

EXPAND PLATING CAPACITY IN **FOODS AND MORE**

# Turn liquids into free-flowing powders



## Introducing **N-ZORBIT™ 2144 DG** plating agent

As you answer demand for the innovative spices, seasonings, flavors and actives that go into today's on-trend foods and beverages, you face many challenges. One is converting these and other ingredients from liquid to powdered form. Today there is a versatile, highly absorbent plating agent that enables you to transform a broad range of hydrophobic and hydrophilic liquids into easy-to-use, free-flowing powders while carrying more concentrated flavor. Discover how N-ZORBIT™ 2144 DG plating agent, from the Ingredion Idea Labs™ innovation centers, is redefining plating in foods, beverages and beyond.

CONVENIENCE & PERFORMANCE™ 

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**idea labs**™   
IDEAS TO SOLUTIONS

# Plate liquids with the latest high efficiency plating technology

N-ZORBIT™ 2144 DG plating agent transforms a wide variety of liquids, both oil- and water-based, into uniformly blended, flowable powders. You can greatly improve processing efficiency when you use this agent with oils, thick liquids such as honey or chocolate syrup, and liquids that are difficult or expensive to spray dry. You can also plate both water- and oil-based liquids together for delivery in one system.

Use N-ZORBIT™ 2144 DG plating agent in a wide variety of applications:

- **Dry mix seasoning blends**
- **Instant noodle seasoning mixes**
- **Powdered sauces**
- **Snacks and crackers**
- **Powdered beverages**
- **Confections**
- **Vitamins**
- **Fragrances**

## INCREASED LOADING CAPACITY FOR MORE INTENSE FLAVORS

Starting with native corn starch, Ingression scientists developed a highly porous structure that enables much greater absorption. N-ZORBIT™ 2144 DG plating agent allows you to carry up to a 40% load, depending on the active used. The optimized particle size, coupled with low bulk density (350-500 g/L) and increased surface area, enables a higher plating capacity than common carriers such as maltodextrin. With N-ZORBIT™ 2144 DG plating agent, you can produce highly concentrated actives and vibrant flavors in small volumes of powder, leading to lower cost-in-use and reduced packaging costs.



SEM (scanning electron microscope) image illustrates the morphology of N-ZORBIT™ 2144 DG plating agent's agglomerated microporous starch granules.

## ABSORBS AND TRANSFORMS TO STREAMLINE FORMULATION

New N-ZORBIT™ 2144 DG plating agent was designed to offer the features and benefits you need most.

**Better flowability.** Optimized bulk density and uniform particle size distribution for easy packing.

**No special equipment required.** Easy to use with existing blenders. Flows through machinery easily without sticking.

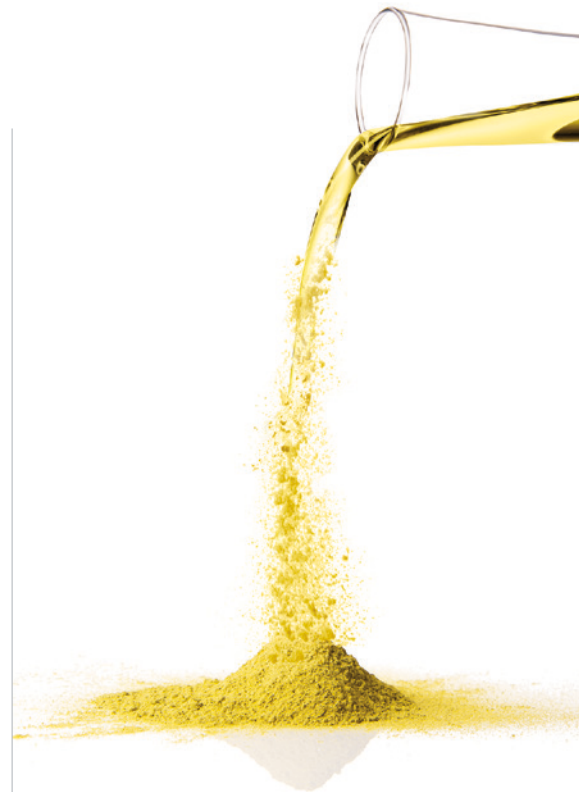
**Dust control.** Safer handling for operators and employees. Supports a cleaner manufacturing environment.

**Alternate to spray drying.** Can be used instead of spray drying for delivery of less sensitive actives such as vanilla.

**Reduced hygroscopicity.** N-ZORBIT™ 2144 DG plating agent demonstrates less caking and clumping than other plating agents.

**Consumer-friendly.** Made from corn starch, it carries no E-number in Europe and has no regulatory restrictions or usage limitations.

**Reduced storage and transportation costs.** More concentrated flavors can reduce inventory, shipping volume and freight costs.



## PLATING REDEFINED

*Plating refers to the physical blending of liquid substances onto a solid carrier to create a free-flowing powder. It is an alternative to spray drying, spray congealing and extrusion.*

Our scientists have taken plating to the next level of performance and efficiency with N-ZORBIT™ 2144 DG plating agent. Enjoy process and cost efficiencies while providing the actives and intense flavors consumers want.



**Ingression™**

Innovate with **CONVENIENCE & PERFORMANCE**  
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