Butyraldehyde

Colorless liquid, miscible with almost all common organic solvents; very slightly soluble in water

Chemical nature

Butyraldehyde, Butanal

\[ \text{CH}_3\text{CH}_2\text{CH}_2\text{CHO} \]

Molecular formula: \( \text{C}_4\text{H}_8\text{O} \)

Molar mass: 72.1 g/mol

CAS Number: 123-72-8

EC-Number: 204-646-6

Delivery specification

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass fraction of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– n-Butyraldehyde</td>
<td>99.4 min.</td>
<td>%</td>
<td>GC based on DIN 55685</td>
</tr>
<tr>
<td>– iso-Butyraldehyde</td>
<td>0.1 max.</td>
<td>%</td>
<td>GC based on DIN 55685</td>
</tr>
<tr>
<td>– Water</td>
<td>0.01 max.</td>
<td>%</td>
<td>DIN 51777, Part 1</td>
</tr>
<tr>
<td>Platinium-cobalt color</td>
<td>5 max.</td>
<td></td>
<td>DIN EN ISO 6271</td>
</tr>
<tr>
<td>Acid value</td>
<td>1 max.</td>
<td>mg KOH/g</td>
<td>DIN EN ISO 2114</td>
</tr>
</tbody>
</table>

Properties

Physical data

The following physical data were compiled from data in the literature and from BASF SE’s own measurement and calculations.

They do not represent any legally-binding guarantee of properties for our sales product.

- Boiling range at 1013 hPa (DIN 53171): 75–76 °C
- Density at 20 °C (DIN 51757): 0.800 g/cm³
- Solidification point (at 1013 hPa): −97 °C
Applications

Butyraldehyde is an intermediate for the chemical industry, for example for the manufacture of pharmaceuticals, crop protection products, pesticides, synthetic resins, antioxidants, vulcanisation accelerators, tanning auxiliaries, perfumes.

Storage & Handling

Butyraldehyde must be stored under nitrogen. The storage temperature must not exceed 40 °C. Under these conditions, a storage stability of 3 months can be expected. In order to minimize the likelihood of overstorage, the storage procedure should strictly follow the “first-in-first-out” principle.

Storage tanks and pipes must be made of stainless steel. Regulations for the storage and handling of flammable liquids must be observed (explosion proof electrical equipment, tanks, pumps and pipes must be earthed, etc.).

Safety

When using this product, the information and advice given in our Safety Data Sheet should be observed. Due attention should also be given to the precautions necessary for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

October 2011