

Accelerate Removal Without Compromising Durability

Bomar[®] Oligomers for Rapid Removal Light-Curable Nail Coatings

Accelerate the removal process for nail coatings with our new line of Bomar[®] oligomers. These oligomers provide low heat generation, high gloss finish, and excellent durability – with the added benefit of improved ease of removal with just acetone. Formulators looking to speed up the removal process for nail coatings should evaluate BR-551M, BR-551ME, or BRC-4434SD. The table below compares the three recommended oligomers in a simple, light-curable model formula. These Bomar[®] oligomers meet the regulatory guidelines for professional salon applications and in DIY retail applications globally, excluding Europe.

- **Rapid acetone removal** for an accelerated removal process
- **Tack-Free UV/LED cure** for a simplified application process
- **Low heat generation** during cure
- **Non-yellowing finish** to provide colorless coatings with higher optical clarity

| Property | Test Method | BR-551M | BR-551ME | BRC-4434SD |
|--|-------------|---------|----------|------------|
| Viscosity (cP) | ASTM D4287 | 9,812 | 15,100 | 5,000 |
| Durometer Hardness (D) | ASTM D2240 | D67 | D75 | D60 |
| Gloss 60° | ASTM D2457 | 67.2 | 83 | 67 |
| Yellowness (b*) | ASTM E1164 | 1.93 | 0.23 | 0.65 |
| Rolling Ball Tackiness Tester (cm) | ASTM D3121 | 81.3 | 73 | >100 |
| Glass Transition Temp. (°C) | ASTM E831 | 79 | 53 | 76 |
| Maximum Temp. Evolved During LED-Curing (°C) | - | 43 | 44 | 32 |
| Acetone Double Rub Resistance | ASTM D4572 | 99 | 70 | 52 |
| Nominal MEHQ Values | - | 50 ppm | 50 ppm | 12 ppm |

If one of our recommended oligomers does not provide the desired properties for your application, Dymax can explore development of a custom oligomer. We also offer a range of scale-up and contract manufacturing services for companies that would like to outsource their product synthesis and/or blending.

Recommended Equipment for Use with Nail Coatings

Model 830 Metering System

The Model 830 metering system is a great way to fill bottles and other containers with nail coatings. The system is built around a pneumatically operated pinch valve that is specifically designed to dispense thick, stringy materials with ease. The valve is highly precise and obtains its precision from lockable controls that facilitate the adjustment of three critical parameters: the flow rate through the valve, the amount of tube closure, and suck-back.

The valve's suck-back feature allows for the clean shutoff of stringy and tacky materials and prevents the formation of a droplet at the end of the dispense nozzle. It also minimizes the filming over of materials that tend to dry out at the end of the nozzle.

The valve also features a disposable fluid path which carries materials from the material reservoir to the dispense tip. Fluids are sealed within the fluid path, preventing contact with the valve's inner components and ensuring a contaminate-free dispensing process. The fluid path is easy to replace and requires minimum cleanup, allowing for rapid material changeover. This valve can be supplied with fluid paths of varying lengths for optimum dispense flexibility.

The Model 830 dispensing valve can be integrated into an automated dispensing system or can be paired with the Dymax DVC-345 Digital Valve Controller and a material reservoir to create a bench-top dispensing system.

The Dymax Application Engineering team is available to help guide you through the dispensing and filling process to make sure the right system is selected for your application.



- Disposable fluid path that carries materials from the material reservoir to the dispense tip
- Stroke adjustment for precise, micro-meter control over dispensing volumes
- Over-pinch adjustment prevents tubing damage, allowing millions of cycles before replacement is necessary
- Adjustable suck-back that eliminates drooling and filming over of the nozzle
- Lightweight for easy handling and mounting in automated or bench-top systems
- Compatible with most standard fluid packages and delivery systems



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