AZ 100 Remover

Stripper for positive working Photoresist

Description
AZ 100 Remover is especially designed for stripping positive working photoresists like the AZ Photoresists. The stripper is free of phenols, chromates, chlorinated hydrocarbons or metal ions. The remover can be mixed with water in any ratio.

Table 1
Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (at 25°C)</td>
<td>0.955 kg/l</td>
</tr>
<tr>
<td>Color (Alpha)</td>
<td>max. 20</td>
</tr>
<tr>
<td>Flashpoint (AP)</td>
<td>72 °C</td>
</tr>
<tr>
<td>Normality (potentiometric)</td>
<td>3.1 mol/l</td>
</tr>
<tr>
<td>Boiling range</td>
<td>159 – 194 °C</td>
</tr>
</tbody>
</table>

Processing

Bath Make-up
AZ 100 Remover is a ready to use solution. A 1:1 mixture with water is possible. On thin films like aluminum the use of the undiluted AZ 100 Remover is recommended.

Process Sequence
Removal of the resist occurs most adequately in a two tank system. In the first bath the majority of the resist is stripped; in the second tank the resist residues are removed.

As indicated in table 2, the total immersion time depends on the bath temperature and the thermal treatment of the resist structures. Use mechanical or nitrogen burst agitation.

After stripping, the substrates are rinsed in deionized water, followed by drying in a rinse dryer.
Table 2

Stripping Capability of AZ 100 Remover

<table>
<thead>
<tr>
<th>Bake temperature of resist °C</th>
<th>Remover Temperature °C</th>
<th>Stripping time min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>21</td>
<td>5</td>
</tr>
<tr>
<td>140</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>150</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>180</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td>190</td>
<td>80</td>
<td>10</td>
</tr>
</tbody>
</table>

Determination of Normality

Procedure

Put about 1,5 g of the remover, weighed to an accuracy of 0.001 g, into an Erlenmeyer flask and immediately add approximately 90 ml deionized water. The titration is performed by an automatic potentiometric titrator (i.e. Titroprocessor 672, Metrohm) or by manual titration. In the latter case add 3 drops of the indicator (i.e. 0.1% aqueous solution of Methyl red and titrate to endpoint with Hydrochloric acid (HCl) 0.5 N.

\[
\text{Normality of AZ 100 Remover} = 0.477 \times \frac{\text{(ml HCl)}}{\text{(g AZ 100 Remover)}}
\]

Waste Disposal

After acidification with hydrochloric acid (3.5%) to pH = 8.5, AZ 100 Remover is bio-logical degradable. At all times local regulations should be observed!

Handling Precautions

Warning

Before using refer to safety data sheet and technical bulletin. Open container only after adjustment to room temperature.
First aid
If eye contact:
Flush with water for at least 15 minutes.
Contact physician.

If skin contact:
Wash affected areas with soap and water.

If inhaled (mist):
Move into fresh air.

Equipment Compatibility
AZ 100 Remover is up to temperatures of 40 °C compatible to polyvinylchloride and to polypropylene up to 55 °C. For elevated temperatures material like quartz, stainless steel and PTFE are recommended.

Storage
Keep in sealed original containers.
Store between 0 – 35 °C.

Shelf life is limited. The expiration date is printed on the label of every bottle.

We advise our customers regarding technical applications to the best of our knowledge within the scope of the possibilities open to us, but without obligation. Current laws and regulations must be observed at all times. This also applies in respect of any protected rights of third parties. Our suggestions do not relieve our customers of the necessity to test our products, on their own responsibility, for suitability for the purpose envisaged. Quotations from our literature are only permitted with our written authority, and the source must be stated.