



TECHNICAL DATA SHEET

Product Name: Refined Carrageenan
CAS Number: 9000-07-1
Molecular Formula: $(C_{12}H_{18}O_9)_n$
Molecular Weight: Not applicable (polymer)
EINECS No.: 232-524-2
EC Code: E407

1. Product Description

Refined Carrageenan is a purified hydrocolloid extracted from red seaweed. It appears as a white to light yellow powder and is widely used as a gelling, thickening, and stabilizing agent in food and industrial applications. Depending on its type (Kappa, Iota, or Lambda), it provides different functionalities such as strong gel formation, elasticity, or viscosity enhancement. It is commonly used in dairy, meat processing, beverages, and plant-based products to improve texture and stability.

2. Specification

Parameter	Specification
Appearance	White to light yellow powder
Particle Size	80 – 120 mesh
Viscosity (1.5%, 75°C)	≥ 5 mPa·s
Gel Strength (Kappa, 1.5%)	≥ 800 g/cm ²
Loss on Drying	$\leq 12.0\%$
Total Ash	15.0% – 40.0%
pH (1% solution)	8.0 – 11.0
Sulfate Content	15% – 40%
Insoluble Matter	$\leq 2.0\%$
Heavy Metals (Pb)	≤ 5 ppm
Arsenic (As)	≤ 3 ppm
Microbiological Standards	
Total Plate Count	≤ 5000 CFU/g

Parameter	Specification
Yeast & Mold	≤ 300 CFU/g
E. coli	Negative
Salmonella	Negative

3. Applications

- Dairy products – chocolate milk, yogurt, cheese, cream
 - Meat processing – sausages, ham, processed meat
 - Plant-based foods – vegan dairy alternatives
 - Beverages – suspension and stabilization
 - Bakery and confectionery – texture improvement
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4. Packaging & Storage

- **Packaging:** 25 kg net weight per kraft paper bag or fiber drum with inner PE liner
 - **Shelf Life:** 24 months under proper storage conditions
 - **Storage Conditions:** Store in a cool, dry place, away from heat, moisture, and direct sunlight
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5. Regulatory Status

- Food grade, compliant with **FCC, FAO/WHO, EU E407 standards**
- Manufactured under ISO and HACCP systems
- Non-GMO, allergen-free, BSE/TSE-free