Pharmaceutical Alginates Product Selection Guide

Unique functionality for a broad range of pharmaceutical applications

From anti-reflux to biomedical implants, alginates are uniquely suited for a wide range of applications. DuPont has decades of experience controlling these naturally derived materials, which means you can count on consistent performance, every time.

Anti-reflux
DuPont harnesses the unique properties of Norwegian brown seaweed to deliver premier performance in anti-reflux applications. Through raw material and process expertise, our products enable strong and consistent raft formation, providing a physical barrier that prevents stomach acid from entering the esophagus.

Controlled-release matrix former
Sodium alginates with higher mannuronic acid ratios are used to modify the release of APIs and prevent the “burst effect” seen with other matrix formers. The pH-controlled release mechanism of alginate matrices is uniquely suited for highly-acid-soluble drugs.

Enteric coating
Alginates are film-forming, pH-sensitive polymers, making them ideal enteric coating agents. Grades with low viscosity and high mannuronic acid content provide superior functionality in acid while allowing for rapid disintegration in the neutral pH of the intestine.

Poorly soluble APIs
Solid dispersions and nano-suspensions made with sodium alginates have been shown to significantly increase the solubility of poorly soluble APIs. Sodium alginates offer steric and electrostatic stabilization for nano- suspensions. In solid dispersions, the API retains the original crystal structure, assuring long-term stability.

Ultrapure grades for biomedical
Our NovaMatrix® product line is a well-characterized and -documented portfolio of sodium alginates that are ultrapure and bio-compatible. Applications include drug delivery, tissue engineering, cell encapsulation, and medical devices.

Application	Product	Type	G / M range	Viscosity, cps (1%)	Description
Anti-reflux	Protanal® LFR 5/60*	Sodium alginate	65–75 / 25–35	5–7	Premier raft formation in liquid products
	Protacid® F120NM	Alginic acid	65–75 / 25–35	Insoluble	Alginic acid form for chewable products
Controlled release	Protanal® CR 8133*	Sodium alginate	30–40 / 60–70	15–45	Lowest viscosity grade for controlled release
	Manucol® LKX	Sodium alginate	30–40 / 60–70	60–170	Medium viscosity grade for controlled release
	Protanal® CR 8223*	Sodium alginate	30–40 / 60–70	200–450	Highest viscosity grade for controlled release
Enteric coating	Aquateric® N100	Sodium alginate	30–40 / 60–70	4–12	Fully formulated coating blend with starch
Biomedical	Pronova® UP LVG	Sodium alginate	Ratio > 1.5	20–200	Ultrapure low viscosity gelling grade
	Pronova® UP MVG	Sodium alginate	Ratio > 1.5	> 200	Ultrapure medium viscosity gelling grade

* Also recommended as solid-dispersion and nano-suspension solubilizer.

HO 71-2 US • 03.2020

DUPONT™

Nutrition & Biosciences
www.pharma.dupont.com