SYL-OFF™ SL 184 Coating

Solvent-free silicone release coating for flat release; minimizes misting and improves production efficiency in high-speed coating operations

Solving the misting challenges of high-speed coating lines

As release liner producers invest in higher-speed label-coating production lines to increase production rates, lower costs and address increased demand for reliable product labels, aerosol misting from incumbent coatings can create challenges – even when used with anti-misting additives (AMAs). Misting can lead to inefficiencies such as runnability problems, more frequent downtimes, material loss and higher maintenance costs.

To address this challenge, Dow silicone technology offers an option without compromising performance, cost or sustainability: SYL-OFF™ SL 184 Coating. This solvent-free release coating enables high-speed operations of up to 1,600 meters per minute with significant mist reduction while maintaining other release coating performance attributes – offering release liner producers an option to move to more profitable high-speed product label operations.

A fast-curing silicone that exhibits low release force at both low and high peel speeds, SYL-OFF™ SL 184 Coating maintains overall performance on most of the existing label-coating equipment – including multi-roll lines – that is used to manufacture pressure sensitive laminates, nonstick packaging, coating for liners of technical adhesive tapes and industrial release papers for the consumer market.

SYL-OFF™ SL 184 Coating – which earned a 2022 Silver Edison Award for breakthrough product innovation in the Transparent Coatings & Film category – is suitable for food-labeling applications, as it is compliant with food contact regulations set by the U.S. Food and Drug Administration (FDA) and Germany’s BfR XV.

Features & benefits
- Fast cure
- Extremely stable release
- Low release force at both low and high peel speeds
- Excellent mist reduction; minimizes mist at very high line speeds
- Can be used at low platinum levels

Applications
As a release coating for:
- Self-adhesive labels (especially where high-speed die-cutting/labeling is needed)
- Nonstick packaging; liners of technical tapes
- Industrial release papers
Misting performance of SYL-OFF™ SL 184 Coating compared to incumbent competitive coatings

<table>
<thead>
<tr>
<th>Incumbent base coating</th>
<th>SYL-OFF™ SL 184 Coating</th>
<th>Incumbent coating with incumbent AMA</th>
<th>Incumbent competitive coating with AMA 1</th>
<th>Incumbent competitive coating with AMA 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mist level at 1,000 m/min, mg/m³</td>
<td></td>
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<tr>
<td>175.34</td>
<td>16.85</td>
<td>78.42</td>
<td>14.83</td>
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Mist threshold <5 mg/m³

Rub-off resistance (ROR) of SYL-OFF™ SL 184 Coating

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<tr>
<th>Immediate</th>
<th>7 days RT aged</th>
<th>28 days RT aged</th>
<th>3 months RT aged</th>
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<td>ROR, %</td>
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Industrial anchorage (ROR, %) threshold >80%

Misting performance at 1,200 meters per minute

SYL-OFF™ SL 184 Coating

Incumbent AMA-based release coating

Rely on Dow for technical support

Dow’s technical support team offers comprehensive troubleshooting assistance, as well as pilot-coating and application-testing support. For product data sheets, selection guides and an overview of Dow’s extensive line of products and services, visit dow.com/syloff.