

# Processed Cheese Products

CHS-01

## Key Benefits of Gelcarin<sup>®</sup> carrageenan in processed cheese products:

- Increases cheese firmness to improve slicing and grating properties
- Allows formulating with reduced dairy solids while maintaining texture or structure
- Imparts excellent melting characteristics
- Improves cheese integrity
- Excellent cheese appearance, flavor release and mouthfeel

## Discussion:

Food service, fast food restaurants and the general need for convenient, easy to prepare meals, continue to replace the traditional meals prepared and eaten at home. Processed cheese products are widely used for burgers, pizzas, salads and other convenient products. This emulsification process usually requires the addition of ingredients such as water, emulsifying salts, dairy ingredients, stabilizers, flavors, colors and preservatives. Gelcarin CH carrageenans effectively stabilize and impart structure to processed cheese while retaining key parameters traditionally associated with processed cheese, such as firmness, melt, slicing properties, etc.

## FMC BioPolymer Product Recommendation

Product*	Properties	Labeling
Gelcarin CH 7352	Premium product	E 407, NaCl
Gelcarin CH 7619	Cost effective product	E 407a, KCl (E 508)

\* Gelcarin CH has a high tolerance for formula variations. Use levels can range from 0.8-3.5%, depending on the cheese content and the desired cheese structure and firmness. Contact your FMC representative for more details.

**Formulation Guideline: Processed Cheese Product**

<b><u>Ingredients</u></b>	<b><u>% By Weight</u></b>
Cheddar cheese	40.00
Salted butter	9.00
Rennet casein	7.00
Sweet whey powder	1.00
<b>Gelcarin® CH carrageenan*</b>	<b>0.8 to 1.5</b>
Salt	0.80
Potassium sorbate	0.15
Lactic Acid 90% Sol.	0.40
Trisodium citrate	3.00
Tricalcium phosphate	0.40
Water	100.00%

**Approximate Composition: %**

Fat content	20.3
Dry matter	45.1
Fat on dry matter	44.9

**Processing Guidelines:**

- Dry blend Gelcarin® CH carrageenan with all of the dry ingredients and disperse in the water.
- Add finely ground cheese and butter and mix until homogeneous.
- Add lactic acid and heat treat as required.
- Form into slices or blocks and refrigerate.

## Regulatory Information

All products manufactured by FMC BioPolymer meet all standards of quality as defined by:

- US Code of Federal Regulations (21 CFR)
- Food Chemicals Codex
- J.E.C.F.A. Specifications issued by FAO/WHO
- European Economic Community Directives

## Patents

FMC Corporation is owner and/or licensee of several patents related to its products. The products, processes and uses of such products referred to in this document may be covered by one or more patents or pending applications in the United States and/or other countries. FMC does not warrant against any infringement claim arising from the sale and/or use of any FMC product in combination with other materials; the use of any FMC product in the operation of any process; any FMC product manufactured to a customer's designs or specifications; or any FMC product manufactured by any process requested by a purchaser.

## Product Suitability

The information contained in this document (as well as any advice or assistance) is provided by FMC only as a courtesy and is intended to be general in nature. Any uses suggested by FMC are presented only to assist our customers in exploring possible applications. FMC makes no warranty, express or implied, as to its accuracy or completeness, or the results to be obtained from such information, advice or assistance. Each customer is solely responsible for determining whether the FMC products are suitable for such customer's intended use, and for obtaining any necessary governmental registrations and approvals for such customer's production, marketing, sale, use and/or transportation of finished goods using or incorporating the FMC products.

## **Technical Service Centers: FMC BioPolymer**

### The Americas:

#### **U.S.A.**

FMC BioPolymer  
Headquarter Office  
1735 Market Street  
Philadelphia, PA 19103  
Phone: 1-215-299-6234  
**1-800-526-3649**

Fax: 1-215-299-5809

#### **BRAZIL**

Galeria Plaza  
Av. Dr. Jose Bonifácio  
Coutinho Nogueira 150-1° A  
13091-611 Campinas  
Sao Paulo, Brazil  
Phone: 55-19-3735-4465  
Fax: 55-19-3735-4480

#### **MEXICO**

Av. De las Granjas No. 300  
Colonia Electricistas  
Del. Azcapotzalco  
C.P. 02060, Mexico, D.F.  
Phone: 52-55-352-3589  
Fax: 52-55-352-3273

### Europe:

FMC BioPolymer  
Avenue E. Mounier 83  
1200 Brussels, BELGIUM  
Phone: +32-2-775.83.11  
Fax: +32-2-775.83.00

#### **BELGIUM**

**Phone: 0800-12402**

#### **FRANCE**

**Phone: 0800-506444**

#### **GERMANY**

**Phone: 0800-1818841**

#### **NETHERLANDS**

**Phone: 0800-0220272**

#### **SPAIN**

**Phone: 0900-973251**

#### **UNITED KINGDOM**

**Phone: 0800-0183079**

### Asia Pacific:

FMC (Shanghai) Commercial Enterprise  
Room 105, Innovation Building  
1009 Yi Shan Lu  
Shanghai 200233  
Peoples Republic of China  
Phone: 86-21 5427-1177  
Fax: 86-21 5427-0193

FMC and Gelcarin are trademarks of FMC Corporation.  
'Know how. It works' is a service mark of FMC Corporation.

© 2005 FMC Corporation.  
All rights reserved.

**Visit our website at  
[www.fmcbiopolymer.com](http://www.fmcbiopolymer.com)**

