

# SAG™ TP-317

### **SAG\* TP-317**

### Description

Silicone Antifoam SAG TP-317 is a new generation of diesel fuel antifoams. It is based on a modified polydimethyl siloxane and contains no halogen.

### **Key Features and Benefits**

- Easily compatible with most diesel fuel additive packages.
- Low Silicon content (9%)
- Low addition levels to diesel fuel.
- Durable effect. No significant loss in antifoam performance after four weeks ageing.
- Low water solubility, this makes Silicone Antifoam SAG TP-317 less prone to deactivation by the small amounts of water present in the diesel fuel.

### **Typical Physical Properties**

| PROPERTY                          | UNIT  | VALUE                           |  |
|-----------------------------------|---|---------------------------------|--|
| Appearance                        | -   | Clear to slightly yellow liquid |  |
| Viscosity @ 25°C                  | mm <sup>2</sup> ·s <sup>-1</sup>  | 480                             |  |
| Freezing Point                    | °C (°F)   | < -32 (-80)                     |  |
| Flash Point, PMCC                 | °C (°F)   | >100 (230)                      |  |
| Refractive Index @ 22°C           | -   | 1.440                           |  |
| Apparent specific gravity at 20°C | -   | 1.03                            |  |
| Volatility @ 50°C, 24 hours       | %   | 6.2                             |  |
| Volatility @ 50°C, 5 days         | %   | 22.7                            |  |
| Solubility                        | SAG TP-317 is soluble in alcohols and aromatic hydrocarbons. It is partially soluble in water |                                 |  |

Table 1: Typical product data values determined on commercial material whose properties might vary within the specification limits. Typical product data values should not be used as

specifications. Assistance and specifications are available from Momentive Performance Materials.

### **Potential Applications**

A suggested starting level would be in the 8-15 ppm range addition to the diesel fuel. The actual concentration of SAG TP-317 required will depend on the exact composition of the diesel fuel and the degree of foam control required.

Silicone Antifoam SAG TP-317 can be added if needed to the diesel additive package by the use of an alcohol like 2-Ethyl Hexanol or Isodecanol and / or aromatic solvents. It is added to the diesel additive package at around 1-2% and the latter to the diesel fuel at a standard 200-500 ppm concentration level which gives an optimal concentration level of 8-10 ppm of Silicone Antifoam SAG TP-317 in the diesel fuel.

In a typical laboratory test varying levels of silicone antifoam SAG TP-317 were dissolved in diesel fuel at ambient temperature (with a predilution in isodecanol), 100 ml aliquots were shaken for 30 seconds in a 250 ml tin flask using a mechanical shaker and the time taken for a clear patch of surface to appear was recorded. The test was run at a fixed temperature of 19°C. To run the test under more critical foaming conditions, a diesel fuel containing 150 ppm water was used.

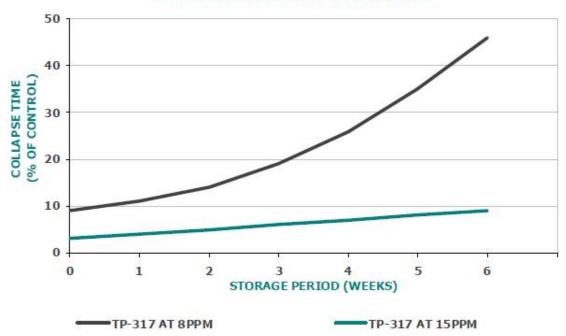
The SAG TP-317 was evaluated at 2 different concentrations (8 ppm and 15 ppm) and over a 6 week period of time to check SAG TP-317 for changes in antifoam performance with time.

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|------|----------|-----|----------|---------|-------|-----|---|
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| Relative Collaps Ti | me (% of foam height of Cont | rol)   |  |
|---------------------|------------------------------|--------|--|
| Weeks               | 8 ppm                        | 16 ppm |  |
| 0                   | 9%                           | 3%     |  |
| 1                   | 11%                          | 4%     |  |
| 2                   | 14%                          | 5%     |  |
| 3                   | 19%                          | 6%     |  |
| 4                   | 16%                          | 7%     |  |
| 5                   | 35%                          | 8%     |  |
| 6                   | 46%                          | 9%     |  |

These are relative results. They have been compared against the foaming height of diesel fuel without any additive, which was set at a value of 100%. A suggested starting level would lie in the 10-20 ppm range. The actual concentration of SAG TP-317 required will depend on the exact composition of the diesel fuel and the degree of foam control required.

### RELATIVE COLLAPSE TIME VS STORAGE PERIOD SAG TP-317 IN WET DIESEL - 150 PPM WATER



## **Packaging**

SAG TP-317 Diesel Fuel Antifoam is available in 25kg pails, 210kg drums and 1000kg IBCs.

### **Patent Status**

Standard copy to come

### **Product Safety, Handling and Storage**

SAG TP-317 Diesel Fuel Antifoam is best stored at temperatures between 0°C and 40°C. Keep container closely sealed to prevent contamination with moisture or dirt.

Standard copy to come

### Limitations

Standard copy to come

### **Contact Information**

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For literature and technical assistance, visit our website at: www.momentive.com

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