

PRODUCT DATA SHEET

Document No.: PDS-RKC-1
Effective Date: 05, Jan 2025

Refined Kappa Carrageenan

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

CAGCAR™ 400

1. PRODUCT DESCRIPTION

CAGCAR™ 400 is a high-purity refined kappa carrageenan extracted from selected red seaweed (*Kappaphycus alvarezii*). It is specifically designed for applications requiring high gel strength, crystal-clear appearance, and firm, sliceable texture. In the presence of potassium ions (K⁺), it forms strong, rigid, thermoreversible gels with excellent structural stability and superior milk protein interaction.

2. KEY FEATURES & BENEFITS

- ◆ High Gel Strength (≥ 1300 g/cm² with KCl)
- ◆ Crystal-Clear Transparent Gels
- ◆ Firm & Sliceable Texture Excellent Milk Protein Reactivity
- ◆ Thermoreversible Gel System
- ◆ Suitable for Food, Pharma & Personal Care

3. TYPICAL APPLICATIONS

Application	Function	Usage Level
Water Jellies	Clear, firm gel structure	0.3–1.0%
Dairy Desserts	Sliceable texture, protein stabilization	0.1–0.5%
Ice Cream	Ice crystal control	0.02–0.05%
Chocolate Milk	Cocoa suspension	0.01–0.03%
Evaporated Milk	Emulsion stabilization	0.005–0.02%
Processed Meat	Water binding & improved yield	0.2–0.8%
Pet Food	Firm gel matrix	0.2–0.8%
Confectionery	Chewy texture development	0.5–1.5%
Bakery Fillings	Structure stabilization	0.3–1.0%
Toothpaste	Rheology modifier	0.1–1.0%

Custom gel strength grades available upon request.

4. PRODUCT SPECIFICATIONS

Parameter	Specification
Appearance	White to off-white powder

Parameter	Specification
Particle Size	≥95% through 80–120 mesh
Loss on Drying	≤12%
Total Sulfate	15–40%
Acid-Insoluble Matter	≤2%
Gel Strength (1.5% + 0.2% KCl)	≥1300 g/cm ²
pH (1.5%)	7.0–11.0
Transparency (0.5%)	≥90%
Heavy Metals	Meets international standards
Microbiological	Food grade compliant

Full technical specification sheet available upon request

5. REGULATORY COMPLIANCE

CAGCAR™ 400 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.