

New mixing system

The majority of mixing technology focuses on two-phase mixing of solids (powders) into liquids, creating either a dispersion/suspension gel or similar state. Many of these powders are difficult to disperse and hydrate, tending to agglomerate or creating substantial foam during blending. Particles left behind on the tank walls or in-line screens are wasted. Apart from decreasing yield, this phenomenon also compromises quality. The agglomerates are often difficult to break down unless they are exposed to enough shear. Other ingredients will not fully “activate” or properly hydrate in order to reach their target viscosity or consistency, unless the shear rate is adequate to disperse all particles.

Soliquid, a recent technological development in Australia, addresses many of the problems mentioned above. It forms a complete shift from conventional mixing systems and is based on an elegant, natural solution. Soliquid employs vortexes for mixing, and provides a large and rapidly changing surface to accept the powders. A controlled vortex is generated and solids are dropped on to the vortex at a pre-determined rate. These get sucked in and the air moves inwards by spinning towards the centre and escapes. As energy is not wasted in thrashing the liquid around, the system is energy efficient.

Compared with conventional mixing units, Soliquid occupies one-tenth the space, removes air and is a true in-line process. It provides the right combination of shear and dispersion surface, both critical for best results. Moreover, it is designed to contain or eliminate excessive foaming, rather than increasing the tendency to aerate and foam as might be expected. *Contact: Saurin Technologies, Australia. Tel: +61 (3) 9706 6777.* (Food and Pack, April 2002)