

SPOTLEAK®1009

TBM-IPM-NPM BLEND

MAIN PROPERTIES

| SPECIFICATIONS | VALUES |
|------------------------------|--------------------|
| Appearance | Clear liquid |
| Colour (APHA) | ≤ 35 |
| Cloud Point | ≤ -50 °F (-45.5°C) |
| Composition (GC) wt % | |
| T-Butyl Mercaptan (TBM) | 77.0 - 80.0 |
| Isopropyl Mercaptan (IPM) | ≥ 16.0 |
| N-Propyl Mercaptan (NPM) | ≥ 2.0 |

The above commercial specifications are guaranteed; they were established using the test methods which were in force at the plant at the time of dispatch of the product, and are in accordance with any applicable revision references.

USES

Spotleak®1009 is used for natural gas odorization. It has a very high odor impact. This product complies with ISO13734, 49 CFR § 192.625 and CSA Z662.

PACKAGING

Spotleak®1009 can be delivered in various packaging.

| | | |
|----------------------|---|---------------------------------------------------|
| Drums | : | 57 Gals loaded with 352.4 lbs - 4 drums on pallet |
| Returnable Cylinders | : | 120 Gals loaded with 700 lbs |
| | : | 57 Gals loaded with 330 lbs |
| | : | 5 Gals loaded with 29 lbs |
| Tank trucks | : | from 250 to 6,000 Gals |

PHYSICAL DATA

| | | |
|------------------------------------------------------|---|---------------------------|
| Specific Gravity at 60 °F (15.5 °C) | : | 0.812 |
| Average Weight, Pounds Per Gallon at 60 °F (15.5 °C) | : | 6.76 |
| Flash point (Tag Closed Cup) | : | < 0.01 °F (-17.77 °C) |
| Vapor pressure at 100 °F (38 °C) | : | 6.6 psia |
| Coefficient of Cubical Expansion /°C | : | 0.00118 /°C (0.00065 /°F) |

CUSTOMER SERVICE

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Pineville, LA 71360

DENSITY TABLES

In lbs/gal in function of °F

| | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| T (°F) | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| Avg Wt (lbs/gal) | 7.03 | 7.02 | 7.01 | 7.00 | 6.99 | 6.98 | 6.97 | 6.96 | 6.95 | 6.94 |
| T (°F) | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 |
| Avg Wt (lbs/gal) | 6.93 | 6.92 | 6.91 | 6.90 | 6.90 | 6.89 | 6.88 | 6.87 | 6.86 | 6.85 |
| T (°F) | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 |
| Avg Wt (lbs/gal) | 6.84 | 6.83 | 6.82 | 6.81 | 6.80 | 6.80 | 6.79 | 6.78 | 6.77 | 6.76 |
| T (°F) | 62 | 64 | 66 | 68 | 70 | 72 | 74 | 76 | 78 | 80 |
| Avg Wt (lbs/gal) | 6.75 | 6.74 | 6.73 | 6.72 | 6.72 | 6.71 | 6.70 | 6.69 | 6.68 | 6.67 |
| T (°F) | 82 | 84 | 86 | 88 | 90 | 92 | 94 | 96 | 98 | 100 |
| Avg Wt (lbs/gal) | 6.66 | 6.66 | 6.65 | 6.64 | 6.63 | 6.62 | 6.61 | 6.60 | 6.60 | 6.59 |

In kg/l in function of °C

| | | | | | | | | | | |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| T (°C) | -17 | -16 | -14 | -13 | -12 | -11 | -10 | -9 | -8 | -7 |
| Avg Wt (kg/l) | 0.842 | 0.841 | 0.840 | 0.839 | 0.838 | 0.836 | 0.835 | 0.834 | 0.833 | 0.832 |
| T (°C) | -6 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 |
| Avg Wt (kg/l) | 0.830 | 0.829 | 0.828 | 0.827 | 0.827 | 0.826 | 0.824 | 0.823 | 0.822 | 0.821 |
| T (°C) | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 16 |
| Avg Wt (kg/l) | 0.820 | 0.818 | 0.817 | 0.816 | 0.815 | 0.815 | 0.814 | 0.812 | 0.811 | 0.810 |
| T (°C) | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 26 | 27 |
| Avg Wt (kg/l) | 0.809 | 0.808 | 0.806 | 0.805 | 0.805 | 0.804 | 0.803 | 0.802 | 0.800 | 0.799 |
| T (°C) | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 37 | 38 |
| Avg Wt (kg/l) | 0.798 | 0.798 | 0.797 | 0.796 | 0.794 | 0.793 | 0.792 | 0.791 | 0.791 | 0.790 |

STORAGE / SAFETY / PRECAUTIONS DURING USE / HANDLING

BEFORE HANDLING THIS MATERIAL, READ AND UNDERSTAND THE SAFETY DATA SHEET FOR ADDITIONAL INFORMATION ON PERSONAL PROTECTIVE EQUIPMENT AND FOR SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION.

Product Code: 001009

Safety Data Sheet updated: May 5, 2015

Version : 3

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