

CARBOWAX™ SENTRY™ Polyethylene Glycols as active pharmaceutical ingredients

CARBOWAX™ SENTRY™ Polyethylene Glycols (PEGs) 3350 and 4000 Uninhibited are active pharmaceutical ingredients (APIs) produced to address the needs of the most stringent requirements of the pharmaceutical industry. These APIs are well-known in the treatment of chronic constipation. Functioning as an osmotic laxative, they offer a mild and effective treatment while minimizing adverse side effects often seen with other laxative types. These products are also widely used in a formulation as an intestinal lavage to facilitate bowel cleansing prior to medical procedures such as colonoscopies, radiological exams, or gastrointestinal surgery.



The API products within Dow's portfolio includes:

- CARBOWAX™ SENTRY™ Polyethylene Glycol 3350 USP Powder (Uninhibited); Macrogol 3350 Ph. Eur.
- CARBOWAX™ SENTRY™ Polyethylene Glycol 3350 USP Granular (Uninhibited); Macrogol 3350 Ph. Eur.
- CARBOWAX™ SENTRY™ Polyethylene Glycol 4000 NF Powder (Uninhibited); Macrogol 4000 Ph. Eur.

The manufacturing, handling, and storage of CARBOWAX™ SENTRY™ PEGs is conducted following appropriate current Good Manufacturing Practices (cGMP) in our world-scale production facility. Moreover, they comply with ICH Q7A cGMP guidelines for APIs.

Some of the CARBOWAX™ SENTRY™ PEGs regulatory compliances

Products	Europe		United States (US)			Canada
	European pharmacopoeia (EP)	Certificate of suitability (CEP)	US Pharmacopoeia (USP)	National formulary (NF)	US Drug Master File (DMF)	Canadian Drug Master File (DMF)
CARBOWAX™ SENTRY™ Polyethylene Glycol 3350 USP Powder (Uninhibited); Macrogol 3350 Ph. Eur.	✓	✓	✓		✓	✓
CARBOWAX™ SENTRY™ Polyethylene Glycol 3350 USP Granular (Uninhibited); Macrogol 3350 Ph. Eur.	✓	✓	✓		✓	✓
CARBOWAX™ SENTRY™ Polyethylene Glycol 4000 NF Powder (Uninhibited); Macrogol 4000 Ph. Eur.	✓	✓		✓		

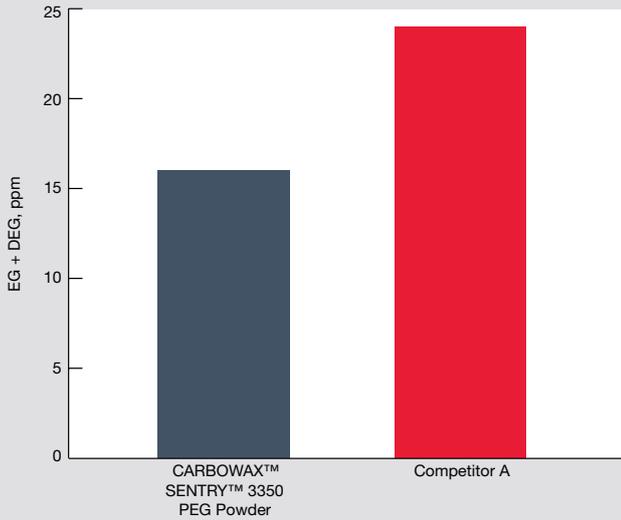
Contact your Dow's representative to check compliance in other countries.

Capability and technical advantages

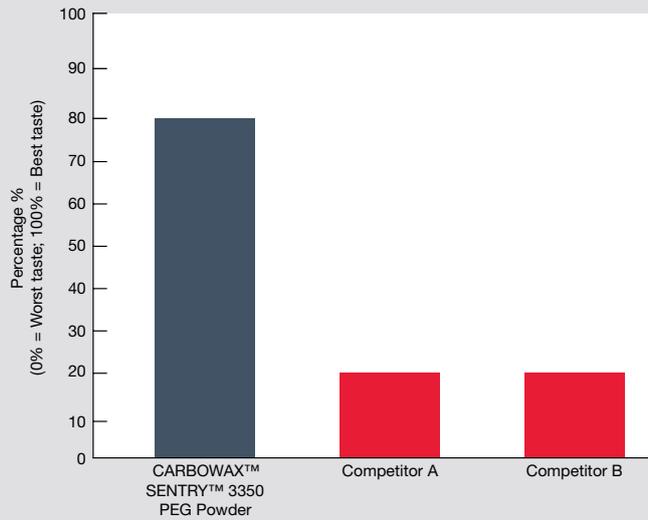
CARBOWAX™ SENTRY™ PEGs 3350 and 4000 products offer multiple advantages for laxatives and colonic lavage producers versus other PEG-based products available in the industry. For example:

- Dow's investment in a flexible alkoxylation facility on the U.S. Gulf Coast and the backing of Dow's global supply chain – you can be assured of **greater supply reliability to dependably grow your business.**
- **Better impurity profile due to low content of residual solvents** such as ethylene glycol (EG) and diethylene glycol (DEG) according to ICH Residual Solvents Guidelines. This helps to ensure that your Maximum Daily Dosage (MDD) for PEG-based drugs are compliant.
- **Enhanced taste experience and superior texture characteristics**, to avoid negative changes in taste or smell of your formulated drug*.

Impurity profile – paired comparison



Consumer taste preference - Paired comparison



* The graphic representations are presented here for illustrative purposes only and should not be construed as product specifications.

Why Choose Dow?

- 1. Innovation:** Dow is committed to collaborate with customers to create innovation. As a company, we spend more than \$1.6 billion each year on research and development.
- 2. Regulatory and technical support:** Dow has decades of experience in the pharmaceutical industry, collaborating with some of the world's largest players. We have regulatory and technical support in nearly every region of the world.
- 3. Digital marketplace centers:** Equipping our customers with the resources to potentially achieve higher sales in the digital economy. Services include: industry listening, marketing automation, digital presence, product promotion, etc.



About Dow

Dow (NYSE: DOW) combines global breadth, asset integration and scale, focused innovation and leading business positions to achieve profitable growth. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company, with a purpose to deliver a sustainable future for the world through our materials science expertise and collaboration with our partners. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer care. Dow operates 106 manufacturing sites in 31 countries and employs approximately 35,700 people. Dow delivered sales of approximately \$39 billion in 2020. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow @DowNewsroom on Twitter.

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Product stewardship: Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer notice: Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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