Dow’s highly purified Sodium Carboxymethyl Cellulose (WALOCEL™ CRT) Ideal for Aqueous Electrode Binder in Lithium Ion Battery (LIB)
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Function of WALOCEL™ in lithium ion battery electrodes
• Optimal dispersion of the active material & conductive additive
• Mechanical integrity during battery manufacturing & cycling
• Adhesion to current collector

Advantages of aqueous WALOCEL™ CRT vs. solvent-based binder formulations
• Eco friendly
• Slurry preparation can be done under ambient conditions, no special humidity control requirement needed
• Low drying temperature & short drying time
• Cost effective formulation and processes
• High electrode flexibility beneficial for winding operation
• Strong adhesion force to improve capacity

WALOCEL™ CRT characteristics
• High purity (>99.5%)
• Low moisture content
• Tailored degree of substitution
• Excellent quality consistency

Product recommendations*

<table>
<thead>
<tr>
<th>WALOCEL™</th>
<th>Viscosity **</th>
<th>Degree of substitution</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRT 2,000 PA 07</td>
<td>1,900 – 2,800 (2 wt-%)</td>
<td>0.75 – 0.85</td>
</tr>
<tr>
<td>CRT 2,000 PA</td>
<td>1,900 – 2,800 (2 wt-%)</td>
<td>0.82 – 0.95</td>
</tr>
<tr>
<td>CRT 20,000 PA 07</td>
<td>1,900 – 2,600 (1 wt-%)</td>
<td>0.75 – 0.85</td>
</tr>
<tr>
<td>CRT 20,000 PA</td>
<td>1,900 – 2,600 (1 wt-%)</td>
<td>0.7 – 0.95</td>
</tr>
<tr>
<td>CRT 30,000 PA</td>
<td>3,000 – 4,000 (1 wt-%)</td>
<td>0.82 – 0.95</td>
</tr>
</tbody>
</table>

* Further grades available on request
** Brookfield, 25° C

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