Solubility enhancement is increasingly a must. Many drugs currently on the market still show considerable potential for improvement in the two areas critical to bioavailability: solubility and permeability. The key to maximizing bioavailability is ensuring the API dissolves in the gastrointestinal tract.

With its extensive expertise in pharmaceutical polymers and formulation development, Evonik achieves just that: by intertwining a poorly soluble API with an amorphous polymer carrier. The EUDRAGIT® family of pharmaceutical-grade polymers offers a range of properties and functionalities that opens an even wider spectrum of formulation possibilities.

EUDRAGIT® FS 100 was specifically designed to enhance solubility at the same time as targeting the colon and treating localized diseases, such as colon cancer and irritable bowel syndrome and delivery site specific APIs. The polymer is suitable for melt extrusion (HME) and spray drying (SD).

Comprehensive regulatory documentation and safety data packages are available.
**KEY PROPERTIES:**

- Excellent solubility enhancement
- Outstanding thermoplastic properties
- High miscibility with APIs and other excipients
- Reliable batch-to-batch consistency as fully synthetic polymers
- Solubility in common solvents
- Solubility in intestinal conditions
- Ability to form hydrogen bonds and/or ionic interactions for additional tailored effects
- Excellent processability
- Optimal glass transition temperature ($T_g$) of 50°C

**SOLUBILITY ENHANCEMENT OF SOLID DISPERSIONS WITH EUDRAGIT® FS 100**

**FIGURE 2:**
Comparative dissolution test in phosphate buffer pH 7.4 with 0.02% SLS

![Dissolution Test Graph](image-url)
This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

EUDRAGIT® = reg. trademark of Evonik Industries AG and its subsidiaries

Evonik Nutrition & Care GmbH
Health Care Business Line
Pharma Polymers & Services

eudragit@evonik.com
www.evonik.com/eudragit