Technical Datasheet (DA-146)

PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Inspection Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids content</td>
<td>54.00 ~ 56.00 %</td>
</tr>
<tr>
<td>Viscosity at 25 °C</td>
<td>1800 – 2700 mPa.s</td>
</tr>
<tr>
<td>pH</td>
<td>4.5 - 6.5</td>
</tr>
</tbody>
</table>

TYPICAL PROPERTY

<table>
<thead>
<tr>
<th>Inspection Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film Appearance</td>
<td>Visual: Cloudy</td>
</tr>
<tr>
<td>Tg</td>
<td>DCC method: 12.0 - 18.0 °C</td>
</tr>
<tr>
<td>Stabilizing System</td>
<td>Polyvinyl Alcohol</td>
</tr>
</tbody>
</table>

INTRODUCTION

DA-146 is a non-plasticized aqueous milky white copolymer dispersion based on vinyl acetate and ethylene. After evaporation of its water content, DA-146 forms a tough but still flexible film with best adhesive properties for broad applications.

It is a preferred raw material for the formulation of high speed packaging adhesives with increased water stability, also especially because it shows best adhesive properties to difficult to bond substrates, such as lacquered surfaces and plastic films in the packaging and paper industry.

DA-146 is also an excellent base emulsion for floor-, wall- or ceiling adhesives.

It shows good resistance against aging, light or saponification. As a result, the durability of your products could be enhanced with usage of DA-146 and suitable applicative industrial formulations. Besides, DA-146 is a very friendly product for our environment.

From the viewpoint of industrial applications, the compatibility of raw materials is considered important to manufacturers.

Solutions of not only partly but also of fully hydrolyzed Polyvinyl Alcohols can be added without separation problems, an advantage for some applications where increased water stability is necessary.

If advantageous, the emulsion can be modified with plasticizers showing low thickening response.

DA-146 also the use as base for EPI wood glue systems by blending with fully hydrolyzed Polyvinyl Alcohol.

RECOMMENDED APPLICATIONS

The DA-146 exhibits excellent mechanical stability, and shows good wet tack and fast setting speed, so it can be ideally applied by a variety of techniques, including roller blade, spray gun or extrusion. The excellent adhesion property to a wide variety of even difficult to bond materials used in the packaging industry makes the emulsion an ideal raw material for the paper and film industry.

Again the increased water resistance should be stressed, and some specialities should be outlined in the following:

- book binding
- envelopes, specially back seams and glue laps of all kinds
- clay coated paper board
- padding
- cigarette packaging
- cups, composite cans, generally: glue laps
- multi wall bags, beverage cases
- water-resistant Kraft paper in general
- base for EPI wood glue systems
- plastic- (PVC-) or metal foil bonding.

SAFETY & STORAGE

In general, DA-146 is considered safe for its intended use. However, as this class of products always contains minor amount of residual vinyl acetate monomers, adequate ventilation is recommended in rooms where DA-146 is handled. Generally when working with polymer emulsions, protective clothes,
gloves and also goggles should be used. Splashes on the skin or in the eyes should immediately be removed by irrigation with clean water.

DA-146 should be stored in sheltered areas at temperatures between 5 and 40 °C; do never store under freezing conditions. Soft lumps or skins may tend to be formed during transportation and storage, therefore filtration is recommended before use. If the product is not transferred completely at one time, the user shall take adequate precautionary measures to prevent the possible formation of lumps or skins on the product. Opened containers should be closed soon to prevent skinning. If the product is stored for a longer period, stirring is recommended before use. Shelf life of DA-146 is minimum 6 months, provided the product is stored in original, unopened containers under proper conditions. Stirring is required before utilizing the product if it has been stored for a longer period.

DA-146 is adequately preserved to prevent microbial contamination. However, if the product is kept in original containers which have been opened, or is transferred to other tanks, the product should be added with suitable preservative package to protect it against microbial attack. Equipment and facilities used to transfer the product should also be kept adequately clean. Finished products manufactured from polymer emulsions usually also require preservation.

**SAFETY NOTICE**

Material Safety Data Sheets are available on request from sales offices or may be printed via web site www.dcc.com.

**PACKAGING**

- Iron drum 220Kg/
- PE IBC 1.1 MT/
- Flexible bag/
- road tanker

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