



# Dow Corning® Crude Oil Demulsifiers

## FEATURES

- Efficient water coalescent
- Efficient water dropper
- Enhances interface definition
- Enhances water quality
- Non-ionic
- Inert

## Silicone Polyethers

### APPLICATIONS

- Silicone polyethers have been shown effective as stand-alone demulsifiers, but are particularly cost-effective as performance boosters for standard demulsifiers.

### TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Material	Viscosity cSt or mm <sup>2</sup> /s	Minimum Flash Point Closed Cup °C	HLB* Equivalent
Dow Corning® DM1	2000	70	7
Dow Corning® DM2	425	60	12
Dow Corning® DM3	275	80	7
Dow Corning® DM4	40	100	12
Dow Corning® DM5	350	60	9
Dow Corning® DM6	260	60	10

\*HLB equivalent = (molecular weight of ethylene oxide/molecular weight of total polymer) x 20.

### DESCRIPTION

The Dow Corning® DMx line of silicone polyethers represents a range of different structures and molecular weights which have been proven effective in oil/water demulsification.

Silicone polyethers are excellent surfactants, which benefit from the low surface tension of silicone, little cohesive energy, low sensitivity of the silicone to temperature, and low environmental toxicity - all desirable traits for a demulsifier as well.

The effectiveness of silicone polyethers as oil/water demulsifiers has been demonstrated over the years, both as stand-alone additives and as performance enhancers to organic-based formulations. Some benefits that can be achieved are increased water drop rate, better interface definition, and overall improved cost efficiency for demulsification operations.

They have shown efficacy with a wide range of crude oils, such as with both high and low asphaltenic crude oils, although they do not show improved performance in all systems.

Note that while the DMx line of demulsifier additives represents silicone polyethers with demonstrated performance in all applications, the specific products represent a range of structures available in this chemistry. If a particular product is particularly interesting, we likely have other commercial silicone polyethers available with slight structural variations that may enhance ultimate performance.

## HOW TO USE

While these products have been shown to be effective as stand-alone demulsifiers in some applications, the most cost efficient use of the products is often as a booster to an organic (non-silicone) demulsifier formulation.

As with most demulsifiers, on site determination (usually with a standard bottle test) of the best formulation is typically required. The recommended procedure for determining booster effectiveness is to:

- 1) Determine the best non-silicone demulsifier formulation and addition rate for that particular system.
- 2) Replace 10% to 25% of the actives in that formulation with Dow Corning® DM1.
- 3) Run standard tests, at the same dose rate, to determine performance as compared to the formulation from step 1.
- 4) Repeat steps 2 & 3 for Dow Corning® DM2 – DM6.
- 5) Choose the best overall performing blend and optimize dose rate and DMx addition level to achieve the desired performance.

## HANDLING PRECAUTIONS

Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information. The safety data sheet is available on the Dow Corning website at [www.dowcorning.com](http://www.dowcorning.com). You can also obtain a copy from your local Dow Corning sales representative or Distributor, or by calling your local Dow Corning Global Connection.

## USABLE LIFE AND STORAGE

When stored between -45°C (-49°F) and 50°C (122°F) in the original unopened containers, Dow Corning®

DM1 has a usable life of 18 months from the date of production; Dow Corning® DM4 has a usable life of 24 months from the date of production; Dow Corning® DM2, DM3, DM5 and DM6 have a usable life of 30 months from the date of production.

## PACKAGING

These products are available in a variety of container sizes. Contact your local Dow Corning sales representative for information about container sizes available in your area.

## LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

## HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, [www.dowcorning.com](http://www.dowcorning.com) or consult your local Dow Corning representative.

## LIMITED WARRANTY INFORMATION - PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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