APPEARANCE
White to yellowish crystalline powder
Bulk density: 700 kg / m³ ± 10 %
Angle of repose: 40° ± 10 %
Particle size distribution: min. 90 % 0 – 1000 μm
Solubility: approx. 30 g/L water at 20 °C

SPECIFIED VALUES
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assay min.</td>
<td>99.0 %</td>
</tr>
<tr>
<td>Ash max.</td>
<td>0.5 %</td>
</tr>
<tr>
<td>Loss on drying max.</td>
<td>0.3 %</td>
</tr>
</tbody>
</table>

MOLECULAR DATA
Molecular formula: C₅H₁₁NO₂S
Molecular weight: 149.21 g/mol

PRODUCTION
MetAMINO® is synthesized from petrochemical raw materials using an environmentally friendly patented proprietary process by the feed additives business of Evonik Operations GmbH, known as the carbonate process. This proven complex, system results in a high quality product without the formation of waste salt, while largely avoiding pollution by waste air and water.

USE
Particularly for use in monogastrics. MetAMINO® ensures the adequate supply of sulfur amino acids, especially of the essential methionine. Because of methionine being first-limiting in typical poultry diets its use has been well established for many years. Additionally, diets for piglets and growing pigs can show a considerable deficiency in methionine, especially when formulated to achieve low nitrogen excretion for ecological reasons. Such a deficiency can be conveniently compensated for by using MetAMINO®. To supply methionine to ruminants, the feed additives business of Evonik offers its Mepron®, a rumen stable form of methionine.

NUTRITIONAL MATRIX
<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Matrix value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methionine content</td>
<td>99.0 %</td>
</tr>
<tr>
<td>Digestibility</td>
<td>100 %</td>
</tr>
<tr>
<td>Crude protein (N x 6.25)</td>
<td>58.1 %</td>
</tr>
<tr>
<td>Metabolizable energy</td>
<td></td>
</tr>
<tr>
<td>Poultry (estimated)</td>
<td>21.0 MJ/kg 5,020 kcal/kg</td>
</tr>
<tr>
<td>Swine (estimated)</td>
<td>22.0 MJ/kg 5,280 kcal/kg</td>
</tr>
</tbody>
</table>
Product Information

MetAMINO®

PROCESSING
MetAMINO® can be processed into premixes, mineral, and compound feeds, together with milk replacers, by any technical procedure. Its technical properties guarantee homogeneous mixability and stability against demixing.

STORAGE AND STABILITY
MetAMINO® should be kept cool and dry in unopened original packing. Storage and conditions of 5 ° – 30 °C and 20 – 75 % rel. humidity are recommended. Under these conditions its active content is guaranteed for 3 years from the manufacturing date. The manufacturing date is part of the lot number on the package label.

PACKAGING
Valve type paper bag 2-ply + plastic film, 25 kg net
Bulk bag / FIBC PP coated, 1000 kg net / 750 kg net
bulk shipment.

REGULATORY AFFAIRS
CAS-No. 59-51-8
Customs tariff number: 293040

MetAMINO® is approved for use in all animal species according to European feed law and labeled accordingly. MetAMINO® is not subject to dangerous goods regulations.

SAFETY AND ENVIRONMENT
MetAMINO® can be handled safely. According to EC chemicals legislation, it is non toxic, and, if correctly handled, it does not irritate the skin and mucous membranes. Accordingly, it is not classified as a hazardous chemical. The usual regulations of safety and hygiene for handling of chemicals should be followed.

For additional information, please contact us directly.

This information and all technical and other advice are based on Evonik’s present knowledge and experience. However, Evonik assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. Evonik reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. EVONIK DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, AND SHALL HAVE NO LIABILITY FOR, MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE), OR OTHERWISE. EVONIK SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. It is the customer’s sole responsibility to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used.

Evonik Operations GmbH
Nutrition & Care
Animal Nutrition Business Line
animal-nutrition@evonik.com
www.evonik.com/animal-nutrition