

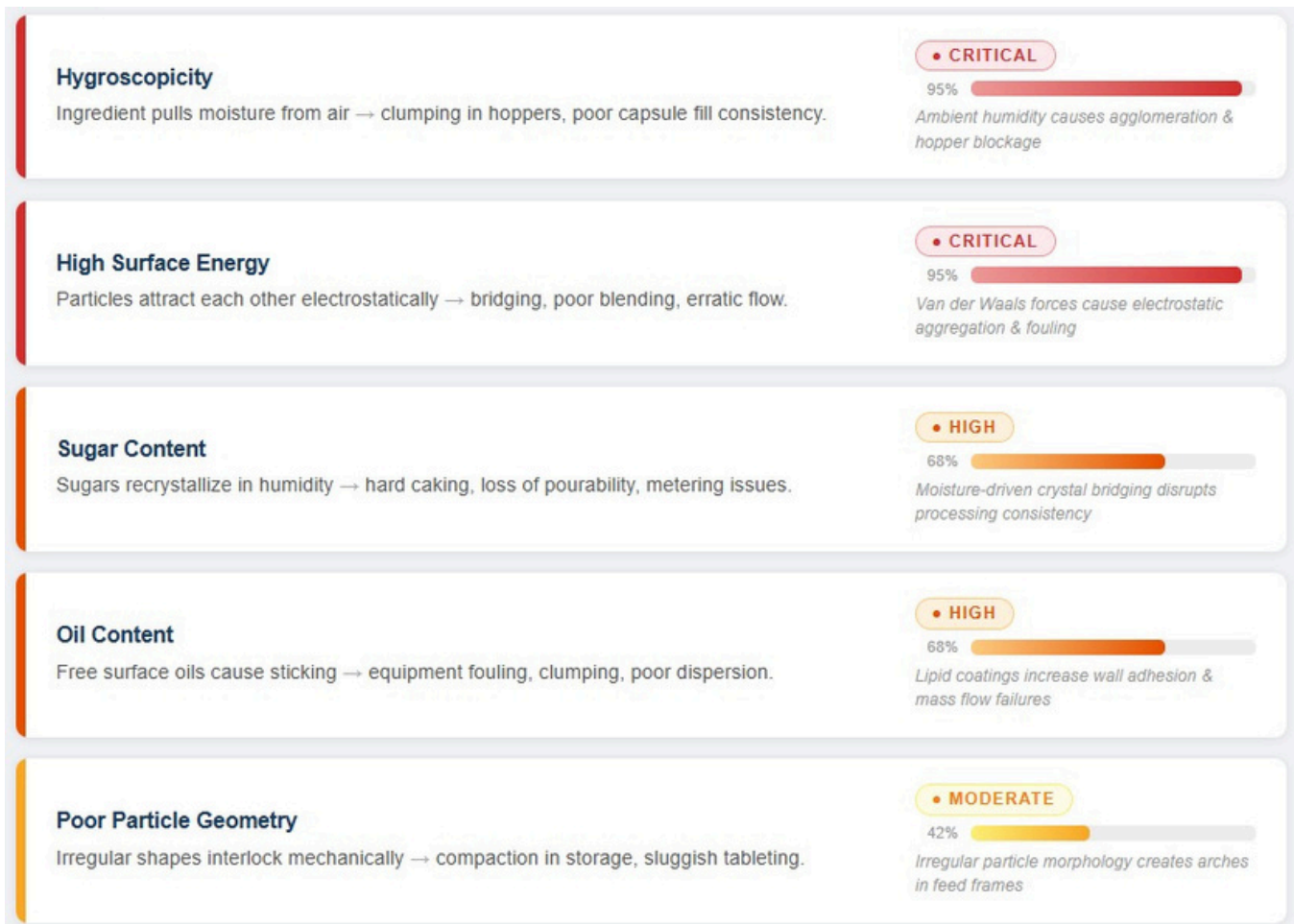
The Role of Clean Label Flow Agents

Solving Powder Production Problems — Without Synthetic Additives

What a Flow Agent Actually Does

A flow agent is not “fixing” the ingredient — it is stabilizing the powder system, so it behaves predictably in equipment and delivery forms. When a powder fails (clumping, caking, bridging, or running unevenly), the cause is almost always one of five dominant physical failure modes.

The Five Powder Failure Modes



This is why one flow agent does not work equally well across all ingredients.



RIBUS Clean Label Solutions

All RIBUS flow agents are plant-based, non-GMO, and allergen-free — replacing synthetic additives like silicon dioxide (SiO₂) with a clean, consumer-recognizable ingredient.

Active	Issue	Severity of Flow	Nu-FLOW	Nu-SORP Oil	Nu-SORP Water	Nu-FILL
Minerals (Calcium, Iron, Zinc)	High Surface Energy	Very High	✓			✓
Calcium Carbonate	High Surface Energy	High	✓			✓
Curcumin	High Surface Energy	High	✓			✓
Probiotics (mineral carrier)	High Surface Energy	High - Mod.	✓			
Amino Acids (Taurine, Lysine)	High Surface Energy	Moderate	✓		✓	
Creatine & BCAA	High Surface Energy	Moderate	✓			
L-Glutamine	High Surface Energy	Moderate	✓			
Beta-Alanine	High Surface Energy	Moderate	✓			✓
Chlorella / Spirulina	Poor Particle Geometry	Very High	✓			✓
Mushrooms (Reishi, Lion's Mane, Cordyceps)	Poor Particle Geometry	Very High	✓			
Whole Botanical Extracts (Turmeric, Green Tea, Ginseng)	Poor Particle Geometry	High	✓		✓	
Herbal Powders (Ashwagandha, Maca, Beet Root)	Poor Particle Geometry	High	✓			
Plant Proteins (Pea, Rice, Hemp)	Poor Particle Geometry	High	✓			
Collagen Blends (with oils / lipophiles)	Oil Content	Extreme		✓		
CBD / Hemp Extract Powders (oil loaded)	Oil Content	Very High		✓		
Lipid-Based Actives	Oil Content	High		✓		
Probiotics (encapsulated lipid system)	Oil Content	High	✓	✓		
CoQ10 & Carotenoids (oil dispersed)	Oil Content	High	✓	✓		
Pumpkin Seed Powder	Oil Content	High	✓	✓		
Hygroscopic Powders (Mg, Sodium, Potassium Salts)	Hygroscopic	Extreme				✓
Hydration Mixes	Hygroscopic	Extreme				✓
Collagen Blends (pure peptides + minerals)	Hygroscopic	Very High	✓			✓
Prebiotic Fibers (Inulin, FOS)	Hygroscopic	Very High	✓			✓
Collagen Peptides	Hygroscopic	High	✓			✓
Standardized Botanical Extracts (spray-dried)	Hygroscopic	High	✓			
Vitamins (B-Complex, C)	Hygroscopic	High - Mod.	✓			
CBD / Hemp Extract Powders (sugar / dextrin carrier)	Sugar Content	Very High				✓
Collagen Blends (with flavors / sweeteners)	Sugar Content	Very High	✓			
Green Coffee Extract	Sugar Content	High	✓		✓	
Fruit Powders (Blueberry, Strawberry, Acai)	Sugar Content	High	✓		✓	
Probiotics (inulin / FOS carrier)	Sugar Content	High	✓			✓
CoQ10 & Carotenoids (spray dried on sugar)	Sugar Content	High	✓			

Product	Solves	Key Advantage
Nu-FLOW®	General flow / replaces SiO ₂	Clean label drop-in for silicon dioxide
Nu-SORP™ Oil	High oil content ingredients	2x oil adsorption vs. Nu-FLOW®
Nu-SORP™ Water	Hygroscopic ingredients	2x moisture adsorption vs. Nu-FLOW®
Nu-FILL™	Low density / capsule fill weight	Adds density, lowers angle of repose vs. MCC

