

A1X Grade 91.0 Premium Unleaded Gasoline Specifications

(This is for export only and not for retail use in the United States)

| Product Property | Test Method | Minimum | Origin | | Deliveries ^{1/} |
|--------------------------------------|---------------|----------------|----------------|----------------|--------------------------|
| | | | Maximum | | |
| Gravity, ° API | D287 | | Report | | |
| Color | | | Undyed | | |
| Volatility ^{2/} | | | | | |
| Distillation | D86 | <u>Class A</u> | <u>Class B</u> | <u>Class C</u> | |
| 10% Evaporated °F, max | | 158 | 149 | 140 | |
| 50% Evaporated °F, min | | 170 | 170 | 170 | |
| 50% Evaporated °F, max | | 250 | 245 | 240 | |
| 90% Evaporated °F, max | | 374 | 374 | 365 | |
| Final Boiling Point °F, max | | 430 | 430 | 430 | |
| Residue, vol% max | | 2 | 2 | 2 | |
| Drivability Index, max | | 1250 | 1240 | 1230 | |
| Vapor Liquid Ratio °F, min | D5188 | <u>Class 1</u> | <u>Class 2</u> | <u>Class 3</u> | |
| | | 129 | 122 | 116 | |
| Benzene, vol % | D3606 | | 2.0 | | |
| Mercaptan Sulfur, wt % ^{3/} | D3227 | | 0.002 | | |
| Copper Corrosion | D130 | | 1 | | |
| Silver Corrosion | D7667,7671 | | 1 | | |
| Gum, Existent, mg/100 ml | D381 | | 4 | 5 | |
| Oxidation Stability, minutes | D525 | 240 | | | |
| Phosphorus, g/gal | D3231 | | 0.003 | 0.005 | |
| Lead, g/gal | D3237 | | 0.010 | 0.05 | |
| Octane | | | | | |
| RON | D2699 | 94.0 | | | |
| MON | D2700 | | Report | | |
| Report (R+M)/2 | | 91.0 | | | |
| Sulfur, ppm | D2622 | | 80 | | |
| Oxygenates, vol % ^{6/} | D4815, D5599 | | 0.05 | | |
| Haze Rating ^{4/} | D4176 | | 2 | 3 | |
| NACE Corrosion | TM0172, D7548 | B+ | | | |
| Odor ^{5/} | | | Nonoffensive | | |

A1X Grade 91.0 Premium Unleaded Gasoline Specifications (continued)

- 1/ Delivered products meet all applicable requirements at time and place of delivery.
- 2/ Refer to Seasonal Gasoline Volatility Schedule.
- 3/ Mercaptan Sulfur determination is waived if the result of the Doctor Test ASTM D4952 is negative.
- 4/ Compliance with ASTM D4176 will be determined using Procedure 2 at the following temperatures, adjusted seasonally:

| | |
|----------------------------|-----------|
| February 16 – September 30 | 55 °F max |
| October 1– February 15 | 45 °F max |
- 5/ Any gasoline exhibiting an offensive odor and/or containing more than 0.30 wt % dicyclopentadiene will not be accepted for shipment.
- 6/ Values below the detectible limit of an approved method may be reported as a zero value.

**NOTE: All parameters must be met without blending of denatured fuel ethanol unless noted.