

# PRODUCT DATA SHEET

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## Semi-Refined Iota Carrageenan

INS 407a | E 407a | CAS 11114-20-8

### CAG-Iota™ 100

#### 1. PRODUCT DESCRIPTION

CAG-Iota™ 100 is a semi-refined iota carrageenan (PES – Processed *Eucheuma* Seaweed) derived from selected *Eucheuma denticulatum*. It is a cost-effective hydrocolloid designed for applications requiring soft, elastic gel texture and excellent freeze-thaw stability, where high clarity is not essential. The product forms cloudy, thixotropic suspensions in water and develops soft, cohesive gels in the presence of calcium ions.

#### 2. KEY FEATURES & BENEFITS

- ◆ Cost-Effective Alternative to Refined Iota
- ◆ Soft, Elastic, Non-Brittle Gel Texture
- ◆ Excellent Freeze-Thaw Stability
- ◆ Strong Calcium Reactivity (Ca<sup>2+</sup> Activated)
- ◆ Good Milk Protein Interaction
- ◆ Ideal for Opaque or Structured Systems

#### 3. TYPICAL APPLICATIONS

| Application                         | Function                            | Usage Level |
|-------------------------------------|-------------------------------------|-------------|
| Dairy Desserts                      | Soft elastic gel, prevent syneresis | 0.2–0.8%    |
| Ice Cream                           | Ice crystal control, melt stability | 0.1–0.5%    |
| Chocolate Milk                      | Cocoa suspension                    | 0.02–0.05%  |
| Pet Food                            | Soft gel matrix                     | 0.2–0.8%    |
| Processed Meat                      | Water binding & texture             | 0.1–0.5%    |
| Restructured Seafood                | Cohesive elastic texture            | 0.3–0.8%    |
| Sauces & Dressings                  | Viscosity & suspension              | 0.1–0.5%    |
| Fruit Preparations                  | Freeze-thaw stability               | 0.2–0.6%    |
| Water Gels (with Ca <sup>2+</sup> ) | Soft non-brittle gel                | 0.5–1.2%    |

#### 4. PRODUCT SPECIFICATIONS

| Parameter     | Specification              |
|---------------|----------------------------|
| Appearance    | Yellowish to yellow powder |
| Particle Size | ≥95% through 120 mesh      |

| <b>Parameter</b>                       | <b>Specification</b>          |
|--|-------------------------------|
| Loss on Drying                         | ≤10%                          |
| Total Sulfate                          | 15–40%                        |
| Total Ash                              | ≤30%                          |
| Acid-Insoluble Matter                  | 8–15% (natural cellulose)     |
| Gel Strength (3% + CaCl <sub>2</sub> ) | Soft elastic gel              |
| pH (1.5%)                              | 8.0–11.0                      |
| Heavy Metals                           | Meets international standards |
| Microbiological                        | Food grade compliant          |

## **5. REGULATORY COMPLIANCE**

CAG-Iota™ 100 complies with: • JECFA (INS 407) • EU Regulation (E 407) • FCC  
• GB 15044-2009

Certifications available:

ISO 9001 | ISO 22000 | HACCP | GMP

Halal | Kosher

Non-GMO | Allergen-Free | Vegan Suitable

BSE/TSE-Free

## **6. PACKAGING**

Inner Packaging: Food-grade PE liner (50-80 µm thickness)

Outer Packaging: Multilayer kraft paper bag, plastic woven bag, or fiber drum

Net Weight: 25 kg / bag (standard), 20 kg / carton (for food service), 500 kg / jumbo bag (bulk orders)

Pallet Configuration: 40 bags per pallet (1000 kg net)

Container Loading: Approximately 20,000 kg per 20' FCL

Custom Packaging: Available upon request (custom weights, labeling)

## **7. STORAGE CONDITIONS & SHELF LIFE**

Storage Conditions: Store in a cool, dry place away from direct sunlight, heat sources, and strong odors. Temperature: < 25°C recommended (optimal 10-20°C), Relative Humidity: < 60%

Shelf Life: 24 months from date of manufacture when stored under recommended conditions

Transport: Strictly prohibit transport with poisonous materials; protect from moisture and contamination

**For detailed technical data, samples, or customized grades, please contact CAG.**

*\*This product data sheet provides typical technical data and should be used for initial product evaluation. Specifications are based on JECFA (FAO/WHO), EU Commission Regulation for E 407, and FCC standards. Actual values may vary slightly depending on the specific grade, seaweed source (harvest season, farming location), and production batch. For specific formulation assistance or custom grade requirements, please contact our technical support team.\**