Plastomoll® DOA

Plasticizer for PVC, surface coatings and rubber. Especially suited for flexible PVC colorants and coatings requiring good low-temperature properties. Plastomoll® DOA meets the requirements for good packaging and can, therefore, be used for flexible PVC films for food contact (cling film).

Chemical Nature
Dioctyl adipate

BASF Registered Name
Plastomoll® DOA

CAS No.
103-23-1

Molecular Weight
371

Formula
C_{22}H_{42}O_4

Molecular Structure

Product Specifications

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity @ 25°C/25 °C</td>
<td>0.923 - 0.927</td>
<td>ASTM D-4052</td>
</tr>
<tr>
<td>Ester content, % by weight (minimum)</td>
<td>99.6</td>
<td>ASTM D-3465</td>
</tr>
<tr>
<td>Acid Number, mg KOH/g (maximum)</td>
<td>0.1</td>
<td>ASTM D-1045</td>
</tr>
<tr>
<td>Water, % by weight (maximum)</td>
<td>0.1</td>
<td>ASTM E-203</td>
</tr>
<tr>
<td>Color, Pt-Co Units (APHA, maximum)</td>
<td>25</td>
<td>ASTM D-5386</td>
</tr>
<tr>
<td>Suspended Matter</td>
<td>COLSFFM*</td>
<td>visual</td>
</tr>
</tbody>
</table>

*Clear Oily Liquid Substantially Free of Foreign Material

Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density @ 25 °C, g/cm³</td>
<td>0.9249</td>
</tr>
<tr>
<td>Vapor Pressure @ 20 °C, mbar</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Pour point, °C</td>
<td>-75</td>
</tr>
<tr>
<td>Solubility @ 25 °C in water, mg/L</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Dynamic viscosity @ 0 °C, cP</td>
<td>33</td>
</tr>
<tr>
<td>@ 20 °C, cP</td>
<td>13</td>
</tr>
<tr>
<td>@ 40 °C, cP</td>
<td>7</td>
</tr>
<tr>
<td>Flash point (COC), °C</td>
<td>199</td>
</tr>
<tr>
<td>Odor</td>
<td>mild characteristic</td>
</tr>
</tbody>
</table>
Description
Plastomoll® DOA is a highly efficient plasticizer which imparts excellent low temperature flexibility and resistance to impact to the base resin. For these reasons it finds wide use in polymeric systems based on vinyl, nitrocellulose and rubber. It is extensively used in food contact applications.

In addition to its high efficiency and contribution to the low temperature properties of vinyl, Plastomoll® DOA is chemically stable and resistant to discoloration on extended exposure to heat and ultraviolet light.

The combination of low viscosity and efficiency provide excellent dry blending and processing characteristics.

Applications
When used in plastisols, Plastomoll® DOA imparts low initial viscosity and good viscosity stability. The contribution to relative yield value suggests use in dip coating formulations where resistance to sag is required.

Safety
Plastomoll® DOA does not require special handling. Handle in accordance with good industrial hygiene and safety practices. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water and contact physician.

Avoid repeated or prolonged skin contact. Avoid breathing vapors by providing adequate ventilation.

Always refer to the Safety Data Sheet (SDS) for detailed information on safety.

Storage and Handling
Plastomoll® DOA has an almost unlimited shelf life when properly stored in closed containers.

Packaging
Plastomoll® DOA is available in bulk, tank trucks or rail cars.
Contact Information

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Note

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