

**RXL® Portfolio**  
*Reliable Release*



**DELASOL®**  
*Delayed Release*



**RAPISOL®**  
*Rapid Release*

**EASYSEAL®**  
*Reliable Softgel Seams*

## Performance by Design

*GELITA® Pharmaceutical Grade Gelatin  
for Softgels and Hard Capsules*

- Full-spectrum capsule solutions
- Purpose-built performance
- Proven regulatory reliability
- Backed by decades of gelatin science

**GELITA**

# Gelatin Capsules

## *Proven Dosage Form with Multifunctional Performance*



Gelatin capsules are a well-established dosage form in the pharmaceutical and nutraceutical industries. They combine predictable dissolution behaviour, high patient compliance and efficient, scalable manufacturing. Gelatin as the capsule shell material dissolves at body temperature, is non-allergenic, easily digestible and neutral in taste. With a long history of safe use in food and pharmaceutical applications, gelatin capsules are widely used to deliver active pharmaceutical ingredients and nutritional compounds both safely and reliably.

GELITA® Pharmaceutical Grade Gelatin is engineered to meet the stringent technical and regulatory requirements of modern capsule manufacturing. In both hard capsule and softgel production, it combines natural origin with multifunctional performance. Its thermoreversible gelling behaviour, film-forming capability and adhesive properties support stable processing, capsule integrity and consistent performance. In addition, GELITA provides customized gelatin solutions tailored to specific formulation challenges and processing conditions.

### Key Benefits of GELITA gelatin for capsule applications:

- **THERMO-REVERSIBLE** gelation properties
- **PERFECT DISSOLUTION** of capsules
- **Excellent FILM FORMATION**
- **CRYSTAL CLEAR capsules possible**
- **GMO-free**
- **Gelatin is a FOODSTUFF** and thus has no E-number

*GELITA gelatins for hard and soft caps are suitable for prescription (Rx), generic (Gx), over-the-counter (OTC) and health & nutrition products, and are available from a variety of different raw material sources.*

*Beyond capsules, pharmaceutical grade gelatin also functions as a natural binder in tablets, supporting easy processing and a stable, non-brittle structure with reliable active release. In microencapsulation, gelatin shields sensitive actives like oil soluble vitamins from light and oxygen, masks taste and odor and allow for controlled release.*



# Hard Gelatin Capsules

## *Established Performance for Solid Dosage Forms*



Hard gelatin capsules are widely used for powdered and granulated fillings. They protect sensitive ingredients from oxygen, light, moisture and dust, thus contributing to product stability throughout shelf life. Shape, size and colour are customisable, and the balance between hardness and flexibility can be accurately adjusted. Thanks to more than a century of industrial use, hard capsule manufacturing is a highly established, high-speed process with excellent reproducibility.

GELITA gelatin for hard capsules supports efficient capsule production by ensuring reliable setting behaviour, enhanced gliding properties and fast machinability. GELITA offers flexibility in raw material selection, supplying bovine and porcine gelatin types, depending on formulation needs and target markets.

Under standard conditions, hard gelatin capsules typically dissolve in the stomach within 20 to 30 minutes. However, not all gelatins are the same. GELITA's application experts support customers in selecting the most appropriate solution for their specific product concept.

# Softgel Capsules

## *Advanced Formulation Options for Liquid and Semi-Solid Fills*



Softgel capsules are particularly suitable for liquid and semi-solid fillings, and widely used in pharmaceutical products, OTCs and dietary supplements. Softgels protect sensitive contents from oxygen, light, moisture and dust, while enabling rapid and reliable fill release. Their smooth surface facilitates easy swallowing and patient compliance.

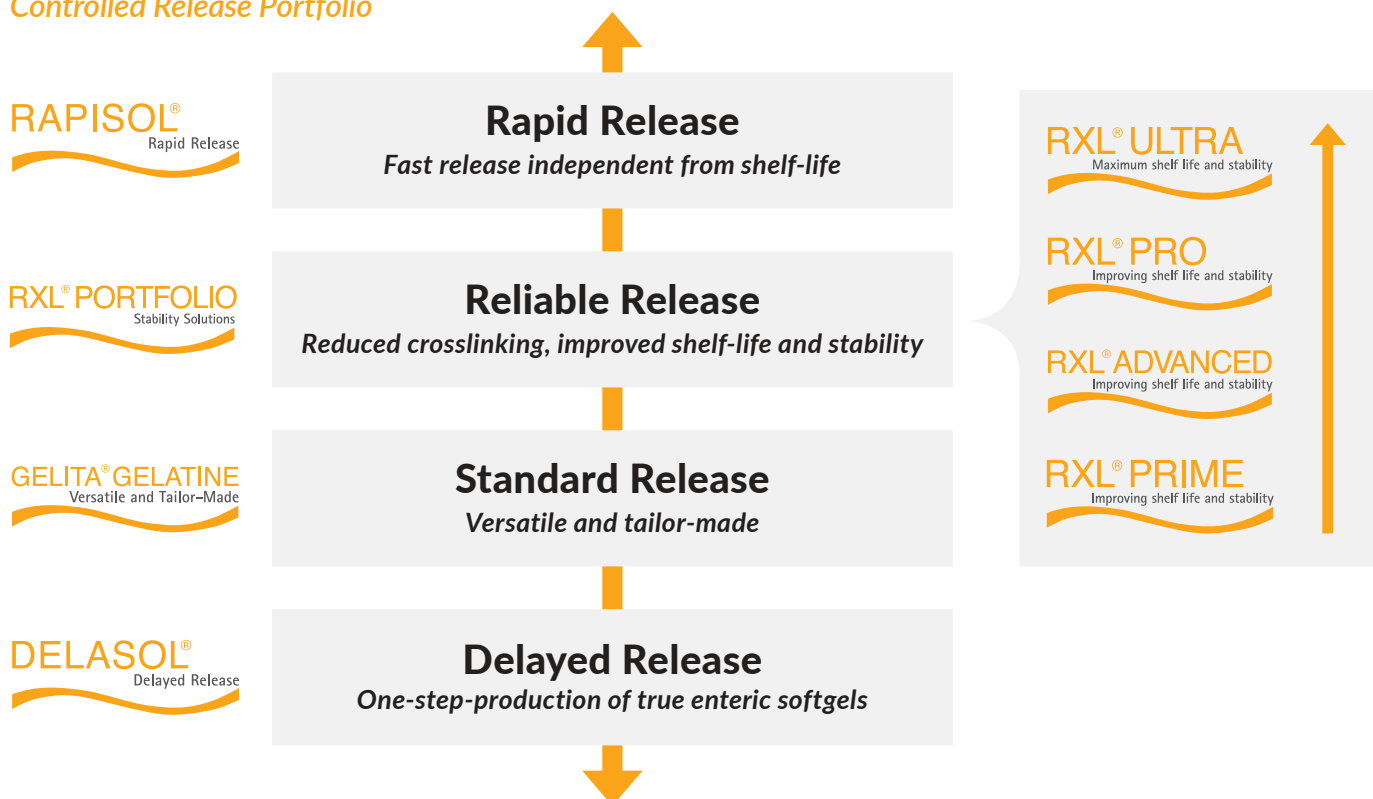
GELITA gelatin for soft capsules is produced from high-quality raw materials and supports optimal dissolution, contributing to improved bioavailability of the fill ingredients. Under standard conditions, softgel capsules release their content within 15 to 30 minutes.

For applications requiring delayed or accelerated release, improved stability or higher process robustness, conventional pharmaceutical gelatin may have functional limitations. In order to address these challenges, GELITA has developed a portfolio of specialised gelatin solutions that provide precise control over softgel performance and manufacturing efficiency.

# GELITA Softgel Specialties

## Targeted Gelatin Solutions for Defined Performance Requirements

### Controlled Release Portfolio



### RXL® Portfolio

#### For Superior Softgel Shelf Life

Crosslinking is one of the major challenges in softgel manufacturing, as it can impair capsule dissolution, compromise performance and reduce active ingredient efficacy over time.

The RXL® portfolio consists of four specialised gelatin products designed to actively reduce crosslinking in softgel applications. RXL® gelatins are designed for extended shelf life compared to standard pharmaceutical gelatin and provide enhanced storage stability across all climate zones, including hot and humid conditions. They ensure reliable solubility throughout the entire shelf life and beyond, supporting consistent bioavailability of valuable ingredients.



## Key Benefits – RXL®

- Actively reduces crosslinking to ensure reliable dissolution throughout shelf life
- Extends shelf life and improves stability under challenging storage conditions
- Maintains bioavailability for critical and reactive fills
- Supports regulatory compliance across pharmaceutical and nutraceutical applications

To suit your target application and individual production needs, the RXL® portfolio offers full flexibility to explore challenging new fills and create the perfect softgel. Our experts will be pleased to support you in developing your ideal formulation.



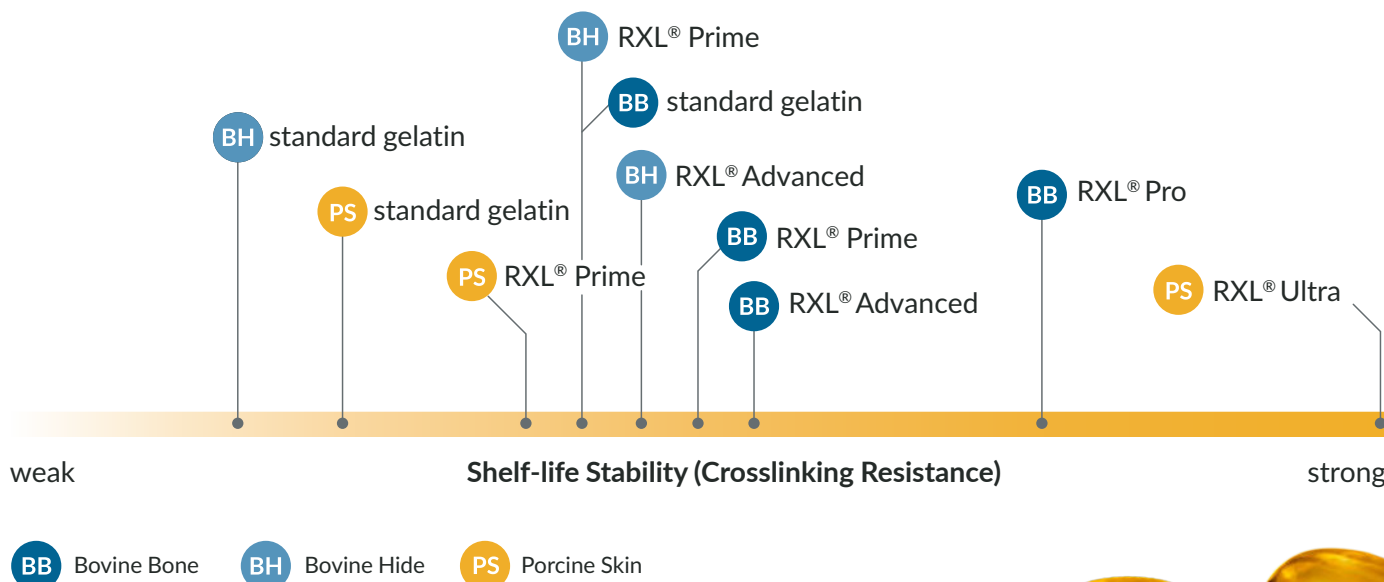
## RXL® Ultra

### Ultimate Performance

GELITA's latest innovation is RXL® Ultra, an optimized gelatin that provides up to zero risk of crosslinking. In RXL® Ultra, the free amino groups in gelatin are blocked via modification at high conversion rates, efficiently preventing self- and external crosslinking.

RXL® Ultra maintains the known benefits of gelatin for softgel production like moderate process temperature, and promises to solve even extreme crosslinking challenges. The result is more reliable products for your brand and consumers.

### Increasing Anti-Crosslinking Potential



As part of GELITA's comprehensive range of gelatin variants, the RXL® portfolio offers a spectrum of anti-crosslinking effects. This gives formulators a huge degree of flexibility in finding the perfect gelatin for every softgel. The RXL® portfolio is available in a choice of bovine bone, bovine hide and porcine skin raw materials.



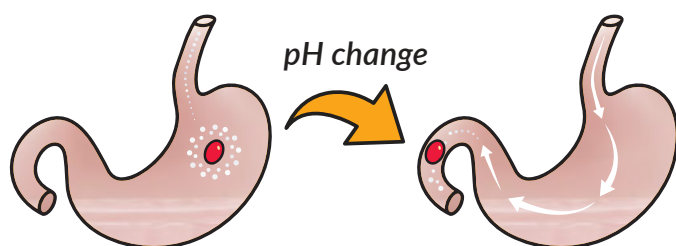
## DELASOL®

### For One-Step Production of True Enteric Softgels

Conventional enteric softgel production typically involves capsule manufacturing followed by an additional coating step, which is often performed by third parties. This approach increases production time, costs, logistical complexity and environmental impact.

DELASOL® enables true enteric softgel capsules to be produced in a single manufacturing step without additional coating. The solution allows manufacturers to reduce processing time, costs and documentation requirements while delivering clear, premium-quality enteric capsules. DELASOL® comprises a blend of gelatin and pectin, free from mineral oil-based substances and made exclusively from natural ingredients. It can be used with existing softgel equipment and is suitable for lipophilic fill systems.

#### pH-Dependent Release



With a dissociation pH value of approximately 6.5, DELASOL® softgels survive the acidic environment of the stomach (approx. pH value of 1.2) and only begin to dissolve and release their fill once they reach the neutral pH of the small intestine (approx. pH value of 6-8).

#### Key Benefits – DELASOL®

- Enables true enteric softgels in a single manufacturing step
- Eliminates coating processes, thus reducing time, cost and complexity
- Delivers clear, premium-quality enteric capsules
- Compatible with existing softgel manufacturing equipment

## EASYSEAL®

### Boosting Production Efficiency and Leaker Reduction

Leakage has traditionally been considered an unavoidable issue in softgel manufacturing, leading to waste and reduced efficiency. EASYSEAL® addresses this challenge by improving seam integrity and reducing leakers.

EASYSEAL® is a pharmaceutical-grade gelatin designed to increase seam thickness and ensure reliable capsule sealing, even at elevated machine speeds. It supports faster drying, reduces energy consumption and improves overall production throughput. EASYSEAL® is compatible with challenging fill materials like suspensions or surface active substances, and suitable for all major softgel applications.

#### Key Benefits – EASYSEAL®

- Reduces leakers through increased capsule seam thickness
- Enables higher machine speeds with reliable sealing performance
- Shortens drying time and lowers energy consumption
- Increases overall production efficiency and yield



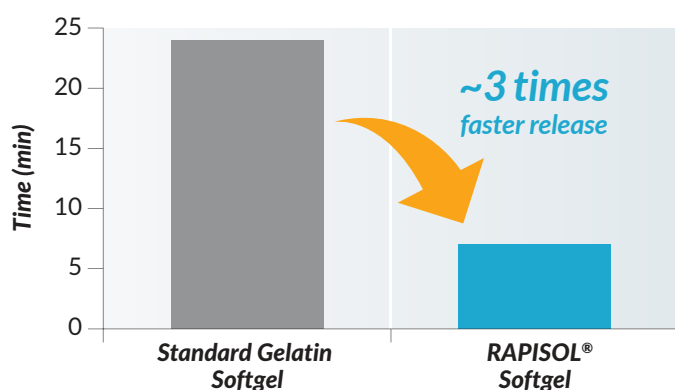
## RAPISOL®

### Revolutionary Rapid Fill Release in Softgels

For time-sensitive applications such as pain relief and cold remedies, rapid release of active ingredients is essential. RAPISOL® is designed to accelerate softgel shell dissolution and therefore support fast fill release.

RAPISOL® is 100 % gelatin with optimised molecular weight distribution. Its structure minimises unwanted shell-fill interactions and ensures a consistently fast dissolution rate throughout the product's shelf life.

#### RAPISOL® vs Standard Gelatin, Accelerated Storage Conditions (40°C / 75 % r.h.), 6 Months



RAPISOL® softgels show excellent performance even under extreme storage conditions. Fill release in standard softgels is substantially slowed.

#### Key Benefits – RAPISOL®

- Accelerates shell dissolution for faster fill release
- Supports rapid onset of action for time-sensitive applications
- Ensures consistent dissolution performance over shelf life

## RAPISOL® Chewable

### The Convenience of a Gummy – the Performance of a Softgel

GELITA's latest addition to its softgel specialty portfolio brings the best of two worlds together: the convenience and enjoyment of a chewable format with the proven delivery performance of a softgel capsule. Designed for chewable softgels, RAPISOL® Chewable delivers an enjoyable texture and pleasant mouthfeel while enabling rapid shell dissolution after consumption.

As consumers increasingly seek convenient and enjoyable supplement formats, chewable softgels offer an attractive alternative to traditional capsules and tablets. They combine high active-loading capacity and excellent protection of sensitive ingredients with a consumer-friendly intake experience that eliminates swallowing difficulties.

For manufacturers, RAPISOL® Chewable creates new opportunities to develop differentiated products without adding complexity. The formulation is based on a single hydrocolloid and can be processed on standard softgel equipment, supporting efficient production and a smooth transition into innovative chewable softgel concepts.

#### Key Benefits – RAPISOL® Chewable

- Pleasant chew and enjoyable mouthfeel
- Fast-dissolving shell for convenient consumption
- Enables innovative chewable formats with high active loading



# Comprehensive Gelatin Platform *for Capsule Innovation*



With its pharmaceutical-grade gelatin portfolio for hard and soft capsules, GELITA provides a comprehensive platform for capsule innovation. From established standard applications to advanced softgel specialties, GELITA enables controlled release behaviour, extended shelf life and efficient, reproducible manufacturing – all of which support the development of differentiated capsule products that meet today's technical, regulatory and market requirements.



**GELITA**  
PHARMA INSTITUTE

## OUR VISION YOUR GROWTH

The GELITA Pharma Institute is dedicated to the pursuit of future-proof solutions that help customers to excel and grow.

It's where we pool our long-standing expertise in gelatin science, successful product formulation, impactful marketing, regulatory knowledge and more – and work with you to create premium products with distinct competitive advantages.

As a global innovation leader, GELITA is committed to pushing boundaries, breaking ground and bringing new ideas to market. Our vision is to promote your growth with our passion, products and expertise.

***Ready to unlock even more  
capsule performance***

Learn more on [www.gelitapharmainstitute.com](http://www.gelitapharmainstitute.com) contact our experts directly at [pharma.institute@gelita.com](mailto:pharma.institute@gelita.com)

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