoxyethylene ether
- ◆ **Type** Non-ionic

Indicator	Vist Insp (25°C)	PH 1% in water	Hydroxyl value mgKOH/g	Color Pt-Co	Water wt (%)
Variety					
Glycerol (18.5) Ether	Clear or yellowish liquid	5.0-7.0	184.0 ± 5.0	≤30	≤0.5
Glycerol (20) Ether	Clear or yellowish liquid	5.0-7.0	174.0 ± 5.0	≤30	≤0.5
Glycerol (25) Ether	Clear or yellowish liquid	5.0-7.0	141.0 ± 5.0	≤30	≤0.5

◆ Performance and application

Soluble in water, ethanol, and other polar organic solvents. Insoluble in mineral oil and other non-polar substances. It can be used as polyurethane as a foam stabilizer, textile printing, and dyeing applications, with excellent leveling performance.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

Emulsifier Span Series

- ◆ **Composition** Sorbitan fatty acid ester
- ◆ **English name** Sorbitan fatty acid ester
- ◆ **Type** Non-ionic

SPEC.	Vist Insp (25°C)	Hydroxyl value (mgKOH/g)	Saponification value (mgKOH/g)	Acid value (mgKOH/g)	Water wt (%)	HLB	Melting point (°C)
S-20	Amber viscous liquid	330 ~ 360	160 ~ 175	≤8	≤1.5	8.6	Liquid (25°C)
S-40	Yellowish waxy solid	255 ~ 290	140 ~ 150	≤8	≤1.5	6.7	45 ~ 47
S-60	Yellowish waxy solid	240 ~ 270	135 ~ 155	≤8	≤1.5	4.7	52 ~ 54
S-80	Amber viscous oil	190 ~ 220	140 ~ 160	≤10	≤1.5	4.3	Liquid (25°C)
S-85	Yellow oily liquid	60 ~ 80	165 ~ 185	≤15	≤1.5	1.8	Liquid (25°C)

◆ Performance and application

SPEC.	Performance and application
S-20	1. Soluble in oil and organic solvents, dispersed in water as a semi-emulsion liquid. 2. In the production of medicine and cosmetics, W/O emulsifiers, stabilizer, plasticizer, lubricants, and desiccants. Used as softener, antistatic agent, and finishing agent in the textile industry. It is also used as a mechanical lubricant. As an additive antifog agent, it has good initial and low-temperature anti-fog droplet properties and is suitable for PVC (1~1.5%), polyolefin film (0.5~0.7%), and EVA film.
S-40	1. Soluble in oil and organic solvents, dispersed in hot water. 2. As an emulsifier and dispersant in the food and cosmetics industry. Emulsion stabilizer in emulsion polymerization. Dispersant in printing ink. It can also be used as a textile waterproof coating additive, oil emulsion, and dispersant. Widely used in polymer anti-fog drops, PVC agricultural film 1~1.7%, EVA 0.5~0.7%.
S-60	1. This product is insoluble in water and dispersed in hot water. It is a good w/o emulsifier with strong emulsification, dispersion, and lubrication properties, as well as a good stabilizer and defoamer. 2. Used as an emulsifier in the food industry, used in the production of beverages, toffee, ice cream, bread, cakes, malted milk, margarine, chocolate, etc. Used as an antistatic agent and soft oiling agent for acrylic fibers in the textile industry components. Used as emulsifiers and stabilizers in food, pesticides, medicine, cosmetics, coatings, and plastics industries. Used as anti-fog drops for PVC, EVA, PE, and other films, the dosage in PVC is 1.5~ 1.8%, and the dosage in EVA is 0.7~ 1%.
S-80	1. Insoluble in water, soluble in hot oil and organic solvents, is a high-grade lipophilic emulsifier. 2. Used for W/O latex explosives, nylon, and viscose cord oil, which has a good smoothing effect on fibers. It is used for the emulsification of machinery, coatings, chemicals, and explosives. As an emulsifier in oil drilling weighted mud, as an emulsifier in the production of food and cosmetics, and as a dispersant in the paint and coating industry. Used as a stabilizer in the production of titanium dioxide, insecticides, wetting agents, and emulsifiers in pesticide production. As a co-solvent in petroleum products; It can also be used as a rust inhibitor for anti-rust oil. Lubricants and softeners for textiles and leather. 3. As a film anti-fog dropper, it has good initial and low-temperature anti-fog droplet properties, and the dosage in PVC is 1~1.5%, and the dosage in polyolefin is 0.5~0.7%.
S-85	1. Slightly soluble in isopropanol, tetrachloroethylene, cotton oil, etc. 2. Mainly used in medicine, cosmetics, textile, paint, and petroleum industries, etc., used as emulsifiers, thickeners, rust inhibitors, etc.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.



Emulsifier Tween Series

- ◆ **Composition** Polyoxyethylene sorbitol fatty acid ester
- ◆ **English name** Polyoxyethylated sorbitan fatty acid ester
- ◆ **Type** non-ionic

SPEC.	Vist Insp (25°C)	Hydroxyl value (mgKOH/g)	Saponification value (mgKOH/g)	Acid value (mgKOH/g)	Water wt (%)	HLB	Specific gravity
T-20	Amber viscous liquid	85 ~ 110	35 ~ 50	≤2.0	≤3	16.5	1.08 ~ 1.13
T-40	Yellowish waxy solid	85 ~ 100	40 ~ 55	≤2.0	≤3	15.5	1.05 ~ 1.10
T-60	Yellowish waxy solid	80 ~ 105	40 ~ 55	≤2.0	≤3	14.5	1.05 ~ 1.10
T-80	Amber viscous oily substances	60 ~ 85	40 ~ 50	≤2.0	≤3	15	1.06 ~ 1.09

◆ Performance and application

SPEC.	Performance and application
T-20	1. Soluble in water, methanol, ethanol, isopropanol, and other solvents. Insoluble in animal and mineral oil, with emulsification, diffusion, solubilization, stability, and other properties. 2. This product is harmless to the human body, non-irritating, and is mainly used in the food industry for cake, ice cream, shortening, etc. 3. In other aspects, it can be used as an emulsifier for mineral oil, a solvent for dyes, an emulsifier for cosmetics, a stabilizer for foam plastics, an emulsifier, a diffuser, and a stabilizer for pharmaceuticals, and an auxiliary agent for photo emulsions.
T-40	Soluble in water, methanol, ethanol, isopropanol, and other solvents, insoluble in moving, mineral oil, used as O/W emulsifier, solubilizer, stabilizer, diffusion agent, antistatic agent, lubricant.
T-60	1. Soluble in water, methanol, ethanol, isopropanol and other solvents, insoluble in animal and mineral oil, with excellent emulsification performance, and wetting, foaming, diffusion and other effects. 2. Used as an O/W type emulsifier, dispersant, and stabilizer, used in the manufacture of food, medicine, cosmetics, and water-based coatings. 3. Used in the textile industry as a softener and antistatic agent, it is a component of polyacrylonitrile spinning oil agent and a softener for fiber post-processing, so that the fiber eliminates static electricity, improves its softness and gives the fiber good dyeing performance.
T-80	1. Soluble in water, methanol, and ethanol. Insoluble in mineral oil. Used as an emulsifier, dispersant, wetting agent, solubilizer, and stabilizer, Used in medicine, cosmetics, food, and other industries. 2. Used as a stabilizer and foaming agent in the production of polyurethane foam. It can be used as an antistatic agent in synthetic fibers and is an intermediate of chemical fiber oil agents. It is used as a wetting agent and dispersant in photosensitive material film production. Used to emulsify silicone oil during fabric waterproofing has a good effect, and is also used in nylon and viscose cords as an oil agent and water-soluble emulsifier, often mixed with S-80. 3. Used as oilfield emulsifier, wax inhibitor, heavy oil wetting, drag reduction agent, near well area treatment agent; Used as precision machine tool modulation, lubrication, coolant, etc.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage. It is transported as non-toxic and non-dangerous goods, stored in a dry and ventilated place, storage period of two years.

Oleyl Alcohol Ether Series

- ◆ **Composition** Addition polymerization product of oleyl alcohol and ethylene oxide
- ◆ **English name** POE oleyl ether

◆ Performance & Application

- Used as a softener, lubricant, solubilizer and emulsifier in the production of cosmetics, used in the production of astringent cream and astringent lotion.
- Used as a solubilizer of bromoacid for the production of lipstick and liquid balm, and can also be used to prepare foam baths, shampoos, Perm agent, hair removal agents and hair straighteners.
- Used as an oil-soluble spreading agent.
- Prepare transparent gel with mineral oil, isopropyl alcohol ester, refined oleyl alcohol, and water.
- Used as emulsifier, lubricant, and solubilizer in the pharmaceutical industry for the manufacture of emulsions and creams.
- Widely used in textile printing and dyeing industries.

◆ Packaging, Storage and Transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products are non-toxic, and non-flammable, according to the general chemical storage, transportation, and transportation, stored in a dry and ventilated place, a storage period of two years.

SPEC.	Vist Insp	Cloud Point	PH Values
1602	Yellowish to colorless transparent liquid	37 ± 2°C (5g in 25g 25% BDG)	5 ~ 7
1605	Light yellow to colorless transparent liquid	72 ± 2°C (5g in 90g 25% BDG)	5 ~ 7



Emulsifier E1300 Series

- ◆ **Composition** Condensation of Isomer alcohols and Ethylene oxide

- ◆ **English name** Isomeric alcohol ethoxylates

- ◆ **Type** Non-ionic

◆ Performance & Applications

- This series of products are easy to disperse or dissolve in water, and have excellent wettability, permeability and emulsification. Add a small amount of this product to the pretreatment formula to get an excellent refining effect.
- In the textile industry and leather processing industry, it is used as a component of degreasing agent, cleaning agent, emulsifier and scouring agent.
- It has a special emulsifying effect on amino silicone oil and simethicone oil, and can improve the efficacy after use. Compared with the general silicone oil emulsifier, the amount of emulsifier is less, the emulsion is more stable, and has strong penetrating power, which can penetrate into the inside of the fiber. This results in a more satisfying soft feel.
- Used as metal processing aids, multi-functional detergents, decontamination solubilizers, household care cleaning agents, vehicles, public facilities, ultrasonic cleaning agents.
- This product does not contain a benzene ring structure, and the product thus prepared becomes a new generation of environmentally friendly products.
- Mixing this product into a concentration of 80-90% will make it a uniform fluid, which is more convenient to use and better in effect.

◆ Packaging, Storage and Transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products are non-toxic, and non-flammable, according to the general chemical storage, transportation, and transportation, stored in a dry and ventilated place, a storage period of two years.

SPEC.	Vist Insp (25°C)	Hydroxyl Number	Cloud Point (10%in25 BDG)	Water (%)	PH Values (1% Aq. Solution)
1302	Colorless to yellowish transparent liquid or milky paste	195 ± 5	35-40	≤0.5	5.0-7.0
1303	Colorless to yellowish transparent liquid or milky paste	169 ± 5	45-55	≤0.5	5.0-7.0
1304	Colorless to yellowish transparent liquid or milky paste	149 ± 5	55-63	≤0.5	5.0-7.0
1305	Colorless to yellowish transparent liquid or milky paste	136 ± 5	63-68	≤0.5	5.0-7.0
1306	Colorless to yellowish transparent liquid or milky paste	121 ± 5	68-73	≤0.5	5.0-7.0
1307	Colorless to yellowish transparent liquid or milky paste	110 ± 5	73-76	≤0.5	5.0-7.0
1308	Colorless to yellowish transparent liquid or milky paste	102 ± 5	76-80	≤0.5	5.0-7.0
1309	Colorless to yellowish transparent liquid or milky paste	94 ± 5	57-63 (1% Aq. Solution)	≤0.5	5.0-7.0
1310	Colorless to yellowish transparent liquid or milky paste	88 ± 5	68-75 (1% Aq. Solution)	≤0.5	5.0-7.0
1312	Colorless to yellowish transparent liquid or milky paste	77 ± 5	85-92 (1% Aq. Solution)	≤0.5	5.0-7.0

Emulsifier E1000 Series

- ◆ **Composition** Condensation of Isomer alcohols and Ethylene oxide

- ◆ **English name** Isomeric alcohol ethoxylates

- ◆ **Type** Non-ionic

◆ Performance & Application

- It can be used as a solvent-based cleaning agent. Its emulsifier and wettability are better than TX series, and it can be compounded with anionic, cationic, and other nonionic surfactants. It can be used to clean metal components such as automobile engines and mechanical parts.
- Used in dispersants.
- It can be used as wetting agent and penetrating agent for purification, refining, soaking and surface treatment.
- Combined with other penetrating agents, it can be used as a leather degreasing agent.

◆ Packaging, Storage and Transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products are non-toxic, and non-flammable, according to the general chemical storage, transportation, and transportation, stored in a dry and ventilated place, a storage period of two years.

SPEC.	Vist Insp (25°C)	PH (1%aqueous solution)	Cloud point (10%in25%BDG solution, °C)	Color	Moisture (%)	Hydroxyl value (mgKOH/g)
1003	Colorless transparent liquid	5.0-7.0	40-50	≤50	≤1.0	185-200
1005	Colorless transparent liquid	5.0-7.0	60-70	≤50	≤1.0	140-155
1006	Colorless transparent liquid	5.0-7.0	35-45 (1%aqueous solution)	≤50	≤1.0	125-140
1007	Colorless transparent liquid	5.0-7.0	70-75	≤50	≤1.0	115-130
1008	Colorless transparent liquid or paste	5.0-7.0	75-80	≤50	≤1.0	105-120
1009	Colorless transparent liquid or paste	5.0-7.0	65-70 (1%aqueous solution)	≤50	≤1.0	95-110

Penetrating agent

- ◆ **Composition** Condensate of fatty alcohol (or alkylphenol) and ethylene oxide

- ◆ **English name** Penetrating agent

- ◆ **Type** Non-ionic

SPEC.	Vist Insp	Color	Cloud point (10%in25%BDG)	Hydroxyl value	Moisture (%)	PH (1%aqueous solution)	Value Penetration	Active ingredient
C8B3	Colorless transparent liquid	≤30	45-55	205-225	≤1.0	4.0-7.5	-	-
C8B4	Colorless transparent liquid	≤30	55-65	175-190	≤1.0	4.0-7.5	-	-
C8B5	Colorless transparent liquid	≤30	65-72	155-165	≤1.0	4.0-7.5	-	-
JFC-3A	Colorless transparent liquid	≤30	70-78	150-160	≤1.0	4.0-7.5	-	-
C8B8	Colorless transparent liquid to white solid	≤30	78-84	110-120	≤1.0	4.0-7.5	-	-
C8B10	Colorless transparent liquid to white solid	≤30	84-88	90-105	≤1.0	4.0-7.5	-	-
C8B12	Colorless transparent liquid to white solid	≤30	88-92	75-95	≤1.0	4.0-7.5	-	-
JFC-3	Yellow transparent liquid	≤50	40-50	215 ± 3	-	-	-	≥95
JFC-5	Yellow transparent liquid	≤50	-	160 ± 3	-	-	≤22s(3%)	-



SURFACTANT SERIES

EMULSIFIER

◆ Performance & Applications

This series of products is resistant to acid and alkali, hard water, good water solubility, high-efficiency penetration and wetting properties, and also has emulsifying, dispersing and cleaning properties. It can be used as penetrating agent in textile printing and dyeing industry, and can be used for sizing, desizing, refining and bleaching, carbonization of wool, suitable for resin finishing agent. Used as penetrating agent and degreasing agent in leather industry. Used as a wetting agent in metal detergents to make oil stains easy to separate from the metal surface, and also has a certain emulsifying and cleaning effect.

1. Soluble in water, resistant to strong acid, strong alkali, hypochlorite, etc., with good permeability.
2. It can be used in conjunction with anion and cation. This product has stratification phenomenon with different temperatures during storage, but it does not affect the use.
3. It's suitable for scouring bleaching and dyeing penetrating agent.
4. In the industrial washing industry, it is often used in the penetrating and rinsing of heavy oil stains. It is resistant to high temperatures, has a high cloud point, and is easy to penetrate in strong alkaline cleaning and has a wide range of uses.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products are non-toxic, and non-flammable, according to the general chemical storage, transportation, and transportation, stored in a dry and ventilated place, a storage period of two years.

Softener SG Series

◆ **Composition** Condensate of stearic acid and ethylene oxide

◆ **English name** Polyoxyethylene stearate

◆ **Type** Non-ionic

◆ Performance & Application

1. SG-6 is diffused in water and has good softness and lubricity. It is one of the components of synthetic fiber spinning oil. It is used as softener in fiber processing and has good antistatic and lubricating properties. It can be used as a softener in the process of fabric weaving to reduce broken ends and improve fabric feel. It can be used as an emulsifier in cosmetics.
2. SG-(9,14) is diffuse in water, has good emulsifying and cleaning performance, and can be used as emulsifier in cosmetics, ointments, paste shoe polish, and has a thickening effect. In the spinning industry, it can be used as an emulsifier for the post-treatment liquid of chemical fibers, which can soften chemical fibers and improve the fabric feel.
3. SG-10: Used as an emulsifier in cosmetics, ointments, cream shoe polish and other products, and also has a thickening effect. In the textile industry, it is used as an emulsifier and oil agent for synthetic fiber finishing, with softness and antistatic properties. Also used as thickener and stabilizer in paper starch coating.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products are non-toxic, and non-flammable, according to the general chemical storage, transportation, and transportation, stored in a dry and ventilated place, a storage period of two years.

Emulsifier O series

◆ **Composition** Condensate of Fatty Alcohol and Ethylene Oxide

◆ **English name** Fatty alcohol polyoxyethylene ether

◆ **Type** Non-ionic

◆ Performance & Application

1. O-3 and O-5 are easily soluble in oils and organic solvents. It can be used as W/O emulsifier, chemical fiber softener and silk post-treatment agent.
2. O-9, O-10, O-15, O-20, O-30 are easily soluble in water and organic solvents, stable to acid, alkali and hard water. It has good wetting, emulsifying and cleaning properties.
3. O-9 can be used as leveling agent, dyeing retarder in printing and dyeing industry, emulsifier in glass fiber industry, chemical fiber spinning oil component, emulsifier in cosmetics and ointment production, and in the preparation of household and industrial cleaning agents.
4. O-10 in the chemical fiber industry, it is used as one of the components of various chemical fiber spinning oils, with good spinnability; in the general industry, it is used as an emulsifier, with good emulsifying properties for animal, vegetable, and mineral oils. The emulsion is very stable; it can also be used to prepare household detergents, industrial detergents, and metal cleaners; it can be used as a wetting agent in the textile industry; it can be used as one of the components of the emulsifier in the pesticide industry.
5. O-15 has good scouring performance; it can be used as a leveling agent and retarder in the printing and dyeing industry to enhance the color fastness and make the color bright and beautiful; it can be used as a cleaning agent in the metal processing process, which is easy to remove the oil stain on the surface and is convenient subsequent process processing; used as emulsifier in general industry to produce extremely stable emulsion.
6. O-20 has the properties of diffusion, leveling, wetting, foaming, etc., and has a good affinity for direct dyes and vat dyes. It is used as a leveling agent, diffusing agent, stripping agent, retarder, printing semi-resist, anti-whitening agent, brightening agent. This product has unique emulsifying properties for stearic acid, paraffin, mineral oil, etc. It is used in latex industry, polymer emulsion polymerization and glass fiber lubricating oil. It can be used as an emulsifier. This product can effectively remove the dirt accumulated on the fabric due to the decomposition of the dye, and reduce the electrostatic effect of the fabric. It can be used as a component of synthetic fiber spinning oil such as polyester. It can be used in chemical production. A raw materials for paint slurry A, adhesive FD and rubber BA. And It's used as raw wool detergent and fruit tree pesticide penetrating agent.
7. O-25 can be mixed with various surfactants, has good dispersing and emulsifying properties, and can be used as leveling agent, retarding agent, glass fiber emulsifier, and industrial cleaning agent in the printing and dyeing industry.

◆ Packaging, Storage and Transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products are non-toxic, and non-flammable, according to the general chemical storage, transportation, and transportation, stored in a dry and ventilated place, a storage period of two years.



SURFACTANT SERIES

POLYETHER POLYOL

Dihydric alcohol cas series polyether polyols

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-204	Colorless to yellowish transparent liquid	≤0.08	≤50	—	≤0.08	≤5	4.5-7.0	260-280
TKC-210	Colorless to yellowish transparent liquid	≤0.08	≤50	100-300	≤0.08	≤5	4.5-7.0	107-117
TKC-220	Colorless to yellowish transparent liquid	≤0.08	≤50	—	≤0.08	≤5	5.0-7.0	54-58
TKC-220D	Colorless to yellowish transparent liquid	≤0.05	≤50	—	—	—	≤8.5	54-58

◆ Performance & Application

This series of products are mainly used for plastic runways, adhesives, polyurethane rubber wheels, polyurethane waterproof materials, sealants, caulking agents, etc. It can be used as an auxiliary material in some other fields. The addition ratio is about 5%-10% of the mass ratio of the main polyol to increase the toughness and stickiness of the product.

◆ Packaging, Storage and Transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products are non-toxic, and non-flammable, according to the general chemical storage, transportation, and transportation, stored in a dry and ventilated place, a storage period of two years.

Ordinary soft foam series polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-3000	Colorless to light yellow transparent liquid	≤0.08	≤50	400-600	≤0.08	≤5	5.0-7.0	53-59

High resilience series polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-330N	Colorless to light yellow transparent liquid	≤0.08	≤100	400-600	≤0.08	≤5	5.0-7.0	32-36
TKC-3600	Colorless to light yellow transparent liquid	≤0.08	≤100	750-1350	≤0.08	≤5	5.0-7.0	26-30

◆ Performance and application

This series of products is mainly used in the preparation of flexible polyurethane foam, such as furniture mats, mattresses, pillows, soles, sound-absorbing panels, carpet floors, filters, packaging materials, etc. In the foam preparation process, the dosage of additives can be adjusted in a wide range, and the foaming stability is good; Among them, there is high molecular weight and high activity polyether, which is used in high resilience foaming process, and can be mixed with polymer polyol POP, and the product has excellent resilience, compression and comfort.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.

Sorbitol series rigid foam polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-6200	Yellow transparent liquid	≤0.15	≤G7	2000-3000	≤0.15	≤50	5.0-8.0	360-400
TKC-600	Yellow transparent liquid	≤0.15	≤G7	11000-19000	≤0.15	≤50	5.0-8.0	430-470
TKC-635	Yellow transparent liquid	≤0.15	≤G7	4500-6500	≤0.15	≤50	5.0-8.0	475-525
TKC-6030	Yellow transparent liquid	≤0.15	≤G7	1000-2000	≤0.15	≤30	5.0-8.0	280-320

◆ Performance and application

This series of products, mainly used in the production of ordinary rigid foam, refrigerators, freezers, sandwich panels, etc., has the characteristics of high functionality, good fluidity and good dimensional stability.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.

Ethylenediamine series rigid polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-403	Colorless to light yellow transparent liquid	≤0.15	≤G3	2000-3000	≤0.15	≤50	5.0-8.0	360-400

◆ Performance and application

This product with high activity can be used for spraying, delicate cell structure, imitation wood frames, craft models and other products.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.

Trihydric alcohol cas series polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-303	Colorless to yellowish transparent liquid	≤0.08	≤100	—	≤0.15	≤20	4.5-7.0	540-580
TKC-304	Colorless to yellowish transparent liquid	≤0.08	≤50	200-500	≤0.15	≤15	4.5-7.0	360-400
TKC-305	Colorless to yellowish transparent liquid	≤0.08	≤50	100-500	≤0.1	≤5	4.5-7.0	315-355
TKC-307	Colorless to yellowish transparent liquid	≤0.08	≤50	—	≤0.08	≤5	4.5-7.0	220-260
TKC-310	Colorless to yellowish transparent liquid	≤0.08	≤50	100-500	≤0.08	≤5	5.0-7.0	158-178
TKC-3050D	Colorless to yellowish transparent liquid	≤0.05	≤50	—	—	—	≤8.5	54-58

Microcellular foaming series polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-28	Colorless to light yellow transparent liquid	≤0.08	≤50	—	≤0.08	≤5	5.0-7.0	26-30

Slow rebound series polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-1836G	Colorless to light yellow transparent liquid	≤0.08	≤100	850-1350	≤0.08	≤5	5.0-7.0	40-44
TKC-1070	Colorless to light yellow transparent liquid	≤0.08	≤100	—	≤0.08	≤5	5.0-7.0	220-260

Toluenediamine series rigid foam polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-401P	Dark brown red viscous liquid	≤0.15	—	9000-15000	—	—	9.0-12.0	380-420

◆ Performance & Applications

This product, mainly used in the production of ordinary rigid foam, refrigerators, freezers, sandwich panels, etc., has high functionality and is used for rapid demolding series products.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.

Sucrose series rigid foam polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-4110	Yellow transparent liquid	≤0.15	≤G9	2600-4000	—	—	9.0-11.0	420-460
TKC-835	Yellow transparent liquid	≤0.15	≤G9	4600-8500	≤0.15	≤50	5.0-8.0	420-480
TKC-380	Yellow transparent liquid	≤0.15	≤G9	8000-12000	≤0.15	≤50	5.0-8.0	350-410

◆ Performance and application

This series of products is mainly used in the production of ordinary rigid foam, refrigerators, freezers, sandwich panels, etc.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.



Sucrose series rigid foam polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-460	Yellow transparent liquid	≤0.15	≤G9	3000-5000	—	—	9.0-12.0	460-500
TKC-410E	Yellow transparent liquid	≤0.15	≤G9	3000-6000	—	—	9.0-12.0	400-460
TKC-4114	Yellow transparent liquid	≤0.15	≤G9	5000-7000	—	—	9.0-12.0	410-470
TKC-4115	Yellow transparent liquid	≤0.10	≤G9	3000-6000	—	—	9.0-12.0	390-450
TKC-8242G	Yellow transparent liquid	≤0.15	≤G10	6000-8000	—	—	9.0-12.0	410-470
TKC-8239G	Yellow transparent liquid	≤0.15	≤G10	5000-8000	—	—	9.0-12.0	370-400
TKC-8340	Yellow transparent liquid	≤0.15	≤G10	8000-12000	—	—	9.0-12.0	380-420
TKC-8318	Yellow transparent liquid	≤0.15	≤G9	5000-7000	—	—	9.0-12.0	380-420
TKC-8404J	Yellow transparent liquid	≤0.16	≤G10	4600-8501	—	—	9.0-12.0	380-420
TKC-8618	Yellow transparent liquid	≤0.15	≤G10	8000-12000	—	—	9.0-12.0	380-420

◆ Performance & Applications

This series of products is mainly used in the production of refrigerators, freezers, sandwich panels, etc. It has good compatibility with pentane.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.

Pentaerythritol series polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-400	Colorless to light yellow transparent liquid	≤0.15	≤100	1500-2300	≤0.08	≤0.15	≤305.0	380-420

◆ Performance & Applications

This product has good stability, fluidity, good plasticity and strong compatibility.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.

Cashew oil series polyether polyol

SPEC.	Vist Insp	Water (%)	APHA Color (APHA)	Viscosity (25°C mPa·s)	Acidity (mgKOH/g)	Potassium and sodium ions (ppm)	PH Values	Hydroxyl Values (mgKOH/g)
TKC-2004	Yellow transparent liquid	≤0.15	≤G9	—	—	—	—	260-320
TKC-4110A	Yellow transparent liquid	≤0.15	≤G10	3000-5000	—	—	9.0-12.0	420-470

◆ Performance and application

This product accounts for about 5%-10% of the system, increasing the compatibility and other characteristics of the product, mainly used in the plate field.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of one year.



Antistatic agent AEO(n)-PK

◆ **Composition** fatty alcohol polyoxyethylene (N) ether phosphate potassium salt

◆ **Type** Anionic type

◆ Performance and application

This product is soluble in water and can ionize lipophilic charged anions. It can also be soluble in general organic solvents, easy to be decomposed

by acid and alkali, mainly used for polyester, polypropylene oil agent, but also widely used in other aspects, with antistatic, emulsification, smoothing and other effects.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of two years.

Variety	Indicator	Vist Insp (25°C)	Active ingredient (%)	PH value (1% in water)
AE03-PK		White to slightly yellow paste	70.0±2.0	7.0-8.0
AE05-PK		White to slightly yellow paste	≥80	7.0-8.0
AE06-PK		White to slightly yellow paste	≥80	7.0-8.0

Antistatic agent APEK

◆ **Composition** fatty alcohol, polyoxyethylene phosphate, potassium salt

◆ **Type** Anionic

◆ Performance and application

This product is easily soluble in water and most organic solvents, can ionize lipophilic charged anions, easy to be decomposed by acid and alkali, not resistant to hard water, can be used for polypropylene, polyester filament and other synthetic fiber oils. With antistatic, emulsified, smooth, soft, wet, anti-rust performance, this product can be used for other industrial antistatic treatment and special antistatic agent for polyester DTY oil.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of two years.

Variety	Indicator	Vist Insp (25°C)	Active ingredient (%)	PH value (1% in water)	Color (Pt-Co)
APEK		Colorless to yellowish transparent liquid	≥90.0	6.0-8.0	≤50

High temperature lubricating oil TOD

◆ **Composition** Trimethylolpropane oleate

◆ Performance and application

This product, a class of ester compounds with excellent performance, which is made of polyols and advanced unsaturated fatty acids. It has excellent viscosity-temperature characteristics, good low temperature characteristics, high temperature stability, low volatility, so as to meet high lubrication requirements. And it is widely used in metal cutting, wire drawing and other processing base oil.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of two years.

Vist Insp (25°C)	Flash point (°C)	Acid value (mgKOH/g)	kinematic viscosity (40°C mm ² /s)	Pour point (°C)	Saponification value (mgKOH/g)
Light yellow transparent liquid	≥310.0	≤3	48.0-55.0	≤-27.0	180.0-190.0

C12-14 alcohol oleate

◆ **Composition** esterification of oleic acid and fatty alcohols

◆ **Type** Non-ionic

◆ Performance and application

This product is insoluble in water, soluble in most organic solvents, and has superior smoothness and heat resistance, and can be used as a smoothing agent for metal processing and chemical fiber oil agents.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of two years.

Vist Insp (25°C)	Acid value (mgKOH/g)	Saponification value (mgKOH/g)
Light yellow to yellow transparent liquid	≤2.0	124±3

Glycerol Trioleate

◆ **Composition** Trioleate

◆ Performance and application

Generally used as an emulsifier, it can be used in textile printing and dyeing industry and pharmaceutical food fermentation industry. It can also be used as a lubricant in the textile industry and a smoothing agent for metal post-processing.

◆ Packaging & Storage

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car.

This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of two years.

Vist Insp (25°C)	Acid value (mgKOH/g)	Saponification value (mgKOH/g)	Hydroxyl value (mgKOH/g)	Iodine value (mgKOH/g)	Freezing point (°C)	Moisture	Heavy metal (ppm)
Light yellow transparent liquid	≤2.0	185-205	≤25	80-115	≤5.0	≤0.5%	≤15

Pentaerythritol oleate

◆ **Composition** Reactants of pentaerythritol with oleic acid

◆ Performance and application

This product is a class of ester compounds with excellent performance made of polyols and advanced unsaturated fatty acids, which has excellent viscosity-temperature characteristics, good low temperature characteristics, high temperature stability, low volatility, so as to meet high lubrication requirements. And it is widely used in metal cutting, wire drawing and other processing base oil.

◆ Packaging and storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexitank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of two years.

Flash point (°C)	Acid value (mgKOH/g)	Viscosity (40°C, mm ² /s)	Viscosity index	Specific gravity	Pour point (°C)
≥310	≤0.8	46-55	≥188	0.91-0.93	≤-36

Isooctyl stearate

◆ **Composition** 2-ethylhexyl stearate

◆ **Type** Non-ionic

Performance and application: This product has good lubricity and is widely used in synthetic fiber oils.

◆ Packaging, storage and transportation

200KG iron drum/plastic drum, 50KG plastic drum, IBC, flexi tank, tank car. This series of products is non-toxic, non-flammable, according to the general chemical storage and transportation, stored in a dry and ventilated place, storage period of two years.

Vist Insp (25°C)	Acid value (mgKOH/g)	Saponification value (mgKOH/g)	Flash point (Open cup, °C)
微黄色透明液体	≤0.15	149±3	≥195

ENTERPRISE HONOR

