Aqueous Adhesive Compounders Guide

Formulating Adhesives

North American Region

Adhesives and Functional Polymers
Dow adhesive products serve numerous end-use markets including duct mastics, flooring adhesives, assembly, laminating, construction adhesives, and many others.

Whether you are formulating to reduce cost, rationalize your product line, pass a new government regulation or improve product performance, our broad range of products and our technical expertise are available to meet your needs.

Acrylic emulsion polymers offer superior aging characteristics, low VOC’s, wide formulating latitude, and excellent adhesion to a variety of surfaces.

Dow Acrylic Technologies
- Pure acrylics
- Styrenated acrylics
- Vinyl acetate acrylics
- Other copolymers

Characteristics of Available Polymers
- Wide range of glass transition temperatures (-60°C to +80°C)
- Wide range of molecular weights
- Low volatile organic compound (VOC) content
- Variety of functionalities and formulating characteristics

The following table includes a representative sample of the many Dow acrylic-based polymers available to meet your adhesive formulating requirements.

<table>
<thead>
<tr>
<th>Emulsion Products</th>
<th>Tg</th>
<th>TS</th>
<th>pH</th>
<th>Viscosity</th>
<th>Type*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROVACE™ HP-2931</td>
<td>-21</td>
<td>55</td>
<td>5.0</td>
<td>3000</td>
<td>VA</td>
<td>pVOH stabilized, low Tg</td>
</tr>
<tr>
<td>RHOPLEX™ P-308</td>
<td>+9</td>
<td>50</td>
<td>7.5</td>
<td>150</td>
<td>SA</td>
<td>Medium flexibility</td>
</tr>
<tr>
<td>RHOPLEX P-376</td>
<td>+22</td>
<td>50</td>
<td>9.2</td>
<td>200</td>
<td>SA</td>
<td>Hydrophobic formulating base</td>
</tr>
<tr>
<td>RHOPLEX 2200LO</td>
<td>+32</td>
<td>50</td>
<td>9.5</td>
<td>400</td>
<td>SA</td>
<td>Excellent adhesion, hydrophobicity</td>
</tr>
<tr>
<td>RHOPLEX 2019RX</td>
<td>+1</td>
<td>55</td>
<td>7.5</td>
<td>200</td>
<td>SA</td>
<td>Flexible, good hydrophobicity</td>
</tr>
<tr>
<td>RHOPLEX A-920</td>
<td>+4</td>
<td>62</td>
<td>4.8</td>
<td>150</td>
<td>A</td>
<td>Self thickening, high filler loading</td>
</tr>
<tr>
<td>RHOPLEX 3805</td>
<td>-4</td>
<td>58</td>
<td>4.3</td>
<td>250</td>
<td>A</td>
<td>Very high filler loading - flexible</td>
</tr>
<tr>
<td>RHOPLEX N-1031D</td>
<td>-28</td>
<td>54</td>
<td>8.6</td>
<td>80</td>
<td>A</td>
<td>High cohesion</td>
</tr>
<tr>
<td>RHOPLEX N-619</td>
<td>-23</td>
<td>57</td>
<td>7.8</td>
<td>100</td>
<td>A</td>
<td>High adhesion</td>
</tr>
<tr>
<td>RHOPLEX CA-597</td>
<td>-9</td>
<td>61</td>
<td>6.2</td>
<td>100</td>
<td>A</td>
<td>Contact adhesive base</td>
</tr>
</tbody>
</table>

* VA – vinyl acrylic, SA – styrene acrylic, A – acrylic copolymer
More Than Binders
In addition to an extensive line of acrylic-based binders, Dow also offers other types of formulating chemicals including thickeners, dispersants and biocides.

ACRYSOL™ Thickeners
- ASE – Alkali swellable emulsion
- HASE – Hydrophobically modified alkali swellable emulsion
- HEUR – Hydrophobically modified EO-based urethane thickeners

TAMOL™ Dispersants
- Polyacryl dispersants
- Hydrophilic copolymer dispersants
- Hydrophobic copolymer dispersants

KATHON™ and ROCIMA™ Biocides
- In-can preservatives
- Dry film protectors

Technical Support
Dow offers you formulating expertise around the world, providing timely assistance in combining our acrylic-based binders with a variety of other raw materials, including tackifiers, plasticizers, cross-linkers, thickeners, surfactants, defoamers, UV additives, biocides, fire retardants, fillers and pigments.

Dow specializes in finding the solution to your formulating problems – helping you to specify the correct binders and identify the right formulation and ingredients to meet the most demanding product performance and application requirements.

Contact your local Dow technical service scientist or account manager today for more information.
Safe Handling Information
Dow maintains comprehensive and up-to-date material safety data sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Dow recommends that you obtain copies of our material safety data sheets from your local Dow representative on each of our products prior to its use in your facilities. We also suggest that you contact your supplier of other materials recommended for use with our products for appropriate health and safety precautions prior to their use.

About Dow Adhesives
The Dow Chemical Company combines the power of science and technology with the “Human Element” to passionately innovate what is essential to human progress. Dow’s diversified industry-leading portfolio delivers a broad range of technology-based products and solutions to customers in approximately 160 countries. Dow’s Adhesives business serves the needs of the duct mastics, flooring adhesives, assembly, laminating, construction and many other markets with a wide range of acrylic emulsion polymer products. These technologies are supported by a network of more than 40 technical, research and manufacturing sites to serve customer needs anywhere in the world.

For more information, visit us at:
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