

»» 食品添加剂系列  
Food Ingredient series



嘉德乐集团  
CARDLO GROUP



CARDLO®

健康智造 “嘉德乐”

HEALTH WISDOM “CARDLO”

# COMPANY PROFILES

## 企业简介



嘉德乐是一家为客户提供酯类材料的国家专精特新重点“小巨人”企业，聚焦酯类材料研发技术，致力于成为世界级的酯类材料供应商和方案提供者。公司以“酯酯不倦、一生一事、改善人类生活、促进社会进步”为使命。

CARDLO is an enterprise that provide materials of esters to all around the world, as one of the key specialized and sophisticated enterprises “little giant” in China. We focus on ester materials to develop technologies and aim to become a world-class ester functional material supplier and solution provider. CARDLO has built the great mission of "tirelessly for ester, one thing for life, improve human life, and promote social progress" .



## • 企业精神

### Company spirit

诚信、拼搏、创新、共赢。

Integrity, hard work, innovation and win-win.

## • 企业宗旨

### Company purpose

品质创造价值，创新成就未来。

Quality creates value, and innovation creates the future.

## • 企业价值观

### Company values

精益求精、追求卓越、成就客户、造福社会。

Keep improving, pursue excellence, satisfy customers and benefit the society.

## • 核心竞争力

### Core competitiveness

核心技术、核心团队、核心产品、核心客户。

Core technology, core team, core products and core customers.

## • 企业使命

### Company mission

酯酯不倦、一生一事，改善人类生活、促进社会进步。

Tirelessly for ester, one thing for life, improve human life, and promote social progress.

## • 企业愿景

### Company vision

成为世界级酯类功能材料领域最具影响力、创新性、受人尊重的材料供应商和方案提供者。

Become the most influential, innovative and respected material supplier and solution provider in the field of world-class ester functional materials.

## • 社会责任

### Social responsibility

【环境保护】一直以来，嘉德乐致力于节能减耗、循环利用和零排放等方面采取多项创新技术，已连续几届被广州市评为清洁生产优秀企业。

[Environmental protection] For a long time, CARDLO has been committed to energy conservation and consumption reduction, recycling and zero emission, and has adopted a number of innovative technologies.

【慈善活动】公司坚持秉承“取之社会，用之社会”的公益理念，积极加入到扶贫、救灾、助困、助学的公益队伍中，在福建成立了嘉德乐慈善基金会，不断传播社会正能量。

[Philanthropic activities] CARDLO adheres to the public welfare concept of "taking from the society and using for the society", and actively participates in the public welfare team of poverty alleviation, disaster relief, and education assistance. CARDLO has set up the Cardlo Charity Foundation.

【关爱员工】公司建立了完善的人力资源管理及薪酬福利体系，并积极组织举办各类员工活动，提升员工归属感，持续为员工提供培训机会，为员工搭建良好的职业发展通道。

[Caring for employees] CARDLO has established a complete human resource management and welfare system, and actively organized various employee activities to improve the sense of belonging of employees, continue to provide training opportunities, and build a good career development channel.





# DEVELOPMENT COURSE

## 发展历程



### 广东嘉德乐集团有限公司

GUANGDONG CARDLO GROUP CO., LTD

#### 2005.12

嘉德乐公司成立

Establishment

#### 2011 - 2014

两条生产线正式投产，与加拿大萨斯卡彻温大学建立合作渠道，获批国家高新技术企业，获得 ISO22000 体系认证

Started using two production line, approved National High-tech Enterprise and established the cooperation with the University of Saskatchewan and obtained ISO22000 certification

#### 2015 - 2018

被授予广州市创新百强企业，广东省创新型企业，国家知识产权优势企业认定，获得 KOSHER 犹太认证

Awarded the top 100 innovative enterprises in Guangzhou, innovative enterprises in Guangdong, recognized as a national intellectual property advantage enterprise and KOSHER certification

#### 2019

获得广东省高成长中小企业、广州市开发区瞪羚企业和瞪羚培育企业，产品获得 FDA、HALAL 认证

Acquired the honor of High Growth Small and Medium-sized Enterprises in Guangdong and the FDA and HALAL certification

## 2020

获得国家专精特新“小巨人”企业、黄埔开发区工业互联网标杆、ISO9001 体系认证、ISO14001 体系认证

Obtained ISO9001 certification, ISO14001 certification

## 2021

获得食品工业诚信管理体系认证, FSSC22000 食品安全体系认证, AAAAA 标准化良好行为企业认定

Obtained the food industry integrity management system certification, FSSC22000 food safety system certification, and AAAAA standardization good behavior enterprise certification

## 2022

被认定为国家专精特新重点“小巨人”企业, 承接国家“十四五”重点研发项目, 自主研发、设计、建设年产量高达 10 万吨的自动化分子蒸馏单甘酯生产线。

Recognized as a national key specialized and sophisticated "small giant" enterprise, annual capacity of up to 100000 tons.



# PRODUCT CATALOG

## 产品目录



### 产品名称

- 蒸馏单硬脂酸甘油酯 E471 GMS99/DMG95 (单、双甘油脂肪酸酯)
- 单、双甘油脂肪酸酯 E471 GMS40 (单、双硬脂酸甘油酯)
- 单月桂酸甘油酯 E471 GML90
- 山梨醇酐脂肪酸酯 E491 SPAN60
- 水分散型单甘酯
- 聚甘油脂肪酸酯 E475 PGE
- 硬脂酰乳酸钙 E482 CSL
- 硬脂酰乳酸钠 E481 SSL
- 双乙酰酒石酸单双甘油酯 E472e DATEM
- 嘉德乐牌 SP 蛋糕油
- 面包乳化保湿膏
- 蔗糖脂肪酸酯

### Product Name

- Distilled Glycerin Monostearate E471 GMS99/DMG95
- Glycerin Monostearate E471 GMS40 (Mono and Diglycerides)
- Glycerol Monolaurate E471 GML90
- Sorbitan Monostearate E491 SPAN60 (Sorbitan fatty acid ester)
- Water Dispersible Glycerin Monostearate
- Polyglycerol Esters Of Fatty Acids E475 PGE
- Calcium Stearoyl Lactylate E482 CSL
- Sodium Stearoyl Lactylate E481 SSL
- Diacetyl Tartaric Acid Esters of Mono and Diglycerides E472e DATEM
- SP Cake Gel Emulsifier
- Bread Improver
- Sucrose Fatty Acid Ester



# 蒸馏单硬脂酸甘油酯 E471 GMS99/DMG95

## Distilled Glycerin Monostearate E471 GMS99/DMG95

Distilled Glycerin Monostearate is the most widely used food emulsifier made from natural vegetable oil, which is called DMG95/GMS90. The HLB value is 3.9-5.3. CARDLO introduced Six-stage distillation technology from Germany. The content of monostearate higher to 99%. This product excellence in emulsification, dispersion, defoaming, foaming, anti-starch aging and control of fat accumulation, it widely use as emulsifier in oils, dairy products, frozen foods, and candy.



### Application range



#### Bread, Cakes, Biscuits and Other flour products

Improve the capsule structure and delay hardening; increase the volume; increases the crispiness of cookies, prevents grease from seeping out, Anti-aging (extended shelf life).



#### Margarine and Shortening

Adjust the crystallization of oil, enhance the stability of the water-in-oil system, and prevent the separation of oil and water; Improve the mixing and whipping of shortening and other ingredients.



#### Candy, Chocolate and Chewing gum

Make the oil easy to disperse, reduce the viscosity of the slurry and the crystallinity of sugar, and improve the taste of the candy; Reduce the viscosity of chewing gum and enhance the plasticity of the glue base.



#### Protein beverage

Improve the stability of fat and protein, prevent stratification and precipitation.



#### Non-Dairy Creamer and Coffee companion

Make the oil easy to disperse, enhance the stability of the emulsion, and the whitening effect is obvious.



#### Meat products

Make the oil easy to disperse, and firmly combine with water and starch, while preventing starch from regenerating and improving the taste.



#### Edible defoamer

Reduce or inhibit the formation of foam in the production process of various foods.



#### Peanut butter

Provides creamy texture, makes the filling temperature high, shortens the standing time and has good oil holding capacity.



#### Potato chips

Ensure a high degree of uniformity, reduce adhesion, improve texture and make production easier.



## Product category

- Distilled Glycerin Monostearate
- Distilled Glycerin Monostearate (**Powder**)
- Distilled Glycerin Monostearate (**100 Mesh powder**)
- Distilled Glycerin Monostearate (**Flake**)
- Distilled Glycerin Monostearate (**Pellet**)
- Distilled Glycerin Monostearate (**Non palm oil**)
- Distilled Glycerin Monostearate (**Unsaturated**)
- Distilled Glycerin Monostearate (**High 18C**)

## Application functions

- Emulsifier
- Anti aging (Extended shelf life)
- Increase the softness
- Increase Stability



## Different raw material Distilled Glycerin Monostearate

Product	Monoglyceride (%)	Source
GMS-C001	≥ 95%	Palm
GMS-C002	≥ 95%	sunflower
GMS-C003	≥ 95%	soybean
GMS-C004	≥ 95%	Rapeseed

## Saturated and Unsaturated Distilled Glycerin Monostearate

Product	Monoglyceride (%)	Source	state	IV
GMS-C001	≥ 95%	Palm	Saturated	≤ 2
GMS-C005	≥ 95%	Palm /soybean	unsaturated	5-15 /16-25

## Distilled Glycerin Monostearate in different size

Product	Monoglyceride (%)	Source	Particle size
GMS-C001	≥ 95%	Palm	40
GMS-C006	≥ 95%	Palm	80-100
GMS-C007	≥ 95%	Palm	200

## Special Distilled Glycerin Monostearate

Product	Monoglyceride (%)	Source	C18 Content
GMS-C001	≥ 95%	Palm	≥ 35%
GMS-C008	≥ 95%	Palm	≥ 60%
GMS-C009	≥ 95%	Palm	≥ 90%

This product conforms to the national standard  
GB1886.65 GB15612-1995-2015



# 单、双甘油脂肪酸酯 E471 GMS40( 单、双硬脂酸甘油酯 )

## Glycerin Monostearate E471 GMS40 (Mono and Diglycerides)

Mono and Diglycerides bring key functionality to oils and fats,dairy products,frozen desserts and confectionery. It is available in variations depending on the concentration of mono-diglyceride.Variants are available with a mono-diglyceride concentration of 40-60%.Mono and Diglycerides are non-ionic surfactants with characteristics (emulsifying, dispersing,foaming,antifoaming,restraining starch retrogradation and controlling fat condensation).

### Application

#### Candy、Chocolate and Caramel

Prevent sugar crystallization and the separation of oil and water.Increase delicacy,luster and taste.

#### Bread、Cake

Improve structure,increase flexibility and volume, and extend shelf life.

#### Ice cream

Improve shape retention and keep bubbles stable.

#### Protein beverage、Coffee-whitener

Improve the stability of fat and protein,prevent lamination and precipitation,and promote the uniform distribution of fat.

#### Dairy products

Promote milk fat dispersion and prevent precipitation.

#### Margarine and Shortening

Enhance the stability of water-in-oil system and prevent oil crystallization.

### Quality Index

Index	GMS40	GMS50	GMS60
Appearance (20° C)	Milky white powder solid	Milky white powder solid	Milky white powder solid
Monoglyceride content/%	≥ 40	≥ 50	≥ 60
Acid value (mg KOH/g)	≤ 5.0	≤ 3.0	≤ 3.0
Free glycerol (w/%)	≤ 7.0	≤ 5.0	≤ 2.0
Residue on ignition (w/%)	≤ 0.5	≤ 0.5	≤ 0.5
Soap quality (calculated by sodium oleate), w/%	≤ 2.0	≤ 2.0	≤ 2.0
Melting point (°C )	50-60	50-60	50-60
Heavy metals (Pb, mg/kg)	≤ 2	≤ 2	≤ 2
Arsenic (As, mg/kg)	≤ 2	≤ 2	≤ 2

# 单月桂酸甘油酯 E471 GML90

## Glycerol Monolaurate E471 GML90

Glycerol monolaurate (GML), also known as dodecanoic acid monoglyceride, is an esterophilic non-ionic surfactant that naturally found in breast milk, coconut oil and American sylvesteris. It is an excellent food emulsifier with an HLB value of 5.2, and is a safe, efficient and broad-spectrum bacteriostatic agent with dual functions of emulsification and antiseptis.

Product Name:  $\alpha$ -Glyceryl Monolaurate, Glyceryl Monolaurate, Glycerin Monolaurate

CAS : 142-18-7

Molecular Formula:  $C_{15}H_{30}O_4$



## Quality Index

Glyceryl Monolaurate GML90			
Appearance	White powder solid	Soap quality w/%	$\leq 0.2$
Monoglyceride content, w/%	$\geq 90$	Water content, w/%	$\leq 0.5$
Acid value (mgKOH/g)	$\leq 4.0$	Lead (mg/kg)	$< 2.0$
Glycerin, w/%	$\leq 3.0$		

## Application

- **Foods:** Dairy products, meat products, baked products, flour products, beverages, candies, seasonings, etc
- **Pharmaceutical products:** Health food, base materials, fillings
- **Industry:** Petroleum industry, fertilizer, etc
- **Cosmetics:** Facial cleanser, creams, shampoo, etc
- **Feeds and veterinary medicine:** Canned feed, feeds, aquatic feeds veterinary medicines, etc

## Advantages of Application

### Dairy、Fruit and Vegetables

Anti-corrosion and preservation, prolong the shelf life, improve the safety of milk.

### Baked products and Flour products

Good inhibitory effect on various molds.

### Meat and Meat Products

Effectively reduce the interfacial tension, avoid the separation of oil and water, prevent delamination and sedimentation, improve the quality of meat products.

### Feed Additives

Has antibacterial and bactericidal ability, good inhibitory effect on viruses such as PRRS and swine fever.

# 山梨醇酐单硬脂酸酯 E491 司盘 60

## Sorbitan Monostearate E491 SPAN60

Span emulsifier is a kind of non-ionic surfactant with excellent emulsification, stability, dispersion, moisture retention and other characteristics. It can be used not only in the manufacture of food and health products, but also in synthetic fiber, metalworking fluid, leather, paint, pesticide, plastic, cosmetics and other industries.

### Application

#### Dry yeast

As the carrier of active yeast, promote dried yeast to be shaped and maintain bio-activity after hydration.

#### Whipping cream

Shorten stirring time, improve foam volume and structure and form nice and stiff foams.

#### Coffee companion and Solid drinks

Promote the fat evenly distributed, improve the color and taste, and enhance the water solubility of solid particles.

#### Confections and Chocolate

Make the oil disperse evenly, reduce the viscosity of syrup, and prevent sugar crystallization.

#### Margarine and Shortening

Prevent oil crystallization and the separation of oil and water, enhance stability and plasticity, and prevent splashing.

#### Cake emulsifier, Cake and Bread

Increase cake, bread volume, improve structure, enhance batter stability, and extend shelf life.

#### Ice cream

Promote the emulsification of milk fat, prevent the formation of coarse ice crystals to enhance the taste and improve the stability.

#### Protein beverage and Dairy

Promote the dispersion of milk fat, prevent layering, and improve the color and taste.

### Quality index

Index	Sorbitan Monolaurate (Span 20)	Sorbitan Monolaurate (Span 40)	Sorbitan Monolaurate (Span 60)	Sorbitan Monolaurate (Span 80)
Appearance (20° C)	Amber colored viscous liquid	Light yellow powder solid	Light yellow powder solid	Amber colored viscous liquid
Acid value (mg KOH/g)	≤ 7	≤ 7	≤ 10	≤ 8
Saponification value (mg KOH/g)	155~170	140~155	147~157	145~160
Hydroxyl value (mg KOH/g)	330~360	270~305	235~260	193~210
HLB value	8.6	6.7	4.7	4.3



# 水分散型单甘酯

## Water Dispersible Glycerin Monostearate

Water Dispersible Glycerin Monostearate is mainly made up of Glycerin Monostearate, which is milky white solid powder at room temperature. It can disperse in water easily as a result of its high HLB value. In addition, Water Dispersible Glycerin Monostearate has strong thermal stability, hydrolytic stability and good biodegradability, which can form micelle easily and reduce the interfacial tension of oil/water boundary surface. It has good compatibility with other emulsifiers and hydrophilic colloid without any adverse effects on color, aroma and taste of food.



### Application



#### Ice cream

Avoid forming large ice crystal, improve mouth feels and provide creamy texture, improve stabilization.



#### Protein beverage

Stabilize the fat and protein, prevent separation and precipitation.



#### Dairy product

Promote the dispersion of milk fat evenly, prevent precipitation.



#### Meats products

Help fat disperse and combine with water and starch, prevent starch retrogradation.



#### Granular potato products

Ensure uniformity, improve structure and make production easier.



#### Peanut butter

Improve stabilization.



#### Cosmetic

As emulsifying agent, dispersing agent and thickener.



#### Candy and Chocolate

Reduce oil-water separation and sugar crystallization, improve the eating quality.



#### Bread and Cake

Improve softness, provides a fine and uniform structure, prolong the shelf life.

### Quality index

#### Water Dispersible Glycerin Monostearate

Appearance (20° C)	Milky white/light yellow waxy solid
Free Acid/%	≤ 2.5
Iodine Value(g/100g)	≤ 4.0
Freezing Point/° C	60.0~70.0
Heavy Metals (Pb/%)	≤ 0.0005
As/%	≤ 0.0001

# 聚甘油脂肪酸酯 E475 PGE

## Polyglycerol Esters Of Fatty Acids E475 PGE

Polyglyceride fatty acid ester is a polyhydroxy ester non-ionic surfactant, referred to as polyglyceride, with HLB value of 3~13, which can be used as O/W type or W/O type emulsifier, non-toxic and harmless, with biodegradability, and is a kind of efficient and safe additive. The HLB value of polyglyceride can be adjusted by changing the length of glycerol chain, the degree of substitution of fatty acids and the type of fatty acids.

### Application functions

Emulsification, viscosity adjustment, crystallization adjustment, quality improvement, antibacterial, etc. PGE with high HLB value is the substitute of Tween series products, which can be used for baking food, shortening, salad dressing, frosting, filling materials and non-fat fresh cream.



### Application



#### Bread and Cake

Increase volume, improve the organizational structure, enhance the stability of the batter, smooth taste, and extend the shelf.



#### Protein beverage

Enhance white and smooth texture and stability.



#### Margarine and Shortening

Enhance stability, shorten mixing time, increase volume, uniform texture, and extend shelf life.



#### Ice cream

Promote the emulsification of milk fat, prevent the formation of coarse ice crystals, enhance the delicate taste, improve the expansion rate, and improve the shape retention and stability.



#### Whipping cream

Shorten stirring time, improve foam volume and organization, make bubbles small, and foam stable and firm.



#### Coffee companion

Promote the uniform distribution of fat, enhance the sense of white and smooth milk, and improve the water solubility of solid particles.



#### Candy and Chocolate

Make the oil disperse evenly, reduce the viscosity of syrup, and adjust the crystallization of sugar.

# 硬脂酰乳酸钙 E482 CSL / 硬脂酰乳酸钠 E481 SSL

## Calcium Stearoyl Lactylate E482 CSL / Sodium Stearoyl Lactylate E481 SSL

Calcium/Sodium Stearoyl Lactylate (CSL/SSL) is milky white powder or flaky solid, a kind of negative ionic emulsifiers, with pleasant caramel odor, has good functions of emulsifying, gluten enhancing, keeping refresh and anti-aging of starch.

EN Code: E482, E481

CAS No.: 5793-94-2, 18200-72-1

Molecular formula:  $C_{48}H_{86}CaO_{12}$ ,  $C_{21}H_{41}O_3Na$



### Application



#### Breads

To enlarge the volume of breads, enhance elasticity & toughness & gas retention of dough, improve inner structure, anti-aging of starch, extend shelf-life, with smooth taste



#### Biscuits

To improve dough handling, increase the crispness of biscuits, prevent from spillage oil, and easy dough demoulding



#### Noodles

To make noodle surface smoother, reduce breakage of noodle, improve boiling fastness and gluten strength



#### Dumplings

To reduce the loss of starch during dumpling wrapper boiling, improve the color of dumpling wrapper, enhance boiling fastness and taste



#### Frozen Foods

To enhance water holding of frozen dough, prevent from forming ice crystal or cracking, stabilize gluten network, increase frost resistance of yeast & dough, and extend dough aging

### Quality index

Index	CSL	SSL
Acid Value (mg KOH/g)	50-86	60-80
Ester Value (mg KOH/g)	125-164	120-190
Total Lactic Acid /%	32.0-38.0	23.0-34.0
Calcium/Sodium Content /%	≤ 4.2-5.2	≤ 3.5-5.0
Heavy Metal (As Pb, mg/kg)	≤ 2	≤ 2





# 双乙酰酒石酸单双甘油酯 E472e DATEM

## Diacetyl Tartaric Acid Esters of Mono and Diglycerides E472e DATEM

Diacetyl Tartaric Acid Esters of Mono & Diglycerides (DATEM) is milky white or/ and light yellow solid powder, with good fluidity, melting point at 45° C, easily soluble in hot water, a kind of non-ionic emulsifiers with HLB value of 8--10. The product of DATEM has relatively strong functions of emulsifying, dispersing, keeping refresh and anti-aging of starch, usually be used as O/W emulsifier.

EN Code: E472e      CAS: 977051-29-8      Molecular formula:  $C_{29}H_{50}O_{11}$



### Application

#### Breads

To enlarge the volume of breads, improve inner structure, enhance elasticity & toughness & gas retention of dough, extend shelf-life, with smooth taste.

#### Ice Cream

To accelerate the emulsifying of cream, prevent from forming coarse ice crystal, enhance delicate taste, increase expansion rate, improve conformability and stability.

#### Frozen Foods

To enhance water holding capacity of frozen dough, prevent from forming ice crystal, keep gluten network, increase frost resistance of yeast and dough, anti-aging of starch, improve boiling fastness.

#### Cakes

As foaming agent in cake pre-mix powder, to stabilize and equalize inner structure, make cake soft & better taste, extend shelf-life.

#### Margarin

To enhance the stability of water in oil system, keep margarin fine and smooth.

#### Coffee Mate

To accelerate even dispersing of fat, enhance smooth taste of milk sensation, increase water solubility rate of solid particles.

### Quality index

#### Diacetyl Tartaric Acid Esters of Mono & Diglycerides

Total Tartaric Acid/%	10 ~ 40	Acid Value (mg KOH/g)	62~76
Total Glycerin/%	11 ~ 28	Saponification Value (mg KOH/g)	380~425
Total Acetic Acid/%	8~32	Ignition Residue/%	≤ 0.5
Total Free Glycerin	≤ 2.0	Heavy Metal (As Pb, mg/kg)	≤ 2



# 嘉德乐牌 SP 蛋糕油

## SP Cake Gel Emulsifier

SP Cake Gel Emulsifier is made from various high-quality raw materials. The use of SP Cake Emulsifier can effectively shorten the production time, make the appearance and structure of the finished product even and delicate, and make the taste more smooth and fragrant. SP Cake Emulsifier has three advantages: strong stability, strong foaming and strong emulsification, and can effectively extend the shelf life.



### Instruction



#### Cake

Add in the mixing tank before stir the materials.



#### Bread

Add with oil and fat when making bread.



#### Moon cake

Add with oil and fat when making moon cake.



#### Pastry

Add with the crust when making pastry.

### Feature

- **Shorter the time** Foaming with egg wash in short time, mixing in 3-4 minutes, 7-10 minutes can be finished
- **Enlarge the volume** The volume can enlarge 10%-20% after use SP cake emulsifier
- **Good structure** The cake have softer and even structure
- **Fragrant flavor** Highlight the cake flavor
- **Smooth taste** With good moisturizing and smooth taste

### Recommended dosage

- **Cake** Add 3%-5% of the flour, but not more than 3% of the total finished product
- **Bread** Add 1%-2% of flour
- **Moon cake** Add 5% of flour
- **Pastry** Add 0.3% of flour

# 面包乳化保湿膏

## Bread Improver



Bread Improver is developing by CARDLO.It has a significant effect on increasing bread volume,improving bread structure, and extending the shelf life.In addition,it can prevent the product harden in low temperature environment,maintain a semi-fluid shape and make the paste smooth.

### Application

It is used in bread making (especially good in toast).

### Product Features

It can make bread soft and delicious within 72 hours.

It can increase bread volume and improve bread structure.

The high and new technology effectively maintains the aroma longer after the baking.

Wide range of temperature adaptation,and not harden in low temperature environment.

It can improve the dough performance and improve the condition of fermentation.





# 蔗糖脂肪酸酯

## Sucrose Fatty Acid Ester

Sucrose Fatty Acid Esters is widely applied to flour products, bread and cake, confectionery, frozen desserts, and etc. It has good emulsifying, dispersing, solubilizing, moisturizing, foaming, viscosity adjusting and antibacterial properties.

Lipophilic Sucrose Fatty Acid Ester	HLB value 1~5
Hydrophilic Sucrose Fatty Acid Ester	HLB value 5~16



## Application range



### Bread

Increase bread volume, improve bread structure, and prolong the shelf life.



### Frozen dough

Prevent dough deterioration during cryopreservation, increase volume and improve structure.



### Cakes and Cookies

Prevent blooming of biscuits with high oil content, increase volume, improve structure and optimize taste.



### Caramel and Confection

Improve stabilization, prevent oil separating out.



### Chewing gum

Facilitate the mixing of gum base, improve the uniform dispersion of the spices, prevent sticking to the teeth during chewing.



### Chocolate

Reduce stickiness, prevent oil separating out, make the product smooth. Recommend to use with lecithin for better effect.



### Ice cream

Make the emulsion evenly dispersed, uniform and delicate in structure, increase the expansion, reduce whipping time, prevent the milk fat separating out during storage.



### Fragrance

Improve the stability of lemon oil, orange oil and grape oil, keep the fragrance long lasting.



### Poultry, Eggs and Fresh

Antibacterial effect, keep the products fresh, prolong the shelf life.

Index	Standard	Test result
Appearance	White/brown powder solid, odorless or slightly oily	White powder solid
Acid value (mgKOH/g)	≤ 6.0	4.22
Free sugar ( sucrose)	≤ 10.0%	6.16
Water	≤ 4.0%	0.66
Residue on ignition	≤ 4.0%	2.5
Arsenic (As) mg/kg	≤ 1.0	≤ 1.0
Lead (Pb) mg/kg	≤ 2.0	≤ 2.0

According to emulsification limited of GB2760, Sucrose ester fatty. several emulsification Composite use is better much than use sucrose ester fatty in In sugar making process and bean products processing process.



嘉德乐集团  
CARDLO GROUP

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