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Good Sensations Soft Serve Stabilizer

Product Bulletin

How does Good Sensations Soft Serve Ice Cream Stabilizer Blend work to improve the body and texture of soft serve

Good Sensations Soft Serve Ice Cream Stabilizer blend is used to stabilize and improve the body and texture of soft serve ice cream. Must be pasteurized and homogenized for full effectiveness. Suggested usage 0.4%

The ingredients are: Mono-diglycerides, guar gum, polysorbate 80, cellulose gum, carrageenan, calcium sulfate

Okay, let's analyze how this specific blend of stabilizers and emulsifiers impacts the body and texture of soft serve ice cream, particularly with a minimum 10% fat content:

Understanding Soft Serve Challenges (at 10% Fat):

- Achieving Smoothness: Even with 10% fat, soft serve needs a fine, smooth texture, not an icy one.
- Maintaining Soft Serve Consistency: It needs to hold its shape and not melt too quickly.
- Preventing Separation: Separation of fat and liquid can occur, especially during operation of the soft serve machine and storage.
- Ensuring Proper Overrun (Air Incorporation): Soft serve's desirable light and airy texture relies on proper air incorporation and retention during the freezing process.

How This Blend Addresses These Challenges:

1. Mono- and Diglycerides (Emulsifier):
 - Fat Emulsification: DMG is vital for dispersing fat globules throughout the mix, even at 10% fat. This creates a smoother texture and helps prevent a greasy mouthfeel.
 - Air Incorporation: DMG aids in whipping in air (overrun), resulting in a softer, lighter texture and better yield.
 - Improved Melt Properties: DMG can influence the melting behavior, helping soft serve to melt slower and retain shape longer.
2. Guar Gum (Thickener and Stabilizer):
 - Water Binding: Guar gum excels at binding water, reducing the formation of large ice crystals.
 - Viscosity Increase: It increases the viscosity of the soft serve mix, giving it a more substantial, smooth body.
 - Enhanced Mouthfeel: Guar contributes to a creamy, smooth mouthfeel.
3. Polysorbate 80 (Emulsifier and Stabilizer):
 - Fat Emulsification and Stabilization: Polysorbate 80 further stabilizes the fat emulsion created by DMG, preventing fat separation during churning and storage in the soft serve machine.
 - Overrun Control: It can help with overrun, leading to a softer texture.
 - Freeze-Thaw Stability: It improves the product's ability to withstand temperature fluctuations, crucial for storage and transport.
4. Cellulose Gum (CMC) (Stabilizer and Ice Crystal Control):
 - Water Binding and Ice Crystal Reduction: CMC helps control ice crystal growth by binding water, preventing large, icy crystals from forming.
 - Syneresis Control: It can help prevent separation or weeping of water from the ice cream mix.

- Viscosity Modification: CMC further increases the viscosity and smoothness of the soft serve mix.
5. Carrageenan (Stabilizer and Texturizer):
- Milk Protein Interaction: Carrageenan can react with milk proteins, improving stability and texture.
 - Syneresis Control: Depending on the type (kappa or iota), carrageenan can contribute to syneresis control (prevention of liquid separation) and texture enhancement.
 - Viscosity Control: It can help control the viscosity of the soft serve mix, creating a desired texture.

How They Work Together:

- Complete System: The blend provides a robust, multi-faceted stabilization and emulsification system.
- Optimized Soft Serve Consistency: The combination of fat emulsification (DMG, Polysorbate 80), water binding (Guar Gum, CMC), and texture modification (Carrageenan) creates a smooth, stable, and properly aerated soft serve.
- Preventing Separation: DMG, Polysorbate 80, and CMC work to prevent fat separation, which helps maintain a consistent product throughout the entire soft serve serving process.

In summary, this carefully selected blend provides a synergistic approach to soft serve stabilization and texture enhancement, achieving a smooth, creamy, and stable product with desirable soft serve characteristics, even with a moderate 10% fat content.

Specifications

PHYSICAL/ORGANOLEPTIC

Form: Powder

Color: Slightly Tan

Odor: No Discernable Odor

Flavor: Bland

Chemical

Parameter	Min	Max	Units
Viscosity (1.5%) (RV@100rpm,25°C)	300	1000	CPS
pH (1.0%)	6.0	8.0	pH

Microbiological

Parameter	Specification (Max)
Standard Plate Count	10,000 /g
Mold and Yeast	100 /g
Coliform	10 /g
Salmonella	Negative

Packaging

A. Packed in multi-wall fiber drums with poly-lined bags, cardboard boxes with poly liner bags.

B. Outside of containers to be labeled with:

1. Product name
2. Lot number
3. National Stabilizers' name and address
4. Net contents/weight
5. Ingredient Statement
6. Only if applicable-Kosher Symbols, Customer Codes, Production Date and/or Expiration Date

Standard Packing: 50 lb. bag in box. 2000- lb. per pallet.

Optional Pack Sizes: 1 lb pouch, 10 lb bag in box

MOQ is flexible

Storage

Store in a cool (60-80 ° F), dry place.

Shelf Life

Shelf Life: 9 months

Usage Levels

Suggested Level: 0.45 % based on total batch weight.

Intended Use: Stabilizer/emulsifier for soft serve ice cream.

Certifications

Kosher

Ingredients

Mono-and Diglycerides, Guar Gum, Cellulose Gum, Polysorbate 80, Carrageenan, Calcium Sulfate.

Nutritional Information (per 100g)

Parameter	Value	Unit
Calories	548	Kcal
Total Fat	39	g
Saturated Fat	39	g
Trans Fat	0	g
Cholesterol	0	mg
Sodium	1142	mg
Total Carbohydrates	47.8	g
Dietary Fiber	39.7	g
Total Sugar	0.9	g
Added Sugar	0.9	g
Protein	1.05	g
Vitamin D	0	mcg
Calcium	1188	mg
Iron	24	mg
Potassium	407	mg
Vitamin A	0	mcg
Vitamin C	0	mg

- General:**
- A. This material will comply with the requirements of the Federal Food, Drug, and Cosmetic Act and its amendments.
 - B. This material will be manufactured under good manufacturing practices as prescribed by F.D.A. regulations.
 - C. This material is subject to approval by the Quality Control Laboratory.
 - D. This material will conform to specifications contained in the Food Chemicals Codex.