AVEKA has many techniques to engineer particles that are applied to a wide range of materials serving a variety of industries such as food, personal care, and agriculture. Our broad scientific and engineering expertise gives us the ability to investigate and tailor the particles to best meet your needs.

The technologies we use to design engineered particles include processes such as spray-drying, prilling, and microencapsulation. We offer a number of bead formation techniques that provide innovative delivery systems and visual appeal. Each technique offers unique and specific advantages dependent on factors such as:

- BEAD SIZE
- RELEASE MECHANISM
- ENCAPSULATION MATERIAL

AVEKA brings years of particle engineering experience, with proven technologies and an extensive intellectual property position to assist in developing and producing your unique, functional particle.

AVEKA is your GO-TO particle solution provider from R&D to production.
ADVANTAGES
Low cost, able to make water soluble walls
Can set release temperature by matrix material selection
Approved for foods, beverages, wet or dry delivery

DISADVANTAGES
Limited to water soluble wall materials
Matrix-type capsule presents less resistance to fill release
Capsules somewhat fragile. Some fills may leak slowly

IDEAL SYSTEM
Vitamin E oil in a water soluble shell
Flavor, color and nutraceuticals, solids
Emollients and fragrances for personal care products, flavors, color of food

Core Materials: Liquids
Water miscible
Hydrophobic (oils, etc)

Core Materials: Solids
Water soluble
Water insoluble

Wall Material
Typical material
sugars, starch
wax
salt of alginic acid

Release Mechanism
Pressure (breakage)
Dissolving
Heat (melting)
Chewing
Digestion

Approved for:
Food
Cosmetics

Capsules
Type
core-shell
matrix
matrix

Typical payload, %
0-50
0-60
0-30

Size limits, microns
5-30
20-2000
200-5000

Process
Relative cost
low
medium
medium