health. wellness. convenience.

ultra-soluble amino acid complex
Acti-Solve™ Branched-Chain Amino Acids (BCAAs) use a proprietary solubilizing agent and process to instantize ingredients for enhanced solubility and minimal foaming. As a result, the use of sodium lauryl sulfate or other surfactants is not required.

Our BCAAs are the solution to BCAA low solubility and mixability in various applications. The unique feature of this product is its rapid suspension in cold water, quickly forming a homogenous solution. The trio of essential amino acids — leucine, isoleucine and valine — are formulated to a specific ratio of 2:1:1. Custom blends are also available.

application
- shakes
- bars
- meal replacements
- beverages

key features and benefits
- enhanced solubility
- faster mixing
- contains no surfactants
- cGMP compliant
- kosher and halal certifications available
<table>
<thead>
<tr>
<th>attribute</th>
<th>acti-solve™ proprietary BCAA</th>
<th>conventional BCAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>sourcing and process</td>
<td>made from a natural source (glucose) by fermentation with proprietary processing</td>
<td>made from inferior sources — bird feathers, hog hair, human hair by standard extraction</td>
</tr>
<tr>
<td>solubility in liquid</td>
<td>enhanced solubility due to increased surface area and lower density</td>
<td>typical solubility due to lower surface area and higher density</td>
</tr>
<tr>
<td>foaming</td>
<td>minimal to no foaming, proprietary solubilizing agent and process</td>
<td>potential for foaming due to use of sodium lauryl sulfate</td>
</tr>
</tbody>
</table>

**example application: improved solubility in instant powdered beverages**

Acti-Solve™ and conventional BCAAs were poured into beakers simultaneously. After stirring both for 15 seconds, Acti-Solve™ showed superior dispersibility. After 20 seconds the Acti-Solve™ product was a homogeneous solution with minimal foaming.

### regional centers

- **North America** — Wilmington, DE USA  
  Tel: +1 877 546 2782
- **Europe** — Switzerland  
  Tel: +41 52 560 55 00
- **India** — Maharashtra  
  Tel: +91 22 61489696
- **Asia Pacific** — Singapore  
  Tel: +65 6775 5366
- **Middle East, Africa** — Dubai, U.A.E.  
  Tel: +971 4 3818515
- **Latin America** — Mexico  
  Tel: +52 55 52 76 6121
  [ashland.com/contact](http://ashland.com/contact)

*Registered trademark, Ashland or its subsidiaries, registered in various countries
**Trademark, Ashland or its subsidiaries, registered in various countries
©2018, Ashland / FNB18-102

The information contained in this brochure and the various products described are intended for use only by persons having technical skill and at their own discretion and risk after they have performed necessary technical investigations, tests and evaluations of the products and their uses. Certain end uses of these products may be regulated pursuant to rules or regulations governing medical devices, drug uses, or pesticidal or antimicrobial uses. It is the end user’s responsibility to determine the applicability of such regulations to its products.

All statements, information, and data presented herein are believed to be accurate and reliable, but are not to be taken as a guarantee of fitness for a particular purpose, or representation, express or implied, for which seller assumes legal responsibility. No freedom to use any patent owned by Ashland, its subsidiaries, or its suppliers is to be inferred.