

# MERGAL® 395

## Wet-State Preservative

Paints & Coatings/US

EPA Registration No.: 5383-196

Mergal® 395 is a liquid preservative designed for use in water-based systems.

### Application & Use

Mergal® 395 is a water white, low odor preservative used to control bacterial and fungal contamination in water-based coatings, emulsions, stains, sealants, adhesives, caulks, joint cements, resin emulsions, inks, textile processing chemicals (lubricants, sizing, and coating compounds), and paints for industrial and household use. The activity of Mergal® 395 activity is primarily bactericidal; its successful use as a fungicide will depend on the use level and base susceptibility of the formulation.

This product is suitable for systems with a pH of 3 - 10 and at a temperature up to 60°C.

### Product Highlights

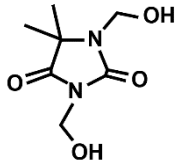
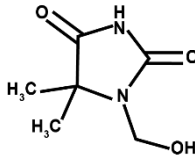
- Low VOC (18 g/L)
- Low odor, water white, pH neutral
- Effective at lower pH levels
- Good thermal stability in end formulations (70°C)
- Non-yellowing
- Recognized as skin safe at use concentrations

### Physical Properties

The following are typical properties of Mergal® 395; they are not to be considered product specifications.

|                         |                        |
|-------------------------|------------------------|
| Appearance:             | Water colorless liquid |
| Specific Gravity, 25°C: | 1.1                    |
| pH (as is)              | 7.0                    |
| Solubility              | Water soluble          |
| Color (Gardner)         | 1 Max.                 |
| Freeze Point            | -5°C                   |

### Active Substance

|       |  |                |   |
|-------|--|----------------|---|
| 36.5% | 1,3-Bis(hydroxymethyl)-5,5-dimethylhydantoin | DMDM Hydantoin |  <p><b>DMDMH</b><br/>C<sub>7</sub>H<sub>12</sub>N<sub>2</sub>O<sub>4</sub></p> |
| 6.2%  | Hydroxymethyl-5,5-dimethylhydantoin          | MDM Hydantoin  |  <p><b>MDMH</b></p>  |

## Function/Activity

For systems in which water is the primary component, Mergal® 395 will generally impart preservative properties at use levels of 0.34% - 1.38% based on the finished formulation weight. The level required to protect any particular system depends on a variety of factors, including the initial level of microbiological contamination, the components of the system, the likelihood of exposure to repeat microbiological intrusions, residual reducing and oxidizing agents, and the temperature and pH of the system. Suggested use levels should be verified by field trials of the end- use product.

| Function                     | % Wt/Wt      |
|------------------------------|--------------|
| Water-based Coatings         | 0.34 - 1.38% |
| Water-based Stains           | 0.34 - 1.38% |
| Sealants                     | 0.34 - 1.38% |
| Adhesives                    | 0.34 - 1.38% |
| Caulks                       | 0.34 - 1.38% |
| Joint Cements                | 0.34 - 1.38% |
| Resin Emulsions              | 0.34 - 1.38% |
| Inks                         | 0.34 - 1.38% |
| Textile Processing Chemicals | 0.34 - 1.38% |
| Liquid Detergents            | 0.34 - 1.38% |
| Polymer Emulsions            | 0.34 - 1.38% |
| Water-based Inks             | 0.34 - 1.38% |
| Water-based Paints           | 0.34 - 1.38% |
| Metalworking Fluids          | 0.08 - 0.50% |

## Formulating Considerations

Mergal® 395 should be slowly added early in the manufacturing process under good mixing. Mergal® 395 is generally stable over a wide pH range (3-10), and up to temperatures of 70C. Avoid incorporation under highly oxidizing or reducing conditions. The preservative is not recommended for use in formulations containing proteinaceous components. In systems with high susceptibility for fungal contamination, the use of a low dosage of a fungicide, such as Polyphase® 678 or Polyphase® PW40, may be necessary.

Due to various possibilities of application and different methods of processing, it is advised to check compatibility in the development of new products. Contact your Arxada representative for assistance.

Shelf-life is 36 months from date of manufacture.

## Packaging

Mergal® 395 is packaged in:

| Package Type | Net Weight        |
|--------------|-------------------|
| Pail         | 40 lbs / 18 kg    |
| Small Drum   | 100 lbs / 45 kg   |
| Large Drum   | 500 lbs / 227 kg  |
| Tote         | 2000 lbs / 907 kg |

## Product Safety & Additional Information

For handling, storage, health, and safety information and disposal procedures, as well as additional information, please refer to the Safety Data Sheet (SDS) and label.



For more information visit:  
[www.arxada.com](http://www.arxada.com)

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