AMALIE MOTOR OIL

*Better than it has to be... Since 1903*

# Passenger Car Motor Oils

Elixir Full Synthetic - PRO High Performance Synthetic Blend
Imperial Turbo Formula - Heavy Duty - HPO Turbo - Non-Detergent

Consult your Amalie District Manager for specific pack sizes and product availability


**Amalie Elixir Full-Synthetic Motor Oils** are the 21st Century oils for tough 21st Century work - protecting your engine Better Than It Has to Be! Elixir Synthetic Oils offer the ultimate in engine protection for both gasoline and diesel engines. Formulated with state-of-the-art additives and 100% synthetic base stocks, Amalie Elixir Full-Synthetic Motor Oil has been carefully developed to meet the most current API Service Classification, SM/CF and ILSAC GF-4, and exceeds the standard for the Thermal Engine Oil Stability Test (TEOST MHT) and the Ford M2C 930-A, which supersedes M2C153-H requirements. These oils offer the ultimate in engine protection for engines operating in the most extreme driving and operating conditions and in the worst ambient operating temperatures from the extreme artic cold to the searing desert heat. Amalie Elixir Full-Synthetic Motor Oil exceeds the stringent lubricating performance requirements of American, European, Korean, Japanese and other worldwide engine manufacturers.

**Amalie PRO High Performance Synthetic Blend Motor Oils** are formulated with new and more robust engine oil chemistry combined with an optimum level of high quality synthetic and first quality mineral base stocks to provide outstanding engine protection for severe driving situations, including high-stress competition engine applications. These high performance motor oils are engineered and formulated to meet API SM/CF and ILSAC GF-4 and exceed the standard for the Thermal Engine Oil Stability Test (TEOST MHT) and the Ford M2C 930-A, which supersedes M2C153-H requirements. These high quality motor oils also help to provide better emission control, increased fuel economy and reduced engine wear and piston deposits. They are designed to lubricate and protect well outside of the range of conventional motor oils and are compatible with a variety of different fuels including competition fuels. Continually tested and proven in professional racecars, Amalie PRO High Performance Synthetic Blend Motor Oils are the Official Motor Oils of the International Hot Rod Association (IHRA). These high performance motor oils exceed the stringent lubricating performance requirements of American, European, Korean, Japanese and other worldwide engine manufacturers.

**Amalie Imperial Turbo Formula Motor Oils** are the oils that made Amalie famous! In the early 1950s Amalie was the first to build a multi-viscosity engine oil, and the legend continues today. Amalie Imperial Turbo Formula multi-viscosity oils provide superior engine protection no matter what the operating temperature. Imperial protects domestic and imported vehicles and equipment powered with either gasoline or light-duty diesel engines even those that are turbo-charged or super-charged equally well. This high quality oil has been specifically formulated to meet or exceed all new car manufacturers' warranty requirements as well as the stringent industry standards API SM/CF and ILSAC GF-4 and exceed the standard for the Thermal Engine Oil Stability Test (TEOST MHT) and the Ford M2C 930-A, which supersedes M2C153-H requirements. Amalie Imperial Turbo Formula will protect with equal vigor both new, modern, close-tolerance engines and older, high-mileage engines running in a wide range of operating temperatures and conditions. These high performance motor oils exceed the stringent lubricating performance requirements of American, European, Korean, Japanese and other worldwide engine manufacturers.

**Amalie Heavy Duty Motor Oils** are the oils your Drill Sergeant told you about! Amalie Heavy Duty Motor Oils are single grade or straight-viscosity motor oils. They are a balanced blend of high VI base stocks and an advanced additive package to deliver superior performance. They provide thermal and oxidation stability, deposit control, anti-wear protection, corrosion protection and improved pumpability. Amalie Heavy Duty Motor Oils may be used in turbo-charged, super-charged or naturally aspirated foreign and domestic engines recommending an API SM/CF mono-grade engine oil. These heavy duty motor oils exceed the stringent lubricating performance requirements of American, European, Korean, Japanese and other worldwide engine manufacturers.

**Amalie HPO Turbo Motor Oils*** are high quality detergent motor oils recommended for gasoline and diesel engines manufactured by American, European, Japanese, Korean and other engine manufactures from around the world. These oils are manufactured to meet the requirements of API SG, SF/CF, CF-2 and CF-4 as well as European ACEA A-1 and B-1. They are manufactured from select blends of high quality base oils and additives to promote long engine life, protect against rust, corrosion and harmful oxidation, and are designed to help reduce engine wear and oil consumption.

The Amalie HPO Turbo Multi-grade Motor Oils are coupled with a premium viscosity modifier to assure easy starts in cold temperatures and protect against oil thinning at higher temperatures. Also, these energy conserving formulations may result in fuel savings to the consumer.

*The Amalie HPO Turbo Motor Oil product line is for export only and minimum order requirements apply.

**Amalie Non-Detergent Motor Oils** are a quality line of straight mineral crankcase engine oils and general purpose oils. Amalie Non-Detergent Motor oils are built from high-quality mineral base stocks and may be used wherever an API SA/SB mono-grade oil is recommended.

Some performance levels are limited by viscosity grades. Please consult the Amalie Performance Application Chart, the Amalie Inspection Data Table for the appropriate Amalie product or contact your Amalie District Manager for more complete information and recommendations.

# INSPECTION DATA TABLE

| SAE Grade | API Gravity | Flash Point C° | Viscosity, cSt @100 C° | @40 C° | Viscosity Index | Pour Point C° |
|---|---|---|---|---|---|---|
| Elixir Full Synthetic | | | | | | |
| 5W-30 | 35.0 | 210 | 10.00 | 58.0 | 160 | -39 |
| 5W-50 | 34.0 | 220 | 17.50 | 110.0 | 170 | -42 |
| 15W-50* | 33.7 | 230 | 17.50 | 150.0 | 150 | -33 |
| PRO High Perf. Syn. Blend | | | | | | |
| 50 | 28.0 | 240 | 17.50 | 178.0 | 107 | -12 |
| 70 | 26.3 | 250 | 27.50 | 350.0 | 107 | -9 |
| 5W-20 | 31.3 | 210 | 7.40 | 42.0 | 140 | -45 |
| 5W-30 | 33.5 | 210 | 10.30 | 57.0 | 168 | -42 |
| 5W-50* | 33.0 | 210 | 17.00 | 107.0 | 170 | -42 |
| 10W-30 | 29.8 | 210 | 10.00 | 61.0 | 149 | -36 |
| 10W-40 | 29.9 | 210 | 13.40 | 84.0 | 160 | -36 |
| 15W-50 | 29.2 | 230 | 17.70 | 126.0 | 155 | -33 |
| 20W-50 | 30.8 | 235 | 17.40 | 152.0 | 126 | -30 |
| Imperial Turbo | | | | | | |
| 5W-20 | 31.3 | 200 | 6.50 | 37.0 | 130 | -42 |
| 5W-30 | 30.5 | 200 | 10.50 | 60.0 | 145 | -39 |
| 10W-30 | 29.5 | 205 | 10.50 | 69.0 | 140 | -35 |
| 10W-40 | 30.0 | 205 | 13.50 | 97.0 | 145 | -32 |
| 15W-40 | 29.0 | 215 | 14.00 | 100.0 | 135 | -27 |
| 20W-50 | 28.9 | 220 | 18.00 | 165.0 | 125 | -18 |
| Heavy Duty | | | | | | |
| 30 | 28.5 | 220 | 11.80 | 103.0 | 103 | -21 |
| 40 | 28.0 | 230 | 14.60 | 141.0 | 103 | -15 |
| 50 | 27.5 | 240 | 17.90 | 189.0 | 103 | -12 |
| HPO Turbo** | | | | | | |
| 5W-30 | 30.5 | 190 | 10.20 | 60.0 | 157 | -39 |
| 10W-30 | 29.5 | 200 | 10.50 | 69.0 | 140 | -35 |
| 10W-40 | 30.0 | 200 | 13.50 | 97.0 | 145 | -32 |
| 15W-40 | 29.0 | 210 | 14.00 | 100.0 | 135 | -27 |
| 20W-50 | 28.9 | 220 | 18.00 | 165.0 | 125 | -18 |
| 25W-50 | 29.6 | 230 | 18.00 | 165.0 | 125 | -18 |
| 40 | 28.0 | 220 | 14.60 | 141.0 | 100 | -12 |
| 50 | 27.5 | 230 | 17.90 | 189.0 | 100 | -12 |
| Non-Detergent | | | | | | |
| 30 | 23.2 | 200 | 10.10 | - | - | -12 |
| 40 | 21.8 | 210 | 13.50 | - | - | -10 |
| 50 | 20.6 | 220 | 17.50 | - | - | -8 |

* Minimum Order Requirements Apply. ** HPO Turbo Motor Oil Product Line is for export only, minimum order requirements apply.

# PERFORMANCE APPLICATION CHART

| Specifications | Elixir Full Synthetic | PRO High Perf Syn Blend | Imperial Turbo | Heavy Duty | HPO Turbo | Non-Detergent |
|---|---|---|---|---|---|---|
| API | | | | | | |
| SM | ✓ | ✓ | ✓ | ✓ | -- | -- |
| SL | ✓ | ✓ | ✓ | ✓ | -- | -- |
| SJ | ✓ | ✓ | ✓ | ✓ | -- | -- |
| SG | ✓ | ✓ | ✓ | ✓ | ✓ | -- |
| SF | ✓ | ✓ | ✓ | ✓ | ✓ | -- |
| SB | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| CF/CF-2 | ✓ | ✓ | ✓ | ✓ | ✓ | -- |
| CF-4 | -- | -- | -- | -- | ✓ | -- |
| ILSAC | | | | | | |
| GF-4 | ✓ | ✓ | ✓ | -- | -- | -- |
| GF-3 / GF-2 | ✓ | ✓ | ✓ | -- | -- | -- |
| ACEA | | | | | | |
| A 1/2/3 | ✓ | ✓ | A 1/2 | A 1/2 | A1 | -- |
| B 1/2/3/4 | ✓ | B 1/2/3 | B 1/2 | B 1/2 | B1 | -- |
| Ford | | | | | | |
| M2C 929A (M2C 205A) | 5W-30 | 5W-30, 10W-30 | ✓ | -- | -- | -- |
| M2C 930A (M2C 153H) | 5W-30* | 5W-20, 5W-30* | 5W-20, 5W-30* | -- | -- | -- |
| DaimlerChrysler | | | | | | |
| MS 6395 K | ✓ | ✓ | -- | -- | -- | -- |
| MB 229.1 | ✓ | ✓ | -- | -- | -- | -- |
| MB 229.3 | ✓ | 5W-30 | -- | -- | -- | -- |
| GENERAL MOTORS | | | | | | |
| GM 4718 M | ✓ | ✓ | -- | -- | -- | -- |
| GM 6094M | ✓ | ✓ | ✓ | -- | -- | -- |
| Volkswagen | | | | | | |
| VW 502 | ✓ | ✓ | ✓ | -- | -- | -- |
| VW 503 | ✓ | 5W-30 | 5W-30 | -- | -- | -- |
| VW 505 | ✓ | ✓ | ✓ | -- | -- | -- |
| VW 506 | ✓ | 5W-30 | 5W-30 | -- | -- | -- |
| BMW | | | | | | |
| LL-0 / M54 | ✓ | ✓ | ✓ | -- | -- | -- |
| CID AA-52039 | ✓ | ✓ | ✓ | ✓ | -- | -- |
| MIL-L-2104-B | ✓ | ✓ | ✓ | ✓ | ✓ | -- |
| MIL-L-46152 | ✓ | ✓ | ✓ | ✓ | ✓ | -- |

*5W-20 preferred viscosity for M2C 903A (M2C 153H).





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