

MARKETING SPECIFICATION

**SUNOCO, INC.**

**MOTOR VEHICLE DIESEL FUEL NO. 2-D S15 (15MV2)**

| TESTS                                | METHOD                  | SPECIFICATIONS |      |
|--------------------------------------|-------------------------|----------------|------|
|                                      |                         | MIN.           | MAX  |
| Appearance                           |                         | Clear & Bright |      |
| Cetane Number or                     | D 613                   | 40             |      |
| Cetane Index                         | D 4737                  | 40             |      |
| Cetane Index                         | D 976                   | 40             |      |
| Distillation 90%, °F                 | D 86                    | 540            | 640  |
| Viscosity, cSt @ 104°F               | D 445                   | 1.9            | 3.4  |
| Flash, PMCC °F;                      | D 93                    | 125            |      |
| Haze Rating @ 70°F                   | D 4176                  |                | 2    |
| Color                                | D 1500                  |                | 2.5  |
| Water & Sediment, %                  | D 1796                  |                | 0.05 |
| Copper Strip, 3 hrs/122°F            | D 130                   |                | 1    |
| Rams Carbon on 10% Res., %           | D 524                   |                | 0.35 |
| Ash, Wt. %                           | D 482                   |                | 0.01 |
| Sulfur, ppm                          | Performance Based (EPA) |                | 15   |
| Thermal stability, 90 minutes @ 302F | D 6468                  |                |      |
| Reflection Pad Rating, %             |                         | 70             |      |
| Lubricity, @ 140°F (60C), microns    |                         |                | 520  |
| Cloud, Pour Pt, °F                   | See Below               |                |      |
| Cold Filter Plugging Point, CFPP, °F | See Below               |                |      |

**LOW TEMPERATURE – SEASONAL SPECIFICATIONS**  
**NORTH EAST PRODUCTION**

| FROM:                 | SEPT 1        | APR 1         |
|-----------------------|---------------|---------------|
| TO:                   | <u>MAR 31</u> | <u>AUG 31</u> |
| Cloud Point, °F, Max. | +15           | +20           |
| Pour Point, °F, Max.  | 0             | +10           |

**MID WEST PRODUCTION**

| FROM:                 | OCT 16        | FEB 16        | APR 1         | SEPT 1        |
|-----------------------|---------------|---------------|---------------|---------------|
| TO:                   | <u>FEB 15</u> | <u>MAR 31</u> | <u>AUG 31</u> | <u>OCT 15</u> |
| Cloud Point, °F, Max. | +10           | +10           | +20           | +10           |
| Pour Point, °F, Max.  | Minus 20      | 0             | +10           | 0             |

Cold Filter Plugging Point, CFPP, is a seasonal (winter) specification. CFPP provides a measure of a fuel's low temperature performance when additives are utilized. CFPP additives reduce the tendency of diesel fuel to plug fuel filters in certain engine designs at temperatures below the fuel's cloud point. CFPP specifications and utilization are dependent on geographical locations and specific products. Check with a Sunoco sales representative for specific information.

These specifications apply to the product only at the time of release of the product from the terminal.

THERE ARE NO GUARANTEES OR WARRANTIES AS TO THE SATISFACTORY QUALITY OR SUITABILITY OF THE FUEL, FOR ANY PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE DESCRIPTION IN THIS SECTION. SELLER HEREBY EXPRESSLY EXCLUDES ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.