**Polyamine Raw Materials**

**MXDA**

- Chemical Resistance
- Fast Curing even at Low Temperature
- Low AHEW = Cost Saving vs. IPDA

**1,3-BAC**

- UV-Resistance
- Clarity
- Low AHEW = Cost Saving vs. IPDA

*High Temperature Applications*
Excellent Curing even at High Temperature & Humidity

*Low Temperature Applications*
Low Freezing point
Fast Curing even at Low Temperature

**Typical use of MXDA and 1,3-BAC**

- Mix with other Amines and additives
- Adduct: modified through chemical reaction with Epoxy
What Properties Do You Require?

**Modified Polyamine Type Hardener**

Ready to use hardener derived from MXDA

**G-240**
- Long Pot Life but Fast Cure
- No VOC
- No Blushing Excellent Chemical Resistance
- Waterborne & Nonsolvent Based Grades

**G-328**
- Excellent Curing Performance
- Wet Surface Adhesion
- Accelerator
- Waterborne & Nonsolvent Based Grades

**Gaskamine Endeavor**

Heavy Duty
- Low Irritation (Phenol Free)
- Chemical resistance
- Fast Cure
## Polyamines Raw Material

<table>
<thead>
<tr>
<th>Product</th>
<th>MXDA</th>
<th>1,3-BAC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Structure</strong></td>
<td><img src="image" alt="MXDA Structure" /></td>
<td><img src="image" alt="1,3-BAC Structure" /></td>
</tr>
<tr>
<td><strong>Color (Gardner)</strong></td>
<td>≤1</td>
<td>≤1</td>
</tr>
<tr>
<td><strong>Viscosity / mPa-s, 25°C</strong></td>
<td>6.8</td>
<td>9.1</td>
</tr>
<tr>
<td><strong>Amine value / mgKOH g⁻¹</strong></td>
<td>824</td>
<td>789</td>
</tr>
<tr>
<td><strong>AHEW</strong></td>
<td>34</td>
<td>35.5</td>
</tr>
<tr>
<td><strong>Phr / g (Added Weight in 100 g Epoxy Resin [EEW 186])</strong></td>
<td>18.3</td>
<td>19.1</td>
</tr>
</tbody>
</table>

## Gaskamine: Modified Polyamine Type Hardener

<table>
<thead>
<tr>
<th>Product</th>
<th>G-328</th>
<th>G-240</th>
<th>Gaskamine Endeavor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Structure</strong></td>
<td><img src="image" alt="G-328 Structure" /></td>
<td><img src="image" alt="G-240 Structure" /></td>
<td>—</td>
</tr>
<tr>
<td><strong>Color (Gardner)</strong></td>
<td>≤5</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td><strong>Viscosity / mPa-s, 25°C</strong></td>
<td>7,000-14,000</td>
<td>50-85</td>
<td>7,750 (NVM 60wt%)</td>
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<tr>
<td><strong>Amine value / mgKOH g⁻¹</strong></td>
<td>650-680</td>
<td>390-415</td>
<td>327</td>
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<tr>
<td><strong>AHEW</strong></td>
<td>55</td>
<td>103</td>
<td>257</td>
</tr>
<tr>
<td><strong>Phr / g (Added Weight in 100 g Epoxy Resin [EEW 186])</strong></td>
<td>29.6</td>
<td>54</td>
<td>138</td>
</tr>
</tbody>
</table>

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