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# Maleic Acid Esters

## Dibutyl Maleate (DBM) & Dioctyl Maleate (DOM)

**KEY FEATURES:**

- Clear, colorless liquids
- Miscible with many organic solvents
- Intermediate in the production of paints, adhesives and films
- Used in addition reactions


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# Maleic Acid Esters

## Dibutyl Maleate (DBM)

### PRODUCT DESCRIPTION

**Maleic acid dibutyl ester (DBM)** is a clear, virtually colorless liquid with an ester-like odor. It is miscible with methanol, ethanol, acetone, diethyl ether, N,N-dimethylformamide and toluene, and it is immiscible with aliphatic hydrocarbons and slightly miscible with water. **DBM** contains about 1%-5% fumaric acid dialkyl ester and 1%-2% alkoxysuccinic acid dialkyl ester. Under higher temperature and in the presence of acids or bases, **DBM** reacts to form fumaric acid dialkyl ester.

## Dioctyl Maleate (DOM)

### PRODUCT DESCRIPTION

**Maleic acid di (2-ethylhexyl) ester (DOM)** is a clear, virtually colorless liquid with an ester-like odor. It is miscible with methanol, ethanol, acetone, diethyl ether, N,N-dimethylformamide and toluene, but not with water and aliphatic hydrocarbons. **DOM** contains about 1%-5% fumaric acid di (2-ethylhexyl) ester and 1%-2% alkoxysuccinic acid di (2-ethylhexyl) ester. Under the action of heat and in the presence of acids or bases, **DOM** reacts to form fumaric acid dialkyl ester.

### APPLICATIONS

**DBM/DOM** is a suitable intermediate for use in the production of paints and adhesives, copolymers and films. **DBM/DOM** permits the addition reactions normally possible with compounds having olefinic double bonds and is suitable, for example, as a dienophile for diene syntheses using the Diels-Alder reaction. By hydrogenation or acetylation, valuable intermediates can be obtained, e.g., succinic acid dimethyl ester and other derivatives of succinic acid, which are employed in many different areas of organic chemistry.

| TYPICAL PROPERTIES | Unit | Dibutyl Maleate | Dioctyl Maleate |
|---|---|---|---|
| Molar mass | g/mol | 228.3 | 340.5 |
| Boiling point | °C | 280 | 345 |
| Melting point | °C | -85 | -60 |
| Density at 20°C | g/cm³ | 0.99 | 0.94 |
| Refractive index $n_D$ at 20°C (DIN 51 423, Part 2) | | 1.445 – 1.446 | 1.445 – 1.456 |
| Solubility in water at 20°C | g/l | 0.17 | n.a. |
| Vapor pressure at 20°C | mbar | 0.0027 | 0.0002 |