

# Disappearing Red Methyl Ethyl Ketone Peroxides Product Bulletin

## PRODUCT PROPERTIES

Arkema Inc. **Disappearing Red Methyl Ethyl Ketone Peroxides**

| Properties                  | Luperox®<br>DDM-9-DR | Luperox®<br>Delta-X-9-DR | Luperox®<br>DHD-9-DR | Luperox®<br>DDM-30-DR |
|-----------------------------|----------------------|--------------------------|----------------------|-----------------------|
| Active Oxygen, %            | 8.7-9.0              | 8.7-9.0                  | 8.7-9.0              | 5.4-5.6               |
| Form                        | Liquid               | Liquid                   | Liquid               | Liquid                |
| Specific Gravity @ 25°C     | 1.0063               | 1.0022                   | 1.0051               | 0.9835                |
| Viscosity @ 25°C, cps       | 13.9                 | 14.0                     | 12.4                 | 9.9                   |
| Flash Point (SETA), °F/°C   | 203/95               | > 212/100                | 178/81               | 194/90                |
| Storage Temperature Maximum | 100/38               | 100/38                   | 100/38               | 100/38                |
| Recommended °F/°C           | ≤ 86/30              | ≤ 86/30                  | ≤ 86/30              | ≤ 86/30               |
| SADT*, °F/°C                | 167/75               | 185/85                   | 185/85               | > 185/85              |

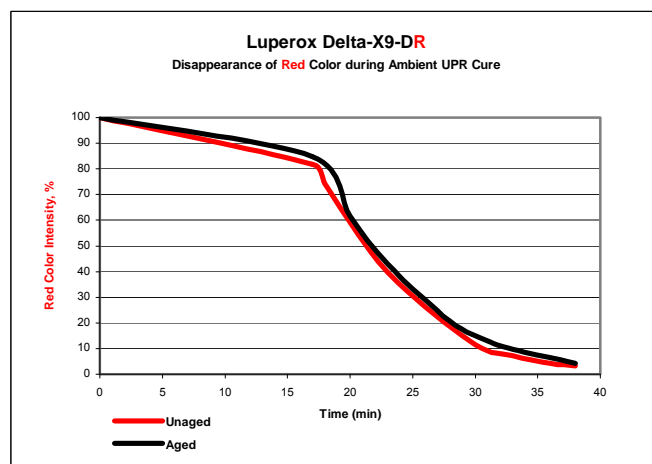
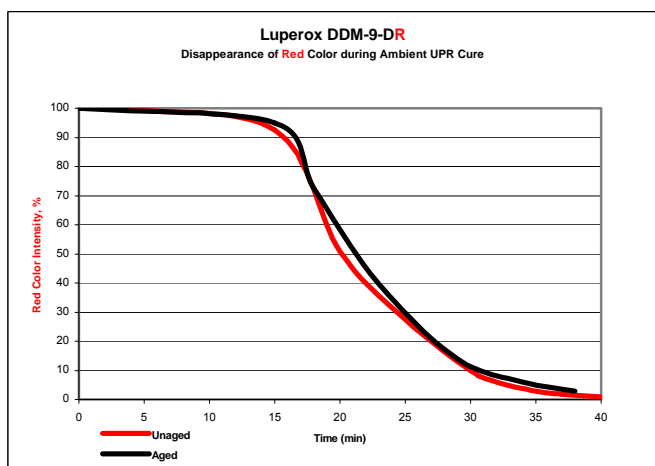
\* Self-Accelerating Decomposition Temperature

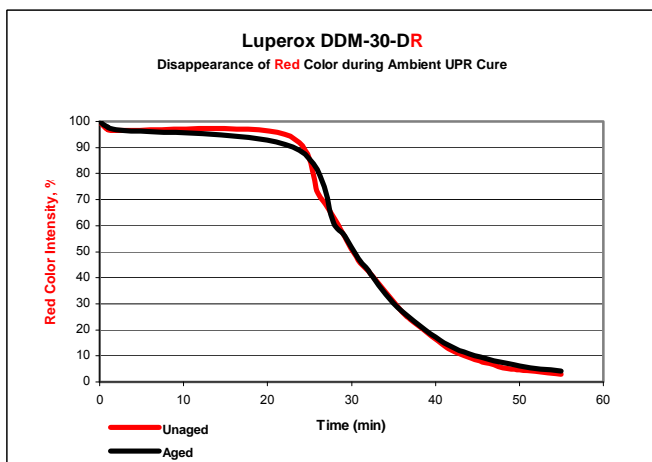
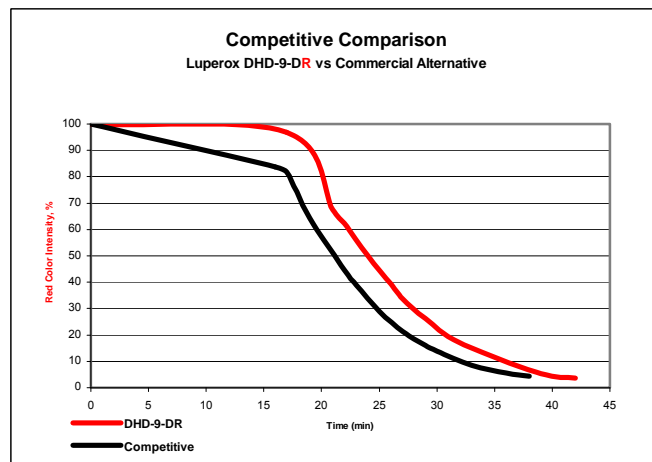
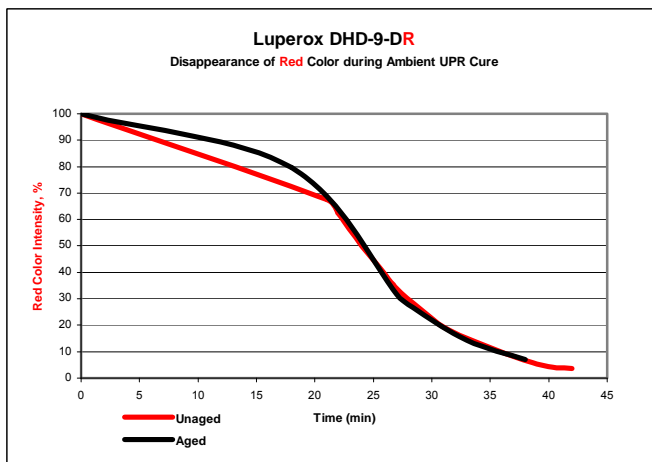
## PERFORMANCE

The Arkema **red** methyl ethyl ketone peroxides (MEKPs) upon which you have relied for consistent and predictable performance are now disappearing. Not from the market, but from your final product. Arkema's new "DR" products feature a **red** color that disappears during use. As the following graphs show, the same **red** color provided by our current **red** products is introduced

during mixing and spray-up of the catalyzed resin.

During cure, the **DR** products provide the same overall performance, but the **red disappears**. As shown below, the performance of the DR material is the same, regardless of the age of the product. The graphs show how the **red disappears** when either unaged or aged catalyst is used.





### DR MEKPs in a TYPICAL APPLICATION

Luperox<sup>®</sup> DDM-9-DR was compared with both colorless and permanent red formulations in the 75°F SPI Gel-Cure Test using promoted, commercially available, unsaturated polyester resin and 2.0 phr initiator. The results are presented in the table below and show the comparable performance of DR and permanent red formulations.

| Initiator | Gel Time (min) | Gel-to-Cure Time (min) | Cure time (min) | Peak Temp (°F) | Barcol Hardness |
|-----------|----------------|------------------------|-----------------|----------------|-----------------|
| DDM-9-DR  | 36.1           | 8.4                    | 44.5            | 245            | 25-30           |
| DDM-9 Red | 35.9           | 8.9                    | 44.8            | 245            | 20-25           |
| DDM-9     | 35.0           | 9.3                    | 44.3            | 249            | 20-30           |

accelerated laboratory testing, we have proven these products are safer in terms of gassing when compared to existing permanent red products.

### SUMMARY

Arkema's DR MEKP's provide the flexibility and control that you need to work quickly, economically, and safely; while meeting your customers' expectations for your product's final color.

### COMPETITIVE ADVANTAGE

DR MEKPs exhibit a clear advantage from the outset. As can be seen in the following graph, they demonstrate an intense initial color, the perfect indicator that resin is catalyzed, and a final color that will leave your customer wondering if it was ever red at all. The only color your customer will see is the color you intended.

### UNCOMPRISED SAFETY

Safety is the utmost concern in handling ketone peroxides, and this is certainly true for DR products. In

IMPORTANT: The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, ARKEMA expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information: NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. Before handling this material, read and understand the MSDS (Material Safety Data Sheet) for additional information on personal protective equipment and for safety, health and environmental information. For environmental, safety and toxicological information, contact our Customer Service Department at 1.800.558.5575 to request an MSDS or visit our website at [www.Luperox.com](http://www.Luperox.com). Luperox is a registered trademark of Arkema Inc. 1004/Carson/Chen/McCabe/Myers

