Manufacturer
Electrogasochem Ltd, Ukraine (EGH Ingredients).

Description
An aqueous dispersion of surfactants with the thickened dispersion phase.

Application
Confectionery (biscuits, cakes, muffins).

Composition
Polyglycerol esters of fatty acids (E 475), propylene glycol esters of fatty acids (E 477), propylene glycol (E 1520), mono- and diglycerides of fatty acids (E471), salts of fatty acids (E470), citric acid (E330), sugar, water.

Benefits
Reduces the consumption of egg products and fat.
Provides the maximal aeration.
Provides uniform distribution of the fat in the dough.
Slows staling of the products.

Recommendations for use
The paste is added during preparation of the emulsion or the whipping step.

Dosage
From 0,6 to 3,0 % on weight basis

Organoleptic

<table>
<thead>
<tr>
<th>Form</th>
<th>Viscous mass. Presence of foam on the surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From white to yellow</td>
</tr>
</tbody>
</table>

Physical and chemical features

| Moisture and volatile substances, % | 50 |
| The ability to whipping g / cm³ | 0,4 |

Nutrition and energy value (100g)

| Fats, g | 19 |
| Carbohydrates, g | 35 |
| Calories, kcal | 320 |

Storage
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 5 to 25 °C. After opening in the original packing at temperatures from 5 to 25 °C. Recommend period of use is 4 months after the date of opening of original packaging.

Shelf life
12 months in the original packing under required storage conditions.

Packing
Polymer buckets with lid, net weight 10 kg.
CONFECTIONERY AND BAKERY

Specifications
PASTE «ESTER М 03»

Manufacturer
Electrogasochem Ltd, Ukraine (EGH Ingredients).

Description
An aqueous dispersion of surfactants with the thickened dispersion phase.

Application
Confectionery. Production of biscuits.

Composition
Polyglycerol esters of fatty acids (E 475), mono- and diglycerides of fatty acids (E471), propylene glycol (E 1520), water.

Benefits
- Reduces the whipping time of biscuits.
- Provides to obtain products with a uniform pore structure.
- Slows staling of the products.
- Extends the shelf life of products.
- Allows to reduce the cost of production.

Recommendations for use
The paste is added during the whipping step to the basin of beating machine.

Dosage
From 1,0 to 3,0 % on weight basis.

Organoleptic and physico-chemical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Gelled mass. Presence of foam on the surface.</td>
</tr>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From white to yellow</td>
</tr>
<tr>
<td>Moisture and volatile substances, %, not more</td>
<td>78</td>
</tr>
</tbody>
</table>

Nutrition and energy value (100g)

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fats, g</td>
<td>23</td>
</tr>
<tr>
<td>Calories, kcal</td>
<td>207</td>
</tr>
</tbody>
</table>

Storage
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 5 to 25 °C.
After opening in the original packing at temperatures from 5 to 25 °C. Recommend period of use is 4 months after the date of opening of original packaging.

Shelf life
12 months in the original packing under required storage conditions.

Packing
Polymer buckets with lid, net weight 10 kg.
Manufacturer
Electrogasochem Ltd, Ukraine (EGH Ingredients).

Description
Paste-grease "ESTER M 04" is a universal release agent for baking pastry and bakery products. Effective and non-stick release agent between the dough pieces and the work surface.

Composition
A mixture of refined and deodorized vegetable oils (E 475, E 322, E 307).

Application
Used in the manufacturing of confectioneries and baking products for application to form trays, conveyor ovens.

Benefits
Prevents sticking dough on a work surface, allows easy demoulding confectionery and bakery products after baking.
Prolongs service lifetime of the equipment.
Only one thin layer is enough for the effective demoulding of the finished product.
Minimal consumption with special equipment.
Suitable for manual, mechanical and automatic applications.
Does not give a foreign flavor to finished products.

Recommendations for use
Be shaken before taking! Applied with thin layer on a clear work surface shapes and sheets on next ways: spray or dab with the help of available tools (brushes, brush, roller).

Dosage
Consumption depends on the recipe of the product, the application method and design features of the equipment.
Normal flow is 2 - 3 g per sq.m.

Organoleptic
<table>
<thead>
<tr>
<th>Form</th>
<th>Viscous mass.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From yellow to dark yellow</td>
</tr>
</tbody>
</table>

Physical and chemical features
<table>
<thead>
<tr>
<th>Density at 20 °C, g / cm³</th>
<th>0,915 - 0,930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity at 20 °C, mPas</td>
<td>180 - 250</td>
</tr>
<tr>
<td>Moisture,% , not more</td>
<td>1</td>
</tr>
</tbody>
</table>

Storage
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 5 to 25 °C.
After opening in the original packing at temperatures from 5 to 25 °C. Recommend period of use is 4 months after the date of opening of original packaging. During low temperatures the viscosity is grew up.

Shelf life
12 months in the original packing under required storage conditions.

Packing
Polymeric containers from 10 to 200 kg.
Manufacture
Electrogasochem Ltd, Ukraine (EGH Ingredients).

Application
Confectionery (candies, halvah, puff products).

Composition
Glycerol monostearate (E 471).

Benefits
Provides uniform distribution of fat in the finished products.
Forms a layered structure in puff products.
Prevents the release of free fat in halvah.

Recommendations for use
Applied into the melted fat at temperatures below 65 °C until smooth and mixing during 10 - 15 minutes, and then the process is carried out in accordance with process instructions for this type of product.

Dosage
From 3,0 to 5,0 kg per 1 ton of finished product.

Organoleptic

<table>
<thead>
<tr>
<th>Form</th>
<th>Powder, granules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From white to light-yellow</td>
</tr>
</tbody>
</table>

Physical and chemical features

| Acid value, mg KOH / g, not more | 4 |
| Essential value, mg KOH / g     | 150-165 |
| Melting point, °C               | 48-62 |

Nutrition and energy value (100g)

| Fats, g   | 99,9 |
| Calories, kcal | 899 |

Storage
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 0 to 35 °C.

Shelf life
12 months in the original packing under required storage conditions.

Packing
Paper or polymeric bags, net weight 25 kg.
Specifications
POLYGLYCEROL POLYRICINOLEATE (PGPR)

Manufacturer
Electrogasochem Ltd, Ukraine  (EGH Ingredients)

Application
In the production of chocolate products, chocolate glazes in order to reduce the viscosity of chocolate mass, and to improve the process of formation.

Composition
A mixture of polyglycerol esters and esterified ricinoleic acids of vegetable origin (E 476).

Benefits
Reduces the yield strength of the glaze and chocolate masses.
Enhances the action of lecithin.
Facilitates the passage of the glaze and chocolate masses via pipelines.
Enhances the formation of chocolate products.

Recommendations for use
Applied at the stage of grinding, milling and conching of chocolate masses. The process is conducted in accordance with process instructions for this type of product.

Dosage
From 1 to 5 kg per 1 ton of finished product.

Organoleptic

<table>
<thead>
<tr>
<th>Form</th>
<th>Viscous liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From light yellow to light brown, uniform throughout the mass.</td>
</tr>
</tbody>
</table>

Physical and chemical features

<table>
<thead>
<tr>
<th>Acid value, mg KOH / g, not more</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iodine value, g l/100 g</td>
<td>72-105</td>
</tr>
<tr>
<td>Hydroxyl value, mg KOH/g</td>
<td>80-100</td>
</tr>
</tbody>
</table>

Nutrition and energy value (100g)

<table>
<thead>
<tr>
<th>Fats, g</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates, g</td>
<td>35</td>
</tr>
<tr>
<td>Calories, kcal</td>
<td>320</td>
</tr>
</tbody>
</table>

Storage
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 0 to 25 °C.

Shelf life
12 months in the original packing under required storage conditions.

Packing
Polymer container net weight from 20 to 1000 kg. Metal barrels net weight of 200 kg.
Specifications
EMULSIFIER «ESTERIN STS»

Manufacturer
Electrogasochem Ltd, Ukraine (EGH Ingredients).

Application
Frying fat, confectionery fat, margarine, sweetened condensed milk, chocolate, glazes.

Composition
Sorbitan tristearate (E492).

Benefits
As anti crystallizer in fats, margarine, condensed milk.
Prevents the growth of fat bloom on the surface of chocolate glaze.
Prevents the formation of lumps in the batter.

Recommendations for use
Applied into the working emulsion with melted fat or as a powder with flour in a kneader.

Dosage
- Frying fat: 0.05 - 0.15%
- Confectionery fat: 1.0 - 3.0%
- Margarine: 0.3 - 0.5%
- Sweetened condensed milk, chocolate, glazes: 0.3 - 1.0%

Organoleptic

<table>
<thead>
<tr>
<th>Form</th>
<th>Powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Typical for this product.</td>
</tr>
<tr>
<td>Color</td>
<td>From white to light brown.</td>
</tr>
</tbody>
</table>

Physical and chemical features

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid value, mg KOH / g, not more</td>
<td>15</td>
</tr>
<tr>
<td>Hydroxyl value, mg KOH/g</td>
<td>66-80</td>
</tr>
<tr>
<td>Saponification value, mg KOH / g</td>
<td>176-188</td>
</tr>
<tr>
<td>Melting point, ° C</td>
<td>47-58</td>
</tr>
</tbody>
</table>

Nutrition and energy value (100g)

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fats, g</td>
<td>99.9</td>
</tr>
<tr>
<td>Calories, kcal</td>
<td>899</td>
</tr>
</tbody>
</table>

Storage
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 0 to 25 °C

Shelf life
24 months in the original packing under required storage conditions.

Packing
Paper or polymeric bags, net weight 25 kg.
Manufacturer
Electrogasochem Ltd, Ukraine (EGH Ingredients).

Application
Confectionery production (butter biscuits, cream and fatty toppings).

Composition
Polyglycerol esters of fatty acids (E 475).

Benefits
Improves whipping.
Provides uniform distribution of fat in the dough.
Provides a good volume of baked goods.
Prolongs the shelf life of products.

Recommendations for use
Applied in the form of a powder or an aqueous emulsion: during preparing dough in the kneader; during production of creams at the stage of whipping; when producing fat stuffing - at step on preparation of fat into melted fatty mass.

Dosage
From 0.2 to 1.0% of weight of the flour or margarine, fat.

Organoleptic
<table>
<thead>
<tr>
<th>Form</th>
<th>Viscous pasty mass.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From yellow to light brown, uniform throughout the mass.</td>
</tr>
</tbody>
</table>

Physical and chemical features
| Acid value, mg KOH / g, not more | 7 |
| Saponification value, mg KOH / g, not more | 160 |
| Iodine value, g I/100 g, not more | 50 |

Nutrition and energy value (100g)
| Fats, g | 99.9 |
| Calories, kcal | 899 |

Storage
In the original packaging in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 0 to 35 °C.

Shelf life
24 months in the original packing under required storage conditions.

Packing
Polymer buckets with lid, net weight 10 kg.
**Manufacturer**
Electrogasochem Ltd, Ukraine (EGH Ingredients).

**Application**
Wheat, wheat-rye and other varieties of bakery production, pastry and pasta.

**Composition**
Polyglycerol esters of fatty acids (E 475).

**Benefits**
- Reduces the consumption of egg products and fat.
- Allows to put in all the components together and reduces the whipping time.
- Provides the maximal aeration.
- Provides uniform distribution of a fat in the dough.
- Prolongs the shelf life of products.

**Recommendations for use**
Applied in the form of a powder or an aqueous emulsion.

**Dosage**
From 0.2 to 1.0% of weight of the flour.

**Organoleptic**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Powder, granules.</td>
</tr>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From white to light-brown.</td>
</tr>
</tbody>
</table>

**Physical and chemical features**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid value, mg KOH / g, max</td>
<td>7</td>
</tr>
<tr>
<td>Saponification value, mg KOH / g, max</td>
<td>140</td>
</tr>
<tr>
<td>Iodine value, g I/100 g, max</td>
<td>5</td>
</tr>
<tr>
<td>Melting point, ° C, min</td>
<td>45</td>
</tr>
</tbody>
</table>

**Nutrition and energy value (100g)**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fats, g</td>
<td>99.9</td>
</tr>
<tr>
<td>Calories, kcal</td>
<td>899</td>
</tr>
</tbody>
</table>

**Storage**
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 0 to 35 °C.

**Shelf life**
24 months in the original packing under required storage conditions.

**Packing**
Paper or polymeric bags, net weight 25 kg.
CONFECTIONERY AND BAKERY

Specifications

IMPROVING AGENT «ESTER T 05»

**Manufacturer**
Electrogasochem Ltd, Ukraine (EGH Ingredients).

**Application**
Confectionery (waffles).

**Composition**
A mixture of mono-, di- and triesters of glycerol and fatty acids with a predominance of triesters.

**Benefits**
Provides uniform distribution of fat in the dough.
Increase the speed of the technological process by reducing the stickiness of dough.

**Recommendations for use**
Applied with the molten fat, either in the form of powder.

**Dosage**
From 0.2 to 5.0% of weight of the flour.

**Organoleptic**

<table>
<thead>
<tr>
<th></th>
<th>Powder, granules.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Typical for this product. Not allowed a foreign smell</td>
</tr>
<tr>
<td>Color</td>
<td>From white to light-brown.</td>
</tr>
</tbody>
</table>

**Physical and chemical features**

<table>
<thead>
<tr>
<th></th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid value, mg KOH / g</td>
<td>5</td>
</tr>
<tr>
<td>Melting point, °C, min</td>
<td>50</td>
</tr>
</tbody>
</table>

**Nutrition and energy value (100g)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fats, g</td>
<td>99.9</td>
</tr>
<tr>
<td>Calories, kcal</td>
<td>899</td>
</tr>
</tbody>
</table>

**Storage**
In the original packing in dry clean rooms, which protect it from direct sunlight and precipitation, at a distance of not less than 1m from the indoor heat sources at temperatures from 0 to 45 °C.

**Shelf life**
24 months in the original packing under required storage conditions.

**Packing**
Paper or polymeric bags, net weight 25 kg.