

PRODUCTS
2022



NEW
FIRE

Trust is confidence.
Trust is earned.



You don't need just another Oil Brand.

YOU NEED a group of people dedicated to your success. Tireless innovators of products combined with true **personalized service** and attention to detail—all designed to give you the confidence to make **solid decisions** about what keeps your machine-based business running smoothly. At STARFIRE, we prove that every day—through the relationships we build, the individualized services we provide and by developing **products that meet the highest demands** of today's technology. Trust is confidence. Trust is earned.

STARFIRE IS PROVEN.

Digital Catalog



STAR FIRE **EX**
INDUSTRIAL LUBRICANTS



CONTENTS

4 / MOTOR OIL

- 5 / Premium Motor Oils
- 6 / Synthetic Blend Motor Oils
- 7 / Full Synthetic Motor Oils
- 8 / dexos 1™ Gen 2 Full Synthetic Motor Oil
- 9 / Full Synthetic 5W-40 Euro Formula
- 10 / High Mileage Motor Oils
- 11 / Synthetic Blend Heavy Duty Engine Oils
- 12 / HD-30 Heavy Duty Motor Oil
- 12 / TC-W3® Premium 2-Cycle Engine Oil
- 13 / Performance 20W-50

14 / TRANSMISSION FLUID

- 15 / Multi-Purpose ATF DEXRON®-III/MERCON®
- 16 / Full Synthetic Multi-Vehicle ATF
- 17 / MERCON® V ATF
- 18 / ATF+4® ATF
- 19 / Type F ATF
- 20 / Full Synthetic CVT Fluid
- 21 / 6-Gallon Eco-Box & Dispensing System

22 / GEAR LUBRICANTS

- 23 / Conventional Gear Lubricants
- 24 / Full Synthetic Gear Lubricants

25 / HYDRAULIC OILS

- 26 / AW Hydraulic Oils
- 27 / Mobile Equipment Fluid MEF-3 Hydraulic Lubricant
- 28 / Premium Tractor Hydraulic Fluid
- 29 / Non-Detergent Lubricating Oils

30 / ANTIFREEZE / COOLANTS

- 31 / Conventional Green Antifreeze/Coolant
- 32 / All Makes All Models Antifreeze/Coolant
- 33 / PureCool Extended Life Antifreeze/Coolant
- 34 / PureFleet Heavy Duty ELC Antifreeze/Coolant
- 35 / PureFleet EXTREME Heavy Duty ELC Antifreeze/Coolant

36 / GREASE

- 37 / Hi-Temp Red EP2 Grease
- 37 / Multi-Purpose NLGI 2 Grease
- 38 / 3% MOLY EP2 Grease

39 / FUNCTIONAL FLUIDS

- 40 / Brake Fluid
- 41 / Power Steering Fluid
- 42 / MOTR Treatment
- 42 / Air Brake Antifreeze and Conditioner
- 43 / Diesel Monster® Anti-Gel & Rescue
- 44 / Starfire DEF
- 45 / Tec-A-Brake® Low VOC Brake & Parts Cleaner
- 45 / Tec-A-Start® Starting Fluid
- 46 / Tec-A-Foam™ Engine Degreaser
- 46 / Tec-A-Carb™ Carb/Choke Cleaner
- 46 / Tec-A-Glass™ Glass Cleaner
- 47 / Tec-A-Nut™ Penetrating Oil
- 47 / Tec-A-Chain™ Chain and Cable Lubricant
- 47 / Tec-A-Lith™ White Lithium Grease
- 48 / Fuel Injector & Carb Cleaner
- 48 / Gas Treatment
- 48 / Motor Flush
- 48 / Octane Booster
- 48 / Oil Treatment

49 / ANCILLARY PRODUCTS

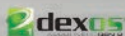
- 50 / RV & Marine Antifreeze (-50°F)
- 50 / Windshield Washer Fluid
- 51 / PurpleStar Degreaser
- 52 / SuperTack™ Bar & Chain Oil
- 53 / Industrial Hand Cleaner
- 53 / Grime Time Heavy Duty Hand and Surface Wipes
- 54 / Zombie Dry Absorbent
- 54 / Multi-Purpose Absorbent

55 / EX Industrial Lubricants

- 57 / SENTRY Fluid Analysis

OEM APPROVALS & LICENSING

Our comprehensive product line includes products for all your customers' needs. From PCMO to Industrial fluids to exceptional service and value, STARFIRE has it all.



Complete
Product and
Safety specs

FOR LIFE



Premium Motor Oils

STARFIRE PREMIUM MOTOR OILS are fully licensed motor oils that meet or exceed the latest manufacturers' requirements for use in passenger car, SUV and light duty truck gasoline engines, powerboats, motorcycles and other stationary and mobile equipment. They are formulated with the highest quality, hydro-treated, paraffinic lubricating oils and a technologically advanced additive system, which includes detergents, dispersants, viscosity improver, anti-wear and anti-friction agents, and oxidation and corrosion inhibitors.

APPLICATIONS

- When API licensed SP, SN Plus, SN, SM, SL, SJ oils are required
- When ILSAC GF-6A, GF-5, GF-4, etc. are required (5W-20, 5W-30, 10W-30)
- STARFIRE 5W-20 can be used when Ford WSS M2C960-A1, M2C945-B1, M2C945-A, M2C930-A, M2C153, Chrysler MS-6395, MS10797 or GM 6094M is specified
- STARFIRE 5W-30 can be used when Ford WSS-M2C961-A1, M2C946-B1, M2C946-A, M2C929-A, Chrysler MS-6395 or GM 6094M is specified
- Meets or exceeds the latest manufacturers' requirements for use in passenger car, SUV and light duty truck gasoline engines, powerboats, motorcycles and other stationary and mobile equipment

BENEFITS

- Excellent fuel economy
- Reduced friction for excellent protection against engine wear
- High resistance to viscosity and thermal breakdown
- Excellent anti-wear, anti-foam, bearing corrosion and anti-rust protection
- Fights volatility burn-off to minimize engine deposits and exhaust emissions



SAE GRADE	5W-20	5W-30	10W-30	10W-40
VISCOSITY: cSt @ 40°C	50.18	61.75	71.33	100.6
cSt @ 100°C	8.62	10.5	10.48	14.64
VISCOSITY INDEX	150	160	133	151
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8578	0.858	0.8701	0.866
GRAVITY, °API	33.46	33.42	31.12	31.89
POUR POINT, °F	-49	-49	-44	-38
FLASH POINT (PMCC), °F	428	428	428	459
CCS VISCOSITY, cP	5200 (-30°C)	5750 (-30°C)	6100 (-25°C)	6200 (-25°C)
NOACK VOLATILITY	14	12	11	11
ILSAC GF-6A CERTIFIED	YES	YES	YES	NO

Synthetic Blend Motor Oils

STARFIRE SYNTHETIC BLEND MOTOR OILS are fully licensed motor oils that meet or exceed the latest manufacturers' requirements for use in passenger car, SUV and light duty truck gasoline engines, powerboats, motorcycles and other stationary and mobile equipment. They are formulated from selected, highly refined paraffinic base oils, synthetic base oils and carefully selected advanced additive technology to provide superior thermal and oxidation stability, corrosion and valve train wear protection and to prevent the formation and accumulation of deposits and sludge.

APPLICATIONS

- When API licensed SP, SN Plus, SN, SM, SL, SJ oils are required
- When ILSAC GF-6A, GF-5, GF-4, etc. are required (5W-20, 5W-30, 10W-30)
- STARFIRE 5W-20 can be used when Ford WSS-M2C960-A1, M2C945-B1, M2C945-A, M2C930-A, M2C153, Chrysler MS-6395, MS10797 or GM 6094M and GM 4718 is specified
- STARFIRE 5W-30 can be used when Ford WSS-M2C961-A1, M2C946-B1, M2C946-A, M2C929-A, Chrysler MS-6395 or GM 6094M and GM 4718 is specified
- Meets or exceeds the latest manufacturers' requirements for use in passenger car, SUV and light duty truck gasoline engines, powerboats, motorcycles and other stationary and mobile equipment

BENEFITS

- Excellent fuel economy
- Superior synthetic blend protection against thermal breakdown
- Excellent protection from deposits at all operating temperatures
- Excellent cold-crinking capabilities
- Excellent anti-wear, anti-foam, bearing corrosion and anti-rust protection



SAE GRADE	5W-20	5W-30	10W-30	10W-40
VISCOSITY: cSt @ 40°C	50.18	61.75	71.33	100.6
cSt @ 100°C	8.62	10.5	10.48	14.64
VISCOSITY INDEX	150	160	133	151
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8578	0.858	0.8701	0.866
GRAVITY, °API	33.55	33.42	31.12	31.89
POUR POINT, °F	-49	-49	-44	-38
FLASH POINT (PMCC), °F	428	428	428	459
CCS VISCOSITY, cP	5200 (-30°C)	5750 (-30°C)	6100 (-25°C)	6200 (-25°C)
NOACK VOLATILITY	14	12	11	11.0
API: RC *RESOURCE CONSERVING*	YES	YES	YES	NO
ILSAC GF-6A CERTIFIED	YES	YES	YES	NO

Full Synthetic Motor Oils

STARFIRE FULL SYNTHETIC MOTOR OILS are premium-quality, 100% synthetic motor oils formulated from superior synthetic base oils and carefully selected advanced additive technology. STARFIRE full synthetic motor oils can be used in virtually all service classifications for domestic and foreign gasoline engines and are fully compatible with all other synthetic and petroleum-based motor oils.

APPLICATIONS

- When API licensed SP, SN Plus, SN, SM, SL, SJ oils are required
- When ILSAC GF-6A (GF-6B for 0W-16), GF-5, GF-4, etc. are required (5W-20, 5W-30, 10W-30)
- STARFIRE 0W-20 can be used when Ford WSS-M2C962-A1, M2C947-B1, M2C947-A, Chrysler MS-6395 or GM 6094M and GM 4718 is specified
- STARFIRE 5W-20 can be used when Ford WSS-M2C960-A1, M2C945-B1, M2C945-A, M2C930-A, M2C153, Chrysler MS-6395, MS10797 or GM 6094M is specified
- STARFIRE 5W-30 can be used when Ford WSS-M2C961-A1, M2C946-B1, M2C946-A, M2C929-A, Chrysler MS-6395 or GM 6094M is specified
- Can be used in virtually all service classifications for domestic and foreign gasoline engines
- Fully compatible with all other synthetic and petroleum-based motor oils

BENEFITS

- 100% synthetic motor oil
- Provides Low Speed Pre-Ignition (LSPI) protection
- Excellent fuel economy
- Superior protection against thermal breakdown
- Excellent protection from deposits at all operating temperatures
- Excellent cold-cranking capabilities
- Excellent anti-wear, anti-foam, bearing corrosion and anti-rust protection



SAE GRADE	0W-16	0W-20	5W-20	5W-30	10W-30
VISCOSITY: cSt @ 40°C	37.3	42.76	46.06	54.82	61.84
cSt @ 100°C	7.236	8.106	8.515	9.92	9.897
VISCOSITY INDEX	162	166	164	169	147
POUR POINT, °F	-49	-49	-49	-49	-44
FLASH POINT (COC), °F	439	441	442	446	437
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8427	0.8454	0.8499	0.8483	0.8592
GRAVITY, °API	36.41	35.88	34.99	35.3	33.19
CCS VISCOSITY, cP	4600 (-30°C)	5600 (-30°C)	3400 (-30°C)	3550 (-30°C)	3760 (-25°C)
NOACK VOLATILITY	13.0	11.0	11.7	11.4	8.2

dexos 1™ Gen 2 Full Synthetic Motor Oil

STARFIRE dexos 1™ GEN 2 FULL SYNTHETIC MOTOR OIL is state-of-the-art, advanced-technology motor oil formulated with sophisticated additives to prevent sludge formation commonly caused by moisture and combustion byproducts. An exceptionally high viscosity index minimizes cold-weather oil thickening, preventing battery drain and engine wear, even at subzero startups. Exceeds GM dexos1™ Gen 2 specifications for worldwide requirements for all GM automotive gasoline engines currently in use.

APPLICATIONS

- Use in all Buick, Chevrolet, Cadillac and GMC vehicles starting in the 2011 model year
- An excellent choice for all previous model year vehicles produced by GM
- All passenger cars, sport utility vehicles and light duty trucks operating on gasoline and with the following specifications:
- When API licensed SP, SN Plus, SN, SM, SL, SJ oils are required
- When ILSAC GF-6A, GF-5, GF-4, etc. are required
- STARFIRE 0W-20 can be used when Ford WSS-M2C962-A1, M2C947-B1, M2C947-A, Chrysler MS-6395 or GM 6094M and GM 4718 is specified
- STARFIRE 5W-30 can be used when Ford WSS-M2C961-A1, M2C946-B1, M2C946-A, M2C929-A, Chrysler MS-6395 or GM 6094M is specified

BENEFITS

- Licensed and approved through General Motors
- Provides Low Speed Pre-Ignition (LSPI) protection for small-displacement turbo-charged and Gasoline Direct Injected (GDI) engines
- Fuel economy improvements
- Meets manufacturers' latest warranty requirements
- Enhanced rust protection for flex-fuel vehicles, specifically those that run on ethanol-based fuel (E85)



SAE GRADE	0W-20	5W-30
VISCOSITY: cSt @ 40°C	42.76	65.06
cSt @ 100°C	8.106	11.13
VISCOSITY INDEX	166	165
POUR POINT, °F	-49	-49
GRAVITY, °API	35.88	35.23
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8454	0.8487
CCS VISCOSITY, cP	5600 (-30°C)	3800 (-30°C)
NOACK VOLATILITY	11	12
COLOR	3	3

Full Synthetic 5W-40 Euro Formula

STARFIRE FULL SYNTHETIC EURO SAE 5W-40 engine oil is specially formulated for the lubrication needs of modern European gasoline and diesel cars and light trucks.

APPLICATIONS

STARFIRE Full Synthetic Euro SAE 5W-40 engine oil is specially formulated for the lubrication needs of modern European gasoline and diesel cars and light trucks.

BENEFITS

- Formulated with advanced 100% synthetic base stocks, premium anti-wear additives and a 5W-40 viscosity rating that is the preferred oil for virtually all European automobiles, especially turbo-charged models
- Provides outstanding protection in high RPM, hot-running engines
- Specially designed to prevent sludge and varnish deposits for reduced oil consumption, extended engine life and maximum overall performance, resulting in a clean engine
- Designed for newer vehicle emission control systems
- Meets industry and vehicle manufacturers' requirements for long-life protection of gasoline vehicle catalytic converters
- Delivers dependable, long-term performance for the extended drain intervals set by all major automakers: Audi, BMW, Mercedes-Benz, Opel, Porsche, Renault, Skoda, SEAT, Volkswagen
- STARFIRE Full Synthetic Euro 5W-40 meets or exceeds the following performance specifications: API SN and SM, ACEA A3/B3 and A3/B4, BMW LL-01, Mercedes-Benz 229.5 and 229.3, Porsche A40, Opel GM-LL-B-025, Renault 0700 and 0710, Volkswagen 501 01, 502 00 and 505 00



TYPICAL PHYSICAL PROPERTIES:

SPECIFIC GRAVITY @ 60°F (15.6°C)	ASTM D4052	0.8551
VISCOSITY: cSt @ 40°C	ASTM D445	77.27
cSt @ 100°C	ASTM D445	13.18
VISCOSITY INDEX	ASTM D2270	173
POUR POINT °C (°F)	ASTM D5950	-45°C (-49°F)
COLOR	ASTM D1500	2
COLD-CRANKING SIMULATOR AT (°C), cP	ASTM D5293	6083 (-30)
HIGH TEMPERATURE / HIGH SHEAR VIS AT 150°C, cP	ASTM D5481	3.7
NOACK VOLATILITY, % LOSS	ASTM D6375	10
CALCIUM, WT. %	ASTM D5185	0.26
ZINC, WT. %	ASTM D5185	0.102
PHOSPHORUS, WT. %	ASTM D5185	0.092
SULFUR, WT. %	ASTM D4951	0.19
BORON, WT. %	ASTM D5185	0.007
NITROGEN, WT. %	ASTM D4629	0.089
PUMPING VISCOSITY AT (°C), cP	ASTM D4684	28,400 (-35)
GRAVITY, °API	ASTM D287	33.98
TBN, MGKOH/G	ASTM D2896	9.8

High Mileage Motor Oils

STARFIRE HIGH MILEAGE MOTOR OILS are fully licensed motor oils that meet or exceed the latest manufacturers' requirements for use in passenger car, SUV and light duty truck gasoline engines. They are specially formulated for higher mileage vehicles – those with 75,000 miles or more – to help protect worn seals, reduce oil loss and prevent leaks from forming. STARFIRE High Mileage Motor Oils are made with highly refined paraffinic base oils, advanced additive technology and special seal conditioners to provide superior thermal and oxidation stability, anti-corrosion and valve train wear protection and to prevent the formation and accumulation of deposits and sludge.

APPLICATIONS

- Vehicles with 75,000 miles or more
- When API licensed SP, SN Plus, SN, SM, SL, SJ oils are required
- When ILSAC GF-6A, GF-5, GF-4, etc. are required
- STARFIRE 5W-20 can be used when Ford WSS-M2C960-A1, M2C945-B1, M2C945-A, M2C930-A, M2C153, Chrysler MS-6395, MS10797 or GM 6094M and GM 4718 is specified
- STARFIRE 5W-30 can be used when Ford WSS-M2C961-A1, M2C946-B1, M2C946-A, M2C929-A, Chrysler MS-6395 or GM 6094M is specified
- Meets or exceeds the latest manufacturers' requirements for use in passenger car, SUV and light duty truck gasoline engines, powerboats, motorcycles and other stationary and mobile equipment

BENEFITS

- Special additives and seal conditioner for older vehicles
- Helps combat engine oil consumption
- Prevents leaks from forming
- Helps reduce oil loss caused by burn-off
- Superior protection against thermal breakdown
- Excellent protection from deposits at all operating temperatures
- Excellent anti-wear, anti-foam, bearing corrosion and anti-rust protection



SAE GRADE	5W-20	5W-30	10W-30
VISCOSITY: cSt @ 40°C	51.73	67.62	68.37
cSt @ 100°C	8.933	11.3	10.56
VISCOSITY INDEX	154	161	142
POUR POINT, °F	-49	-49	-44
FLASH POINT (COC), °F	428	428	428
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8573	0.8577	0.869
GRAVITY, °API	33.55	33.48	31.33
CCS VISCOSITY, cP	5150 (-30°C)	5500 (-30°C)	5300 (-25°C)
NOACK VOLATILITY	13	12	12
ILSAC GF-6A CERTIFIED	YES	YES	YES

Synthetic Blend Heavy Duty Engine Oils

STARFIRE SYNTHETIC BLEND HD ENGINE OILS are specially engineered for heavy duty diesel and gasoline engines operating under all service conditions, including today's emission-controlled engines with EGR and diesel particulate filters using Ultra-Low Sulfur Diesel fuel (ULSD) and Low Sulfur Diesel (LSD). They provide extra protection and performance compared with conventional engine oil formulations, with excellent oxidation control and soot suspension characteristics to provide outstanding protection for extended drain intervals.

APPLICATIONS

STARFIRE Synthetic Blend HD Engine Oils meet or exceed performance requirements for all naturally aspirated and turbo-charged four-stroke diesel engines in which the API CK-4 service category and 15W-40 or 10W-30 grades are recommended. They are formulated for engines operating under severe service and a wide range of cold and hot temperatures. They are also backward-compatible for CJ-4 and older API service categories.

RECOMMENDATIONS

- Mack EOS-4.5, EO-O Premium Plus, EO-N Premium Plus 03, EO-M Plus, and prior
- Ford WSS-M2C171-F1, WSS-M2C171-E
- GLOBAL DHD-1
- Detroit Diesel 93K222, 93K218, 93K215, 93K214
- Cummins CES 20086, 20081, 20077, 20076
- Renault RLD-4
- Caterpillar ECF-3, ECF-2, ECF-1a
- Mercedes-Benz 228.3, 228.31
- Man 3575, 3275, 270
- MTU 2.1, Type I, Type II
- Volvo VDS-4.5, VDS-4, VDS-3, VDS-2, DHD-1
- ACEA E9, E7, E4 and E2
- JASO DH-2
- Allison C-4
- Caterpillar TO-2
- CID A-A-52306, MIL-PRF-2104G



OEM Approved



SAE GRADE	TEST METHOD	15W-40	10W-30
VISCOSITY: cSt @ 40°C	D445	116.1	82.06
cSt @ 100°C		15.66	12.21
VISCOSITY INDEX	D2270	143	149
POUR POINT, °C (°F)	D97	-36 (-33)	-39 (-38)
FLASH POINT, °C (°F)	D92	224 (435)	220 (428)
NEUTRALIZATION NO., TBN-E	D2896	10	10
SULFATED ASH, WT. %	D874	0.99	0.99
COLD CRANK SIMULATOR, cP	D5293	5398/-20°C	6270/-25°C
PUMPING VISCOSITY, cP	D4684	21,600/-25°C	23,000/-30°C
HTHS VIS @ 150°C, cP	D5481	4.3	3.5

HD-30 Heavy Duty Motor Oil

STARFIRE HD-30 HEAVY DUTY MOTOR OIL is formulated with high viscosity index paraffinic base oils and select additive technology to provide superior thermal and oxidative stability, corrosion and valve train wear protection and to prevent the formation and accumulation of deposits and sludge. It is designed for modern-day, heavy duty diesel engines operating in both highway and off-highway applications.

APPLICATIONS

STARFIRE HD-30 Heavy Duty Motor Oils are recommended for modern-day, heavy duty diesel and gasoline engines. They meet or exceed the CF-2 and CF service classifications.

BENEFITS

- Excellent protection from deposits at all operating temperatures
- Excellent bearing corrosion protection (EGR critical)
- Excellent anti-wear properties
- Excellent anti-foam properties
- Excellent anti-rust properties
- Excellent soot control



TYPICAL PROPERTIES	SAE 30
VISCOSITY: cSt @ 40°C	91.05
cSt @ 100°C	10.91
VISCOSITY INDEX	105
POUR POINT, °F	-22
SPECIFIC GRAVITY @ 60°F	0.876
GRAVITY, API	30.03

TC-W3® Premium 2-Cycle Engine Oil

STARFIRE TC-W3® PREMIUM 2-CYCLE OIL is a premium, high-quality motor oil formulated for use in outboard motors, motorcycles, snowmobiles, chain saws, garden equipment and other fuel-lubricated or fuel-injected 2-cycle engines. It is formulated to prevent ring-sticking, to reduce spark plug fouling and to keep engines clean.

Follow engine manufacturer's recommendations to determine correct oil/fuel ratio. Add oil to fuel, mix thoroughly.

BENEFITS

- Multi-application usage
- Ideal for oil-injected and fuel/oil-lubricated engines
- Meets API TC and JASO FB, TC-W3® specifications
- Licensed by National Marine Manufacturers Association (NMMA)

Packaging
Available:
3.2 OZ, 8 OZ,
1 QT, 1 GAL



TYPICAL PROPERTIES	
VISCOSITY: cSt @ 40°C	51.58
cSt @ 100°C	7.686
VISCOSITY INDEX	114
POUR POINT, °F	0
GRAVITY, °API	31.22
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8696
SULFATED ASH, WT%	0.04

Performance 20W-50 Motor Oil

STARFIRE PERFORMANCE 20W-50 MOTOR OIL is a premium-quality oil formulated for gasoline engines. It contains only the highest quality, hydro-treated, paraffinic lubricating oils and a technologically advanced additive system, which includes detergents, dispersants, viscosity improver, anti-wear and anti-friction agents, and oxidation and corrosion inhibitors.

APPLICATIONS

STARFIRE 20W-50 motor oil is acceptable for use in all domestic and foreign automotive gasoline-fueled passenger cars and light duty trucks where an SAE 20W-50 that meets API SP, SN Plus, SN, SM or SL is specified.

BENEFITS

- Superior protection against thermal breakdown
- Excellent protection from deposits and sludge at all operating temperatures
- Excellent oxidation stability
- Excellent corrosion and valve-train wear protection



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	164.9
cSt @ 100°C	17.76
VISCOSITY INDEX	118
POUR POINT, °F	-22
FLASH POINT (COC), °F	464
GRAVITY, °API	29.24
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8803
ZN (PPM)	850
P (PPM)	770
CA (PPM)	990
CCS VISCOSITY, cP 4500	9244 (-15°C)
NOACK VOLATILITY	5



MISSISSIPPI TRANS FLUID

Multi-Purpose DEXRON®-III / MERCON® ATF

STARFIRE ATF DEXRON®-III/MERCON® is a multi-purpose automatic transmission fluid especially designed and engineered to extend transmission life and provide smooth operation for Ford and General Motors vehicles where a DEXRON®-III/MERCON® fluid is specified.

APPLICATIONS

- DEXRON®-III H, DEXRON®-III G, DEXRON® II, DEXRON®, AWI
- MERCON®, M2C138-CJ or M2C166-H fluids
- Allison C-4 fluids and Caterpillar TO-2 fluids
- In all 1979 through 2005 transmissions built by Ford (exceptions: Ford FMX and pre-1980 C-4 transmissions and where MERCON® V is required)

BENEFITS

- Superior cold-temperature performance characteristics
- Wide range of seal compatibility
- Excellent wear protection and oxidation resistance
- Fortified against rust and corrosion
- Meets requirements for foam protection
- Superior frictional characteristics with excellent friction retention and smooth shifting



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	35.67
cSt @ 100°C	7.38
VISCOSITY INDEX	179
POUR POINT, °F	-60
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8603
GRAVITY, °API	32.98
BROOKFIELD VISCOSITY @ -40°C, cP	18,500
COLOR	Red

Full Synthetic Multi-Vehicle ATF

STARFIRE Full Synthetic Multi-Vehicle ATF is a high-performance, low viscosity multi-vehicle transmission fluid that is specially formulated for use in most planetary-gear transmissions applications. It is approved for use in General Motors automatic transmissions calling for DEXRON®-VI and Ford transmissions calling for MERCON® LV.

BENEFITS

- Full synthetic
- GM approved
- Protection against wear and transmission shudder
- Resistance to thickening due to high temperatures
- Friction stability to maintain smooth, consistent shift performance

Allison C-3
Allison C-4
Allison TES-389
Audi 5 HP LT71141, G 052162-A1/A2, G052 025 A2
Audi G 052 025, 052 162, 055 025
Audi/VW: G 052 025, 052 162, 055 025, GUS 000 162
BMW 7045E, LA2634, LT71141
BMW JWS 3309, LA2634, ZF 5HP18FL, 5HP24, 5HP30, Mini
BMW P/N 83 22 0 024 359, ETL-8072B
BMW P/N 83 22 0 0246 922, ETL-7045E
BMW P/N 83 22 0 403 249, ETL-8072B
BMW P/N 83 22 9 407 765, LA 2634
BMW P/N 83 22 9 407 807, LT 711 41
CAT T0-2
Chrysler 8 and 9 speed transmissions
Chrysler AS68RC, AS69RC (T-IV), Diamond SP-III
Chrysler P/N 05127382AA, P/N 68043742AA
Daewoo LT 71141
Daihatsu AMMIX ATF D-II, D-III SP
Dexron III G/H, Dexron II, Dexron, AW1
Dexron VI
Esso 71141
Fiat T-VI, JWS 3309
Ford FNR5
Ford M2C138-CJ
Ford M2C166H, 138CJ, 922A1, 924A, JWS 3309
Fuchs 3353
FUSO ATF-II, SPIII, A4
GM DEXRON®III, II

GMN10060
Hino Blue Ribbon ATF
Honda: DW-1, Z-1
Hyundai NSWS9638
Hyundai/Kia SP-IV M, RR Dex-II/SP-II, JWS 3314, 9683
Hyundai/Kia/Mitsubishi Diamond SP-II and SP-III, RED-1, SP-IV
Hyundai/Kia/Mitsubishi: SP-II, SP-III, SP-IV
IDEMITSU APORIL ATF HP
ISUZU 08200-9001 / Genuine ATF
ISUZU BESCO ATF-II, III
Jaguar ATF 3403 M115, LT71141, ZF 5HP24, JLM20238
Jaguar P/N WSS-M2C922-A-1
Jaso M315-2013 1A, 1A-LV, 2A
JWS 3309, Any 3309
JWS 3324
Lexus JWS 3309
M315-2004 JASO 1A, 2A
MAN 339 Type V2
MAN 339 Type Z1, Z2, V1
Mazda ATF D-II, M-III, M-V, FZ, F-1, S-1, N-1, 3317
Mazda ATF M-III, MV, T-IV
MB 223.2, 236.1, 236.2, 236.10, 236.12, 236.41, 236.5, 236.6, 236.7,
Mercon LV (XT-10-QLV)
Mercon, Ford ESP-M2C166-H
Mini Cooper T-IV
MINI P/N 83 22 0 402 413
Mitsubishi Diaqueen SK, AW, J2, J3, PA
Mitsubishi MA-1

Mopar AS 68 RC, JWS 3309
NAG-1
Nissan Matic-D, J, K
Nissan Matic, J, S
Nissan: Matic-D, J, K, 402
Opel
Peugeot ZF 4HP20
Porsche P/N 999 917 547 00 (A2)
Porsche ZF 5HP19FL, ZF 5HP20, LT71141, ATF 3403-M115, T-VI,
SAAB P/N 22 717 466, 93 165 147 (AW-1)
Saturn P/N 21005966
Saturn T-IV, GM TASA, T-IV ATF, GM WS ATF
Scion
Shell 3403 M115
Shell 3403, LA2634, Texaco 7045-E, ETL-8072B
Subaru ATF 5AT, Dex II, AT OIL 5D06,
Subaru: ATF, ATF-HP
Suzuki ATF 2326, 2384K, JWS 3309, 3314
Texaco N402
Toyota D-II, D-III
Toyota T-II, T-III, T-IV, WS, Ford XT8QAW
Toyota: WS, T-IV, T-III, T-II
Type A
Voith 55.6335 (G607)
Volvo P/N 1161540-8
Volvo Passenger Car (4 / 6 sp), Volvo 97340, 97341, 97342
VW 5 HP ZF5 HP 30, 18FL, 30, 19FL, 24A, G-055-025 A2, TL 521 62
VW G 052 025, 162, 099, 055 025
VW P/N GUS 000 162

VW TL52162 (LT71141)
XT-6-QSP, XT-6-DSP, except 6HP26 / 6R60 / 6R75 transmissions
ZF 845RE / 870RE, ZF 8HP45 / 8HP70 / 8HP90
ZF all 3 & 4 speed trans.
ZF TE-ML 02F, TE-ML 03D, TE-ML 04D, TE-ML 09, TE-ML 11A
ZF TE-ML 14A, TE-ML 14B, TE-ML 14C, TE-ML 16L, ZF TE-ML 17C



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	28.56
cSt @ 100°C	5.797
BROOKFIELD VISCOSITY AT -40°C, cP	10,300
VISCOSITY INDEX	151
POUR POINT, °F	-60
SPECIFIC GRAVITY @ 60°F (15.6 °C)	0.8468
GRAVITY, °API	35.6
COLOR	Red

MERCON® V ATF

STARFIRE MERCON® V ATF is specially formulated with a unique combination of conventional base stocks and advanced additive technology to meet performance requirements of Ford automatic transmissions calling for MERCON® V fluid. Not for use in transmissions requiring Ford Type F fluid or Continuous Variable Transmissions (CVTs). Licensed by Ford Motor Co., Inc. - License # M5141201.

STARFIRE MERCON® V ATF is suitable for use where the following automatic transmission fluids are recommended: automobile and truck automatic transmissions, power-shift transmissions and other types of service requiring an approved Ford MERCON® V automatic transmission fluid, DEXRON®-III (G, H), II (E, F) specifications, Honda Z-1, Nissan Matic-J and Toyota T-IV.

CLAIMS INFORMATION

Allison C-4	Mazda ATF M-III, MV, T-IV
Allison TES-389	MB236.1, 2, 5, 6, 7, 9, 10, 11
Audi G 052 025, 052 162, 055 025	MERCON®, Ford ESP-M2C166-H
BMW 7045E, LA2634, LT71141	MERCON® V (XT-5-QM, XT-5-DM)
BMW P/N 83 22 0 024 359, ETL-8072B	MINI P/N 83 22 0 402 413
BMW P/N 83 22 0 0246 922, ETL-7045E	Nissan Matic-D, J, K
BMW P/N 83 22 0 403 249, ETL-8072B	Porsche P/N 999 917 547 00 (A2)
BMW P/N 83 22 9 407 765, LA 2634	Saab P/N 22 717 466, 93 165 147 (AW-1)
BMW P/N 83 22 9 407 807, LT 711 41	Saturn P/N 21005966
Chrysler AS68RC, Diamond SP-III	Saturn T-IV, GM TASA, T-IV ATF, GM WS ATF
Chrysler P/N 05127382AA, P/N 68043742AA	Shell 3403, LA2634, Texaco 7045-E, ETL-8072B
DEXRON®-III G/H, DEXRON®-II, DEXRON®, AW1	Shell 3403 M115
Esso 71141	Subaru ATF, ATF-HP
Ford P/N XT-2-DX (MERC), Ford P/N XT-2-SM (SYN MERC)	Suzuki 3314, 3317
Fuchs 3353	Texaco N402
Honda DW-1, Z-1	Toyota T-II, T-III, T-IV, WS, Ford XT8QAW
Hyundai/Kia/Mitsubishi Diamond SP-II and SP-III, RED-1, SP-IV	Voith 55.6335 (G607)
Hyundai NSWS9638	Volvo Passenger Car (4 / 6 sp), Volvo 97340, 97341, 97342
Idemitsu APOROIL ATF HP	Volvo P/N 1161540-8
Idemitsu K17	VW G 052 025, 162, 099, 055 025
Isuzu 08200-9001 / Genuine ATF	VW P/N GUS 000 162
Jaguar P/N WSS-M2C922-A-1	ZF TE-ML 03D, 04D, 05L, 09, 11B, 14A, 16L, 17C
JWS 3309, Any 3309	ZF TE-ML 14B
JWS 3324	
M315-2004 JASO 1A, 2A	
MAN 339 Type Z1, Z2, V1	



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	35.43
cSt @ 100°C	7.56
BROOKFIELD VISCOSITY @ -40°C, cP	11,300
VISCOSITY INDEX	189
FLASH, CDC, °F	390
POUR POINT, °F	-60
SPECIFIC GRAVITY @ 60°F	0.8619
API GRAVITY	33.02
COLOR	Red

ATF+4® ATF

STARFIRE ATF+4® AUTOMATIC TRANSMISSION FLUID is a uniquely blended, full synthetic fluid designed to meet the specific requirements of Chrysler and FCA automatic transmissions/transaxles specifying MS-9602®, MS-7176®, ATF+®, ATF+2®, ATF+3®, or ATF+4® fluids.

APPLICATIONS

- Mopar ATF+4®
- Mopar ATF+3®
- Mopar ATF+2®
- Mopar ATF+®
- Type MS-9602®
- Type MS-7176®

BENEFITS

- Full synthetic
- Excellent high and low temperature protection
- Resistance to thickening due to high temperatures
- Friction stability to maintain smooth, consistent shift performance



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	35.22
cSt @ 100°C	7.68
BROOKFIELD VISCOSITY @ -40°C, cP	9000
VISCOSITY INDEX	201
POUR POINT, °F	-54
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8508
GRAVITY, °API	34.81
COLOR	Red

TYPE F ATF

STARFIRE TYPE F ATF is specially formulated using high-quality lubricating oils and a technologically advanced additive system. Engineered to extend transmission life and smooth operation of Ford automatic transmissions not requiring MERCON® or DEXRON® type fluid. Type F fluid is approved for all Ford automatic transmissions built prior to 1977 and certain models for years 1977 through 1980. Meets Ford specification for high static friction fluid and all warranty requirements for transmissions recommending a Type F fluid.

APPLICATIONS

- Ford automatic transmissions built prior to 1977 and certain models for years 1977 through 1980
- For use where Ford M2C-33F, M2C-33G and Ford Type F fluids are recommended

BENEFITS

- Excellent high and low temperature protection
- Stable friction properties for smooth and consistent shifting
- Excellent shear stability
- Outstanding resistance to wear, oxidation and varnish deposits



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	38.11
cSt @ 100°C	7.47
VISCOSITY INDEX	167
POUR POINT, °F	-60
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8619
GRAVITY, °API	32.67
COLOR	Red

Full Synthetic CVT Fluid

STARFIRE CHAIN & BELT FULL SYNTHETIC CVT FLUID is specially formulated with a unique combination of full synthetic base stocks and an advanced additive technology designed for the specific demands of CVTs. This premium-quality product is recommended for use in most belt-driven Continuously Variable Transmissions, and it is not a replacement for ATF.

APPLICATIONS

STARFIRE Chain & Belt Full Synthetic CVT Fluid is suitable for use in the following applications:

Audi/VW (TL 52180; G 052 180; G 052 516)
 BMW 8322 0 136 376/8322 0 429 154 (EZL 799/EZL 799A)
 Daihatsu Amix CVTF-DC, Daihatsu AMIX CVTF-DFE
 Dodge/Jeep (NS-2/CVTF+4/Mopar CVT 4)
 Ford CFT30/WSS-M2C933-A/Motorcraft XT-7-QCFT
 GM/Saturn (DEX-CVT, CVTF I-Green 2)
 Honda (HMMF, HCF-2)
 Hyundai/Kia CVTF (SP-CVT 1)
 Mazda CVTF 3320
 Mercedes-Benz (236.20)
 Mercedes-Benz CVT28/MB-Approval 236.20
 Mini Cooper (EZL 799/EZL 799A/ZF CVT V1)
 Mitsubishi (CVTF-J1)
 Mitsubishi DiaQueen (CVTF-J1, CVTF-J4)
 Nissan (NS-1, NS-2, NS-3)
 Punch EZL 799/EZL 799A
 Renault ELFMATIC
 Shell Green IV
 Subaru (NS-2/Lineartronic CVTF, i-CVTF, K0425Y0710) e-CVTF
 Suzuki (TC/NS-2/CVTF Green 1, CVTF Green 2, CVTF 3320)
 Toyota (TC, FE)



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	33.8
cSt @ 100°C	7.21
VISCOSITY INDEX	185
POUR POINT, °F	-60
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.8538
GRAVITY, °API	34.23
COLOR	Amber

6-Gallon Eco-Box & Dispensing System

STARFIRE 6-GALLON ECO-BOX & DISPENSING SYSTEM is a space-saving, innovative design that provides professional installers with a cost-effective alternative for offering a wider variety of STARFIRE motor oils and fluids. The innovative Eco-Box design decreases environmental impact by reducing discarded plastic packaging by as much as 85% when compared with quart packaging. The flexible bag-in-box design also provides a significant reduction in residual oil that would normally be left in conventional plastic packing, so there is less wasted product!

STARFIRE ECO-BOXES ARE AVAILABLE IN:

FULL SYNTHETIC MOTOR OIL

- 0W-16
- 0W-20 dexos 1st Gen 2
- 5W-20
- 5W-30 dexos 1st Gen 2
- 5W-40 Heavy Duty
- 5W-40 Euro

SYNTHETIC BLEND MOTOR OIL

- 5W-20
- 5W-30
- 10W-30
- 15W-40 Heavy Duty

AUTOMATIC TRANSMISSION FLUID

- Multi-Purpose ATF
DEXRON[®]-III/MERCON[®]
- Full Synthetic Multi-Vehicle ATF

BENEFITS

- Space-saving rack dispensing system
- Quick access to up to 6 different products
- User-friendly dispensing system
- Inventory cost savings
- Environmentally friendly packaging reduces plastic waste
- Reduces product residual waste





GEAR CAN'T LUBRICANTS



Conventional Gear Lubricants

STARFIRE GL-5 GEAR LUBRICANTS are multi-purpose lubricants designed for service in automotive and heavy duty applications. They are formulated with refined paraffinic base stocks and a sulfur-phosphorus extreme-pressure additive package, which provides excellent thermal and oxidative stability, as well as anti-foam, anti-rust and anti-corrosion protection, and they have excellent load-carrying capabilities.

Note: These products are not approved for Eaton Roadranger and ArvinMeritor Extended Warranties.

APPLICATIONS

- STARFIRE GL-5 Gear Lubricant meets the API GL-5 Service Designation as well as the MIL-L-2105F and MIL Prf 2105E and is suitable for use in limited-slip differentials.
- STARFIRE GL-5 Gear Lubricant is also suitable for use in Mack GO-H & GO-J and Proposed PG-1/PG-2 Service Designations, Scania STO 110, MERITOR®-076D (80W90), and MERITOR®-076A (85W140), MAN 342 M2 (160,000 km), and MB 235.
- STARFIRE GL-5 Gear Lubricant meets API MT 1. For use when extreme-pressure (EP) gear oils are required: in all heavy duty truck differentials, in all domestic automobile differentials and some manually shifted transmissions, heavy duty manually shifted truck transmissions requiring API MT 1 performance, and oil-lubricated wheel bearings.



TYPICAL TEST DATA	80W-90	85W-140
VISCOSITY: cSt @ 40°C	133	321
cSt @ 100°C	14.1	24.6
VISCOSITY INDEX	104	98
FLASH POINT, COC, °C (°F)	224 (435)	235 (455)
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.891	0.903
GRAVITY, API, 60°F	27.4	25.2

Full Synthetic Gear Lubricants

STARFIRE FULL SYNTHETIC GL-5 GEAR LUBRICANTS are multi-purpose lubricants designed for service in automotive and heavy duty applications. STARFIRE Full Synthetic GL-5 Gear Lubricants are formulated with synthetic base stocks and a sulfur-phosphorus extreme-pressure additive package with friction modifier, which provides excellent thermal and oxidative stability, as well as anti-foam, anti-rust and anti-corrosion protection and excellent load-carrying capabilities.

APPLICATIONS

STARFIRE Full Synthetic 75W-90, 75W-140 and 80W-140 Gear Lubricants are suitable for use in the following applications:

- API GL-5
- API MT-1
- MIL-PRF-2105E and MIL-PRF-2105D
- Mack GO-J, GO-H
- PG-2 limited slip differentials

STARFIRE Full Synthetic 50W Transmission Oil is suitable for use in the following applications:

- API MT-1
- Eaton PS-164 Rev 7
- Navistar/International TMS 6816
- Mack TO-A Plus
- MERITOR® O-81 (Publication TP-90014)
- ZF Freedomline

BENEFITS

- Provides excellent protection against wear under extreme pressure and high torque operation
- High resistance to thermal breakdown
- Helps prevent foaming, rust, and corrosion
- Smooths and quiets operation



TYPICAL TEST DATA	75W-90 GL-5	75W-140 GL-5	80W-140 GL-5	50W
POUR POINT, 60°F	-36	-36	-36	-32
VISCOSITY: cSt @ 40°C	100	182	186	131
cSt @ 100°C	15.7	26.2	26.8	18.6
VISCOSITY INDEX	168	180	181	163
DENSITY (LB/GAL) @ 60°F	7.14	7.13	7.13	7.14
SPECIFIC GRAVITY, 60°F	0.857	0.856	0.856	0.854
API GRAVITY @ 60°F	33.7	33.8	33.9	33.7
COLOR	11.5	11.5	11.5	11.5

HYDRAULIC OILS



AW32
HYDRAULIC OIL

**Multi-Purpose
Hydraulic Oil**
Provides superior
anti-wear, anti-foam,
anti-rust, oxidation &
corrosion protection

AW Hydraulic Oils

STARFIRE AW HYDRAULIC OILS are high-performance hydraulic fluids formulated from select base stocks and advanced additive technology to deliver ultimate equipment protection and extended operating life. STARFIRE AW Hydraulic Oils contain active anti-wear agents, anti-oxidation, anti-corrosion, anti-rust and anti-foam additive components.

APPLICATIONS

Recommended for hydraulic pumps and hydraulic and high-pressure circulating systems requiring:

- Parker Hannifin (Denison) HF-O, HF-1, HF-2, & T6H2OC
- Eaton Vickers 35VQ25A Pump, M-2950-S, & I-286-S
- Cincinnati Milacron P-68, P-69, & P-70 or DIN 51524-2

BENEFITS

- Formulated with premium base stocks for added resistance to thermal breakdown
- Outstanding wear protection
- Excellent resistance to system rust and oil oxidation
- Maintains excellent water-separating properties
- Excellent foam control and air release deliver consistent system operation



ISO GRADE	AW32	AW 46	AW 68
FLASH POINT, °C	235	239	248
POUR POINT, °C	-37	-35	-36
VISCOSITY: cSt @ 40°C	32.74	44.28	66.20
cSt @ 100°C	6.03	7.83	11.13
VISCOSITY INDEX	132	148	162
DENSITY (LB/GAL)	7.08	7.08	7.09
SPECIFIC GRAVITY	0.849	0.850	0.850
GRAVITY, API	35.08	35.06	34.96

Mobile Equipment Fluid MEF-3 Hydraulic Lubricant

STARFIRE MEF-3 LUBRICANT has been field-tested in farm, construction and logging equipment. This multi-purpose hydraulic lubricant is an economical lubricant suited for equipment that requires frequent fluid replacement. It is not recommended for use in equipment manufactured after 1974.

APPLICATIONS

- Equipment that requires frequent fluid replacement
- Multi-purpose lubricant applications
- Older, aging equipment
- Not recommended for equipment manufactured after 1974

BENEFITS

- Anti-wear protection
- Good seal compatibility
- Protection against rust and oxidization
- Economical multi-purpose lubricant



TYPICAL PROPERTIES	MEF-3
API GRAVITY	31.9
VISCOSITY: cSt @ 40°C	57.9
cSt @ 100°C	9.50
POUR POINT, °C (°F)	-35 (-31)
VISCOSITY INDEX	147
DENSITY (LB/GAL)	7.22
COLOR	L2.5

Premium Tractor Hydraulic Fluid

STARFIRE PREMIUM TRACTOR HYDRAULIC FLUID is formulated with highly refined Group II base stocks for added resistance to thermal breakdown and utilizes the combination of special friction modifiers and shear-stable viscosity modifiers to offer optimum performance levels. STARFIRE Premium Tractor Hydraulic Fluid is recommended for use in all major OEM equipment. STARFIRE Premium Tractor Hydraulic Fluid is designed for use in a variety of farm equipment, off-highway machinery, industrial tractors, final drives, power take-off units, wet brakes, power steering units, and hydraulic systems. It provides the unique combination of ultimate equipment protection and the convenience of using one fluid in place of two or more fluids while maintaining optimum component performance and durability.

APPLICATIONS

Allison: C-4

John Deere: Quatrol, J20C, J20A, J21A, Hy-Gard J14B/C

International Harvester: Hy-Tran, B-6

AGCO (Massey Ferguson): M-1145, M-1143, M-1110, M-1127B, M-1129A, M-1135 Permatran III, M-1138, M-1141, White Q-1826, & Allis Chalmers Power Fluid 821 XL, Duetz-Allis Hyd Trans Fluid, 25743, 272843, & AGCO-Allis

J.I. Case: TFD (JIC-143/146), Hi-Vis (JIC-185), JIC-144/145, MS-1204, MS-1205/1206/1207, MS-1210 (TCH) and B-6

Case New Holland: MAT 3505, MAT 3525, MAT 3526, ESN M2C86-A/B/C, M2C134-A/B/C/D, M2C41-B, M2C43, M2C53-A/B, M2C92-A

Vickers: I-2986-S, 104C, & M2950S, Denison UTTQ, HF-0, HF-01, HF-02

Kubota Universal Transdrdraulic Fluid: UTD & Super UTD

Sundstrand Hydrostatic Transmissions: JDQ-84

Volvo: BM, VCE 1273.03 & WB-101 (wet brake)

Caterpillar: TO-2 & MTO (Multi-Application Tractor Oil) for older backhoe loader rear axles and Challenger tractors

BENEFITS

- Formulated with highly refined Group II base stocks for added resistance to thermal breakdown
- Superior wear protection to protect critical components
- Excellent frictional properties for smooth shifting
- Excellent anti-shudder performance
- Good seal compatibility
- Protection against varnish and sludge formation
- Superior thermal stability and oxidation resistance



TYPICAL PROPERTIES

POUR POINT, °C	-35
VISCOSITY: cSt @ 40°C	59.4
cSt @ 100°C	9.58
VISCOSITY INDEX	145
DENSITY (LB/GAL)	7.29
SPECIFIC GRAVITY	0.875
API GRAVITY	30.2
COLOR	L2

Non-Detergent Lubricating Oils

STARFIRE NON-DETERGENT (ND) LUBRICATING OILS are manufactured using highly refined base oils for increased lubrication and wear protection in operating conditions which do not require a detergent motor oil. STARFIRE Non-Detergent Lubricating Oils are recommended for light engines that call for a non-additive motor oil, compressors, circulating oils and low-pressure hydraulic systems. STARFIRE ND Lubricating Oils satisfy API SA performance.

CAUTION: This oil is rated API SA. It contains no additives. It is not suitable for use in most gasoline-powered automotive engines built after 1930. Use in modern engines may cause unsatisfactory engine performance or equipment harm.

APPLICATIONS

- Light engines calling for non-additive motor oil
- Compressors
- Circulating oil
- Low-pressure hydraulic systems

BENEFITS

- Highly refined base stocks provide superior lubrication
- Superior anti-foam control
- Wide range of applications



VISCOSITY GRADE	SAE 30
VISCOSITY: cSt @ 40°C cSt @ 100°C	143.8 10.98
VISCOSITY INDEX	38
FLASH POINT, °F	429
SPECIFIC GRAVITY @ 60°F (15.6°C)	0.9222
GRAVITY, °API	21.94



ANTIFREEZE/COOLANTS



MEETS
ASTM D-3306
ASTM D-6210

**ALL MAKES
ALL MODELS**
ANTIFREEZE/COOLANT

CONCENTRATE
MUST ADD WATER

LIGHT DUTY PROTECTION UP TO 5 YEARS/150,000 MILES
HEAVY DUTY PROTECTION UP TO 3 YEARS/300,000 MILES

Conventional Green Antifreeze/Coolant

STARFIRE CONVENTIONAL GREEN ANTIFREEZE/COOLANT is a premium ethylene glycol-based antifreeze that provides all season protection and when used as directed, offers superior 5-way protection against:

- Freeze-up
- Boil Over
- Scale Build Up
- Rust Corrosion
- Sludge/Clogging
- Wet Sleeve Liner Pitting

STARFIRE Conventional Green Antifreeze/Coolant when used as directed:

- Meets Light Duty ASTM D-3306 and Heavy Duty ASTM D-6210
- One universal product for Light Duty and Heavy Duty applications
- No need to add SCA's or chemical filters
- Compatible with all Conventional Green Antifreeze
- Blended with pure De-Ionized water for your quality needs.
- Phosphate free and meets low silicate standards
- May be used in virtually any engine cooling system

Meets the following OEM Specifications:

ASTM D-3306
Ford ESE M97B44D
Chrysler MS 7170
GM 1825M
GM 1899M
ASTM D-6210
Caterpillar
GMC Truck
John Deere
Case

Mack
Detroit Diesel
GE Locomotive
Military CID A-A52624-A
Orion/MCI Coaches
Freightliner
International
TMC RP329



ALL MAKES ALL MODELS	TYPICAL VALUES	ASTM METHOD
PH (50% SOLUTION)	8.5 - 10	D1287
RESERVE ALKALINITY MIN.	2.5	D1121
SPECIFIC GRAVITY AT 60/60°F	1.053 - 1.083	D1122
FREEZING POINT (50% MAX)	-34°F	D3321
FOAM TEST	150 ML/5 SEC.	D1881
COLOR	GREEN	

All Makes All Models Antifreeze/Coolant

STARFIRE ALL MAKES ALL MODELS ANTIFREEZE/COOLANT is a true universal antifreeze/coolant that can be used as a top-off or a complete flush and fill in virtually any application. It's HOAT chemistry is designed for both light duty automotive and heavy-duty diesel use. STARFIRE All Makes All Models is a premium ethylene glycol-based product and when mixed with water and used as directed offers superior protection against:

- Freeze-up
- Scale Build Up
- Sludge/Clogging
- Boil Over
- Rust Corrosion
- Wet Sleeve Liner Pitting

STARFIRE All Makes All Models Antifreeze/Coolant when used as directed:

- Meets Light Duty ASTM D-3306 and Heavy Duty ASTM D-6210
- One universal product for Light Duty and Heavy Duty applications
- Perfect choice for mixed fleets. No need to add SCA's.
- Blended with pure De-Ionized water for your quality needs.
- Phosphate free and low silicate -the choice for Japanese and Korean models.
- Light Duty - 5 years/150,000 miles / Heavy Duty - 3 years/300,000 miles

Meets the following OEM Specifications:

ASTM D-3306
Chrysler MS 7170
TMC RP329
Ford WSS-M97B51
GM 1825M
GM 1899M
ASTM D-6210
Caterpillar DEAC
Detroit Diesel
Cummins Engine

John Deere
International
Case New Holland
Volvo Trucks
GE Locomotive
Freightliner
Ford ESE-M97B44-D
Mercedes
Komatsu
Navistar



ALL MAKES ALL MODELS	TYPICAL VALUES	ASTM METHOD
PH (50% BY VOLUME SOLUTION)	8.5 - 10	D1287
RESERVE ALKALINITY MIN.	2.5	D1121
SPECIFIC GRAVITY AT 60/60°F	1.053 - 1.083	D1122
FREEZING POINT (50% MAX)	-34°F	D3321
FOAM TEST	150 ML/5 SEC.	D1881
COLOR	GOLD/YELLOW	

PureCool Extended Life Antifreeze/Coolant

STARFIRE PureCool EXTENDED LIFE ANTIFREEZE/COOLANT is a premium, virgin, ethylene glycol-based product that may be used in all GM vehicles that require DEX-COOL® coolant, as well as other cars and light duty trucks with aluminum radiators.

**STARFIRE PureCool Extended Life
Antifreeze/Coolant when used as directed:**

- Meets GM 6277M, ASTM D3306 and ASTM D4985
- May be added to conventional antifreeze/coolant
- Protects aluminum and ANY other engine metals
- Meets GM and Ford performance specifications
- DEX-COOL® is a registered trademark of GM Corporation
- Available in concentrate and 50/50 pre-diluted formulas



PURECOOL	TYPICAL VALUES	ASTM METHOD
ASH CONTENT (50% BY VOLUME SOLUTION)	1.5% BY WEIGHT	D1119
PH (50% BY VOLUME SOLUTION)	10.0 – 11.0	D1287
RESERVE ALKALINITY	2.4	D1121
SPECIFIC GRAVITY AT 20/20°C (50% BY VOLUME SOLUTION)	1.064	D1122
FREEZING POINT (50% BY VOLUME SOLUTION)	-34°F	D1177
BOILING POINT (50% BY VOLUME SOLUTION)	227°F	D1120
FLASH POINT (TAG OPEN CUP) (70% BY VOLUME SOLUTION)	NONE	
FOAM TEST	50 ML/2.0 SEC.	D1881
COLOR	ORANGE	

PureFleet Heavy Duty ELC Antifreeze/Coolant

STARFIRE PureFleet HEAVY DUTY ELC ANTIFREEZE/COOLANT Used as directed, offers superior performance in virtually every light and heavy duty application. The proprietary inhibitor package is low silicate and phosphate and 2-EH free. Can be used as a top-off but to achieve maximum protection a complete flush and fill should be performed. STARFIRE provides protection against:

- Freeze-up
- Scale Build Up
- Sludge/Clogging
- Boil Over
- Rust Corrosion
- Wet Sleeve Liner Pitting

STARFIRE PureFleet Heavy Duty ELC Antifreeze/Coolant when used as directed:

- Meets Light Duty ASTM D-3306 and Heavy Duty ASTM D-6210
- One product for Light Duty and Heavy Duty applications.
- Perfect choice for mixed fleets. No need to add SCA's.
- Blended with pure De-Ionized water for your quality needs.
- Phosphate free and low silicate - the choice for Japanese and Korean models.
- Light Duty - 5 years/150,000 miles
- Heavy Duty - 3 years/300,000 miles.
- Compatible with hybrid and OAT coolants

Meets the following OEM Specifications:

ASTM D-3306
Chrysler MS 7170
Ford WSS-M97B51
GM 1825M
GM 1899M
ASTM D-6210
Caterpillar EC-1
Detroit Diesel
Cummins Engine
John Deere

International
Case New Holland
Volvo Trucks
GE Locomotive
Freightliner
Ford ESE-M97B44-D
Mercedes
Komatsu
Navistar
TMC RP329



PUREFLEET HEAVY DUTY ELC	TYPICAL VALUES	ASTM METHOD
PH (50% BY VOLUME SOLUTION)	8.5-10.0	D1287
RESERVE ALKALINITY MIN.	2.5	D1121
SPECIFIC GRAVITY AT 60/60°F	1.053-1083	D1122
FREEZING POINT (50% MAX.)	-34°F	D3321
FOAM TEST	150 ML/5.0 SEC.	D1881
COLOR	RED	

PureFleet EXTREME Heavy Duty ELC Antifreeze/Coolant

STARFIRE PureFleet EXTREME HEAVY DUTY ELC ANTIFREEZE/COOLANT is a premium, virgin, ethylene glycol-based heavy duty antifreeze/coolant that contains a proprietary poly-organic/multi-organic acid technology inhibitor system that does not contain any phosphate, silicate, borate, nitrate or nitrite. It provides total cooling system protection for 750,000 on-road miles without the use of additive-containing coolant filters or supplemental coolant additives (SCAs). STARFIRE PureFleet EXTREME Heavy Duty ELC Antifreeze/Coolant is designed for use in ALL heavy duty cooling system applications, including truck, farm, off-road and/or marine engines.

STARFIRE PureFleet EXTREME Heavy Duty ELC Antifreeze/Coolant when used as directed:

- Meets ASTM D3306, ASTM D4985, ASTM D6210, TMC RP-329/330 and Caterpillar EC-1
- Is compatible with ALL types of coolant technologies, including conventional inorganic acid salt formulations, straight organic acid (OAT) formulations, hybrid organic acid formulations (HOAT), nitrated HOAT formulations (NOAT) and other poly-organic acid formulations
- Does NOT contain any phosphate, silicate, borate, nitrate or nitrite
- Provides up to 750,000 miles of total cooling system protection
- Is suitable for passenger cars, vans, SUVs, light trucks, heavy duty fleet vehicles and many off-road applications such as stationary engine cooling systems
- Will provide superior corrosion protection for ALL cooling system metals, including aluminum, steel, cast iron, copper, brass and solder
- Available in concentrate and 50/50 pre-diluted formulas

Meets the following OEM Specifications:

GM 6277M	BMW
Ford ESE M97B44-A	Mercedes-Benz 325.0 & 325.2
Ford WSE M97B44-B	AudiSaab 6901 599
Ford WSS M97B44-D	Volvo 014 GS 17009
Ford WSS-M97B54-A	Caterpillar EC-1
Ford WSS-M97B44-E1/E2	Caterpillar ELC (with the addition of molybdate per specification)
Chrysler MS9769	Cummins CES14603 (as found in service bulletin 3666132-02)
John Deere H-5, H-24, A-1 to C-1	Detroit Diesel 7SE298; DDC
MTU MTL 5048, MTL 5049	Powercool Plus and DDC
Toyota	Powercool Plus 6000
Porsche TL-774D	Navistar CEMS B-44
Mitsubishi	Navistar/International B-1, Type III
Honda HES D2009-75	(CEMS B-1), with the addition of molybdate per specification
Hyundai	PACCAR: Kenworth, Peterbilt
Mazda MEZ MW 121D	
Suzuki OF02	
Isuzu	
VW TL774F (G12), light violet	
VW G12	



PUREFLEET EXTREME HEAVY DUTY ELC	TYPICAL VALUES	ASTM METHOD
ASH CONTENT (50% BY VOLUME SOLUTION)	2.5% MAX	D1119
PH (50% BY VOLUME SOLUTION)	7.5-9.0	D1287
RESERVE ALKALINITY	NONE SPECIFIED	D1121
SPECIFIC GRAVITY AT 20/20°C (50% BY VOLUME SOLUTION)	1.110-1.145	D1122
FREEZING POINT (50% BY VOLUME SOLUTION)	-34°F	D1177
BOILING POINT (50% BY VOLUME SOLUTION)	226°F	D1120
FLASH POINT (TAG OPEN CUP) (70% BY VOLUME SOLUTION)	NONE	6100 (-30 °C)
FOAM TEST	150 ML/5.0 SEC. MAX.	D1881
COLOR	YELLOW	

GREASE



STAR FIRE

RED

HI-TEMP

PREMIUM
EP2 GREASE

Hi-Temp Red EP2 Grease

STARFIRE HI-TEMP RED EP2 GREASE is recommended for most automotive and industrial applications, including trucks, automobiles, construction equipment and heavy duty industrial service. It is commonly recommended for wheel bearings, U-joints, chassis, and fifth wheels, as well as heavy duty industrial ball, roller and sleeve bearing designs. Hi-Temp Red EP2 Grease is licensed with NLGI to meet NLGI GC/LB specifications for automotive wheel bearings and chassis lubrication.

BENEFITS

- High-temperature capability
- Excellent thermal and mechanical stability
- Oxidation and rust resistance
- Excellent water resistance
- Good low-temperature pumpability
- Extreme-pressure additive
- Compatible with lithium or lithium complex greases
- Excellent adhesion properties, tacky consistency

Also available in
1 lb and 4 lb tubs

TYPICAL PROPERTIES

NLGI GRADE	2
THICKENER	LITHIUM COMPLEX
NLGI CLASSIFICATION	GC/LB
WORKED PENETRATION, D-217	265-295
DROPPING POINT °C (°F), MIN.	260 (500)
FOUR BALL WELD POINT, KGF	400
RUST PROTECTION	PASS 1, 1, 1
WATER WASHOUT @ 80°C, %	<5.0
TIMKEN OK LOAD, LBS.	50
BASE OIL VISCOSITY @ 40°C, cSt	220
APPROXIMATE TEMPERATURE RANGE, °C (°F)	-18 TO 129 (0 TO 265)



Multi-Purpose NLGI 2 Grease

STARFIRE MULTI-PURPOSE NLGI 2 GREASE is recommended for moderate speed and temperature applications. It is suitable for bearing temperatures up to 121°C (250°F) and down to -12.2°C (10°F). STARFIRE Multi-Purpose NLGI 2 Grease provides excellent lubrication performance for automotive chassis, electric motor bearings, universal joints, fifth wheels and general-purpose bearing lubrication.

TYPICAL PROPERTIES

NLGI GRADE	2
THICKENER	LITHIUM 12 - HYDROXY
DROPPING POINT °F, MIN.	390
WORKED PENETRATION @ 77°F, 60 STROKES	280
BASE OIL VISCOSITY @ 40°C, cSt	150
COLOR	AMBER



3% MOLY EP2 Grease

STARFIRE 3% MOLY EP2 GREASE is a high-quality multi-purpose grease for construction, industrial and transportation service. It has a lithium complex thickener for compatibility with a wide range of industrial greases. STARFIRE 3% MOLY EP2 GREASE offers anti-wear protection, strong extreme-pressure properties, rust and oxidation inhibitors and tackifiers. It is fortified with 3% Molybdenum Disulfide for additional EP protection. It offers excellent mechanical stability, load-carrying capability and water and corrosion resistance. STARFIRE 3% MOLY EP2 GREASE is also recommended for high-temperature service.

APPLICATIONS

STARFIRE 3% MOLY EP2 GREASE can be used in any ball or roller bearing application. It is specifically designed for use in heavy duty construction equipment where high shock loads and water wash-out are required. NLGI GC-LB performance guarantees excellent wheel bearing performance. Molybdenum Disulfide provides EP protection when the bulk grease has dissipated. This protection is vital for reciprocating bearings such as backhoe knuckle bushings and universal joints.

FEATURES

- Excellent extreme-pressure properties
- High shock load resistance
- Excellent rust and corrosion protection
- Outstanding oxidation stability

SPECIFICATIONS

- Caterpillar Multi-purpose Grease with 3% Moly

TYPICAL PROPERTIES

NLGI GRADE	2
THICKENER	LITHIUM COMPLEX
PENETRATION, 60 STROKES, 25°C DMM	280
PENETRATION, 1000 STROKES, 25°C DMM	290
DROPPING POINT °C (°F), MIN.	260 (500)
TIMKEN OK LOAD LBS.	70
FOUR BALL WEAR SCAR, 40 KGF, 1 HR, 75°C, 1200 RPM. MM	0.45
FOUR BALL EP WELD POINT, KGF	400
FOUR BALL LOAD WEAR INDEX, KGF	54
DI RUST PROTECTION, 48 HR, 52°C	PASS
WATER WASHOUT 1 HR, 79°C	4
WATER SPRAY RESISTANCE, 5 MIN., 100°F, 40 PSI, %	30
HIGH TEMPERATURE LIFE, 1000 RPM, 160°C, HR.	120
BASE OIL VISCOSITY AT 40°C, cSt	320
COLOR	GREY



FUNCTIONAL FLUIDS



Brake Fluid

STARFIRE BRAKE FLUIDS are glycol-based fluids formulated to give optimum performance, longer service and to prevent corrosion in brake systems. STARFIRE Brake Fluids meet or exceed the high standards of performance and safety for DOT 3 and DOT 4 fluids.

APPLICATIONS

- For all disc and drum brake systems, including ABS, in which a DOT 3 or DOT 4 fluid is recommended
- Complies with Federal Motor Vehicle Safety Standard (FMVSS) No. 516.116
- Surpasses SAE Spec. J1703 (DOT 3), SAE Spec. J1704 and ISO 4925 (DOT 4)
- Minimum wet boiling point 284°F (140°C)



TYPICAL PROPERTIES	DOT 3	DOT 4
ERBP	249°C 480°F	266°C 510°F
WET ERBP	157°C 314°F	166°C 330°F
VISCOSITY: cSt @ -40°C	1150	1100

Power Steering Fluid

STARFIRE POWER STEERING FLUID is a premium formulation using high-quality lubricating base stocks and select additives. It provides optimum protection in power steering systems of both foreign and domestic automobiles. It controls seal swelling and protects pump parts against wear while providing the proper friction coefficient for proper system operation.

APPLICATIONS

- STARFIRE Power Steering Fluid is suitable for use in most passenger car and light truck applications
- STARFIRE Power Steering Fluid is NOT recommended for systems where special fluids are specified, e.g., Saab, Honda, Mercedes-Benz, etc.
- Always check your owner's manual when choosing a power steering fluid



TYPICAL PROPERTIES

VISCOSITY: cSt @ 40°C	32.25
cSt @ 100°C	6.25
VISCOSITY INDEX	150
BROOKFIELD @ -40°C	22000 cP
FLASH POINT (PMCC), °C	>160
POUR POINT, °C	-48
DENSITY, LBS/GAL @ 60°F	7.44
APPEARANCE/COLOR	BRIGHT AND CLEAR/ L1.5

MOTR Treatment

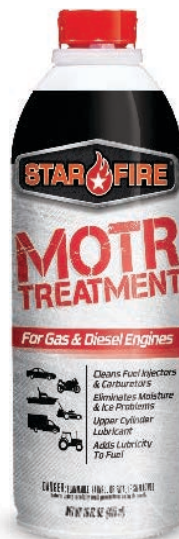
STARFIRE MOTR TREATMENT is a specially formulated fuel and carburetor cleaner for use in gas and diesel engines. It helps reduce hesitation and rough idle and eliminates noisy lifters. It also eliminates moisture and ice problems. Starfire MOTR Treatment is great for use in cars, trucks, boats, tractors and small engines.

APPLICATIONS

- Any gasoline or diesel engine
- Oil treatment in crankcase
- Fuel treatment during fill-up

Benefits

- Fuel injector and carburetor cleaner
- Eliminates moisture and ice problems
- Upper cylinder lubricant
- Adds lubricity to fuel
- Cleans up motor sludge
- Removes varnish



Air Brake Antifreeze and Conditioner

STARFIRE AIR BRAKE ANTIFREEZE AND CONDITIONER helps clean, condition and protect all air brake systems. It prevents freeze-ups, even in sub-zero weather. STARFIRE AIR BRAKE ANTIFREEZE AND CONDITIONER contains no ingredients or residues which can corrode brake line systems. It contains only the purest anhydrous-grade methanol.

BENEFITS

- Prevents moisture and freeze-ups
- Rust and corrosion inhibitor
- Works in all air brake systems
- Ultra-pure formula
- Leaves no residue



TYPICAL PROPERTIES	AIRBRAKE ANTIFREEZE
APPEARANCE	COLORLESS LIQUID
FREEZING POINT, °C (°F)	-97.6 (-143.68)
FLASH POINT, °C (°F)	11 (51.8)
RELATIVE DENSITY @20°C (68°F)	0.791 - 0.793



Diesel Monster® Anti-Gel

STARFIRE DIESEL MONSTER® ANTI-GEL is a high-performance winter diesel treatment formulated for today's low sulfur fuel. Utilizing an advanced diesel fuel cold flow improver, Diesel Monster® Anti-Gel provides superior protection in cold weather.

BENEFITS

- Eliminates water in fuel
- Improves fuel economy
- Lowers cold filter plug point
- Meets L10 & N14 tests
- Helps stabilize fuel

CONTAINS

- Cetane improver
- Pour point depressant
- Lubricity additive
- Wax dispersant
- Injector cleaner

TREAT RATES

32 OZ	64 OZ	2.5 GALLON
125 GAL	250 GAL	7500 GAL



Diesel Monster® Rescue

STARFIRE DIESEL MONSTER® RESCUE is a special blend of ingredients designed to quickly dissolve ice and wax crystal formations in gelled fuel and restore the flow of fuel to the engine.

BENEFITS

- Dissolves gelled fuel
- Compatible with all fuel types
- Will not harm combustion components
- Will not harm fuel pump injectors

TREAT RATES

32 OZ	64 OZ
50 GAL	100 GAL



STARFIRE DEF

STARFIRE DEF is a mixture of 32.5% high-purity urea and 67.5% deionized water that is used in Selective Catalytic Reduction (SCR) systems on diesel engines. DEF is the primary ingredient used to help convert diesel-powered bus, car and truck NOx emissions to harmless nitrogen and water. DEF is stable, colorless, non-flammable and non-toxic. DEF conforms to the ISO 22241-1 specification for DEF, is API licensed and meets or exceeds all OEM specifications.

BENEFITS

- API licensed
- Meets or exceeds all OEM specifications
- Conforms to ISO 22241-1 specification for DEF

HANDLING

- Use only dedicated DEF equipment when handling/dispensing DEF, and keep dispensing equipment clean and free from dirt or other contaminants
- DO NOT add DEF to diesel fuel tank
- DO NOT add diesel fuel to DEF tank
- DO NOT add water to DEF



PHYSICAL PROPERTIES

BOILING POINT	>212°F
CRYSTALLIZATION POINT	2°F
POUNDS/GALLONS	9.09
SPECIFIC GRAVITY (WATER -1)	1.09
VAPOR PRESSURE (MM OF HG)	N/A
VAPOR DENSITY (AIR -1)	0.6 H ₂ O, >1
WATER SOLUBILITY	100%
APPEARANCE	COLORLESS, CLEAR LIQUID
ODOR	NONE TO SLIGHT AMMONIA
EVAPORATION RATE	<1



Tec-A-Brake® Low VOC Brake & Parts Cleaner

STARFIRE TEC-A-BRAKE® LOW VOC BRAKE & PARTS CLEANER is a non-chlorinated formula that quickly and effectively removes grease, brake dust, brake fluids, oils and other contaminants from brake parts, linings and pads. Do not use on electrical motors or circuits, and avoid contact with rubber and plastic.

APPLICATIONS

- ABS
- Discs
- Drum
- Brake cylinders, drums, linings, shoes
- Clutch discs
- Disc brake pads

BENEFITS

- Fast drying
- Removes grease, oil, brake fluid and other contaminants from disc and drum brake components instantly
- Leaves no residue
- Cleans without disassembly
- Helps stop brake squeaking and can improve braking performance
- Non-chlorinated
- Low VOC formula



Tec-A-Start® Starting Fluid

STARFIRE TEC-A-START® STARTING FLUID is professional-grade engine starting fluid. It is a balanced formulation combining active, volatile solvents, upper cylinder lubricant and corrosion inhibitors, each designed to play a vital part in starting engines.

APPLICATIONS

- Cars
- Trucks
- Buses
- Tractors
- Motorbikes and motorcycles
- Chain saws
- Boats (inboard and outboard)
- Go-carts
- Stationary engines
- Compressors
- Diesel, gasoline and kerosene engines
- 2-cycle and 4-cycle engines

BENEFITS

- Ensures fast, economical starting of all diesel and gasoline engines
- Reduces starter motor and spark plug wear
- Saves battery strain and engine wear during cold start
- Saves time and money
- Equipped with the 360° (upside down) spray valve and extension tube for added convenience





Tec-A-Foam™ Engine Degreaser

STARFIRE TEC-A-FOAM™ ENGINE DEGREASER is a fast-acting foam engine cleaner that clings to surfaces and quickly penetrates and expands into hard-to-reach areas to clean dirt, dust, and road grime.

APPLICATIONS

Use on cars, trucks, power mowers, RVs, ATVs, bikes, farm equipment, and tractors and engines with plastic covers.

BENEFITS

- Clings to surfaces
- Fast-acting foam removes dirt quickly
- Penetrates and expands into hard-to-reach areas
- Rinses off with water



Tec-A-Carb™ Carb/Choke Cleaner

STARFIRE TEC-A-CARB™ CARB/CHOKE & THROTTLE BODY CLEANER quickly dissolves and removes harmful carbon, gum, sludge and varnish deposits from throttle plates, manifold heat control valves, PCV valves, automatic chokes, combustion chambers, and carburetor linkages and passages. Tec-A-Carb™ serves as an excellent penetrant to free hard-to-reach passages and sliding surfaces that are clogged or bound by gum, carbon or corrosive deposits. Safe for oxygen sensors and catalytic converters.

BENEFITS

- Quickly dissolves deposits
- Oxygen sensor safe
- Removes gum and varnish
- Non-chlorinated
- Restores performance



Tec-A-Glass™ Glass Cleaner

STARFIRE TEC-A-GLASS™ GLASS CLEANER quickly cleans glass, mirrors, windshields and windows. Its clinging foam formula quickly removes fingerprints, smudges, lipstick, light grease, bugs, dust, dirt, smoke film and other residues from glass surfaces. Tec-A-Glass™ dries quickly, requires no rinsing and leaves a pleasant, fresh aroma.

APPLICATIONS

- Industrial
- Commercial
- Institutional
- Automotive
- Household

BENEFITS

- Clinging foam formula-no dripping or running
- Leaves a streak-free shine
- No ammonia
- Dries quickly
- Pleasant, fresh scent
- Ergonomically designed spray tip for maximum comfort during use





Tec-A-Nut™ Penetrating Oil

STARFIRE TEC-A-NUT™ PENETRATING OIL is a fast-acting penetrant that quickly cuts through grease, penetrates corrosion and dissolves rust to free seized parts. Tec-A-Nut™ Penetrating Oil will also get into cracks and crevices to displace water and leave a protective film to protect against rust and corrosion.

APPLICATIONS

Tec-A-Nut™ Penetrating Oil will loosen, clean, lubricate and protect nuts/bolts, lock mechanisms, hinges, pipe threads, lug nuts and equipment subject to moisture, rust and corrosion.

BENEFITS

- Helps free seized parts
- Quickly penetrates corrosion
- Non-chlorinated spray valve and extension tube for added convenience
- Dissolves rust
- Displaces moisture
- Cuts through grease
- Silences squeaks



Tec-A-Chain™ Chain and Cable Lubricant

STARFIRE TEC-A-CHAIN™ CHAIN AND CABLE LUBRICANT, fortified with moly, provides superior penetrating action that leaves a lubricating film which reduces friction, wear and corrosion. When applied to wire ropes, cables, rollers, pins, links and bushings of chains, the moly and other additives provide superior anti-wear and rust protection.

BENEFITS

- Penetrates
- Lubricates
- Protects
- Foaming action, with tackifiers
- Fortified with moly



Tec-A-Lith™ White Lithium Grease

STARFIRE TEC-A-LITH™ WHITE LITHIUM GREASE is an all-weather, multi-purpose, water-resistant grease that leaves a long-lasting lubricating film. Its white color helps indicate lubricated areas and reduces staining.

APPLICATIONS

- Automotive
- Marine
- Industrial
- Home
- Office
-

BENEFITS

- All-weather use
- Deep penetrating
- Heavy duty
- Non-staining
- Water resistant



Fuel Injector & Carb Cleaner

STARFIRE FUEL INJECTOR & CARB CLEANER uses the latest technology in gasoline detergency to clean and lubricate fuel injectors and carburetors and restore fuel flow and performance.

FEATURES/BENEFITS

- Cleans fuel system as you drive
- Use regularly to keep fuel system clean
- Each bottle treats up to 20 gallons
- Dissolves gum and varnish
- Restores lost power
- Reduces rough idle and stalling
- Contains no alcohol
- Will not harm catalytic converters or oxygen sensors
- Increases mileage



Gas Treatment

STARFIRE GAS TREATMENT is a special blend of powerful cleaners designed to clean the entire fuel system of gum, varnish and deposits. This alcohol-free cleaner will not harm catalytic converters or oxygen sensors and works with both fuel injectors and carburetors.

FEATURES/BENEFITS

- Cleans fuel system as you drive
- Use regularly to keep fuel system clean
- Each bottle treats up to 20 gallons
- Dissolves gum and varnish
- Contains no alcohol
- Will not harm catalytic converters or oxygen sensors
- Restores lost power
- Reduces rough idle and stalling



Motor Flush

STARFIRE MOTOR FLUSH is designed to remove sludge, gum and varnish from your engine and improve oil flow.

FEATURES/BENEFITS

- Use just before changing oil
- Add to cold engine
- Extends engine life
- Frees sticky valves and rings in 5 minutes
- Restores oil flow throughout the engine
- Use twice a year to keep engine clean



Octane Booster

STARFIRE OCTANE BOOSTER is designed to restore lost power, reduce hesitation and stalling, and prevent difficult starting.

FEATURES/BENEFITS

- Cleans fuel system as you drive
- Use regularly to keep fuel system clean
- Each bottle treats up to 20 gallons
- Dissolves fuel system deposits
- Use on a regular basis to maintain engine performance
- Restores fuel flow
- Restores lost power
- Prevents difficult starts
- Effective with methanol and alcohol fuel mixtures



Oil Treatment

STARFIRE OIL TREATMENT is an advanced formula designed to provide a protective barrier against friction and heat, thus extending engine life.

FEATURES/BENEFITS

- Add a full bottle to oil during oil change
- Improves oil viscosity
- Can be added between drains to fortify the oil
- Coats engine with a tough, slippery film that resists heat and pressure
- Protects against corrosion
- Keeps engine parts clean
- Reduces oil degradation with temperature





ANCILLARY PRODUCTS

RV & Marine Antifreeze (-50°F)

STARFIRE RV & MARINE ANTIFREEZE (-50°F) provides burst protection in potable water systems down to -50°F. Starfire RV & Marine Antifreeze is an environmentally and economically safe winterization fluid.

APPLICATIONS

STARFIRE RV & Marine Antifreeze (-50°F) is an economical alternative for the winterization of campers, RVs, boats and summer homes.

BENEFITS

- 2 formulations are available:
Ethanol blend and PG only
- No mixing required
- Burst protection down to -50°F
- Non-toxic
- Safe for freshwater systems



Windshield Washer Fluid

STARFIRE WINDSHIELD WASHER FLUID has been formulated to provide the additional freezing protection that water just cannot provide. STARFIRE Windshield Washer Fluid will protect to -20°F. Starfire Windshield Washer Fluid clears windshields of dirt, bug stains, frost and ice.

BENEFITS

- Keeps windshields clean and improves visibility
- No mixing necessary
- Freeze protection to -20°F
- Harmless to car finishes

Windshield Washer Concentrate

BENEFITS

- Lowers freeze point on existing fluid that was subject to alcohol evaporation
- Environmentally conscious with reduced plastic packaging
- Saves inventory space



PurpleStar Degreaser

STARFIRE PURPLESTAR DEGREASER is a powerful, concentrated, non-hazardous cleaner and degreaser. Special deep-cleaning formulation separates, entraps and removes grease, dirt, oil, and grime from almost every type of surface.

APPLICATIONS

- Works in manual, mechanical and pressure-washing systems
- Concentrated
- Dilute up to 20:1
- Use to clean everything from kitchen counters to barbecue grills to the greasy, dirty, burned-in grime on your engine

BENEFITS

- Special deep-cleaning formulation that separates, entraps and removes grease, dirt, oil, and grime from almost every type of surface
- Non-flammable, non-abrasive
- Water based
- Biodegradable
- Powerful cleaning and degreasing without hazardous chemicals
- Readily biodegradable and solvent (VOC) free
- Completely removes oily, greasy soils, carbon, soot, and grime
- More concentrated than leading brands
- Safe to use on any water-washable surface or material
- Non-corrosive, non-toxic
- Rinses quickly for residue-free surfaces
- Retards post-cleaning rusting and oxidation
- Does not interfere with wastewater treatment
- Dilutions- SPRAY CLEANING: Dilute 20:1, GENERAL CLEANING: Dilute 20:1, FLOOR CLEANING: Dilute 10:1, HEAVY DUTY CLEANING: Dilute 6:1



PROPERTIES	RESULTS
SPECIFIC GRAVITY @ 70°F	1.025
APPEARANCE	PURPLE
PH	12.5
ODOR	SWEET GLYCOL

SuperTack™ Bar & Chain Oil

STARFIRE SUPERTACK™ BAR & CHAIN OIL is a premium lubricant designed to prevent rusting and reduce wear and link breakage, thus extending bar and chain life. The SuperTack™ tackifier formula provides maximum resistance to dropping and throw-off, even at the highest speeds. Its high viscosity index makes it an excellent choice for commercial bar and chain applications.

APPLICATIONS

- Commercial logging operations
- Professional tree-trimming services
- Professional clearing operations
- Homeowners seeking premium-grade protection

BENEFITS

- Two viscosity grades provide excellent year-round protection and performance
- SuperTack™ additive resists throw-off at highest speeds
- Prevents rust and reduces wear and link breakage
- Superior protection and performance for commercial and home applications



TYPICAL PROPERTIES	ALL SEASON	INDUSTRIAL GRADE
VISCOSITY: cSt @ 40°C	77.7	100
cSt @ 100°C	11.7	14.5
VISCOSITY INDEX	144	149
FLASH POINT (PMCC), °F	>155°C / >311°F	>208°C / >406°F
SPECIFIC GRAVITY @ 60°F	.8644	.864
API GRAVITY @ 60°F	32.2	32.3
COLOR	AMBER	RED

Industrial Hand Cleaner

STARFIRE INDUSTRIAL HAND CLEANER is a non-solvent industrial hand soap that's designed for the toughest cleaning without drying out your hands. Multiple emollients and conditioners actually moisturize chapped skin with repeated use.

APPLICATIONS

- Use on hands to liquify and remove stubborn industrial soils, grease, oil, tar, ink, paint and more.

BENEFITS

An environmentally friendly, biodegradable product. Does not contain petroleum distillates or dyes. STARFIRE Industrial Hand Cleaner is an official USDA certified biobased product. The super-concentrated formula reduces hand soap use by up to 75%. Contains natural walnut shell scrubbers that are less abrasive to skin and superior skin emollients and skin conditioners that will not dry or crack hands. Leaves no greasy residue.



Grime Time Heavy Duty Hand and Surface Wipes

GRIME TIME HEAVY DUTY HAND AND SURFACE WIPES are built for ultimate performance. The abrasive side cuts through the toughest soils, while the smooth side allows for wiping the most delicate surfaces. Fortified with new-generation cleaning agents and unmatched skin conditioners. This one wipe does it all!

APPLICATIONS

- Use on grease, grime, oil, and many other soils
- Use as a hand cleaner or surface wipe to take on the toughest jobs

BENEFITS

- Multi-purpose
- Two-sided cleaning wipe
- Hand cleaner & surface wipe
- Fortified with skin conditioners



Zombie Dry Absorbent

STARFIRE ZOMBIE DRY ABSORBENT is kiln-dried, calcined and milled natural Montmorillonite Clay (CAS # 70892-59-0) with lower bulk density, higher sorptive capacity, higher surface area and high hardness (low solubility).

SCREEN SIZE: *

U.S.A. Standard Test Sieve (ASTME-II)

+10 MESH.....	5%
+20 MESH	50%
+50 MESH	40%
+ PAN	<5 %

(100.00 %) *Typical analysis of standard product, individual results

may vary.

TYPICAL CHARACTERIZATION	TYPICAL VALUES
LOOSE BULK DENSITY	37 - 39 LBS./CU. FT.
MOISTURE CONTENT	< 0.5%
HARDNESS	> 95%
PH	6.5
CEC	33.6
WATER ABSORPTION	78%
OIL ABSORPTION	76%
PRODUCT POROSITY	78%
GRANULATION	FINE



Multi-Purpose Absorbent

STARFIRE MULTI-PURPOSE ABSORBENT is kiln-dried, calcined and milled natural Montmorillonite Clay (CAS # 70892-59-0) with medium bulk density, medium sorptive capacity, average surface area and high hardness (low solubility).

SCREEN SIZE: *

U.S.A. Standard Test Sieve (ASTME II)

+ 4 MESH.....	0%
+ 6 MESH	16%
+ 10 MESH.....	40%
+ 20 MESH	35%
+ 30 MESH5%
+ 60 MESH	<5%
+ PAN	<0.5%

(100.00%) *Typical analysis of standard product, individual results may vary.

TYPICAL CHARACTERIZATION	TYPICAL VALUES
LOOSE BULK DENSITY	40 - 42 LBS./CU. FT.
MOISTURE CONTENT	< 0.5%
HARDNESS	> 95%
PH	6.0 - 6.5
CEC	33.6
WATER ABSORPTION	72%
OIL ABSORPTION	53%
PRODUCT POROSITY	78%
GRANULATION	COARSE





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Introducing our New line of High-Performance Industrial Lubricants for large-scale industrial applications —specifically blended to protect machinery, increase efficiency, and deliver legendary STARFIRE reliability.





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// EP grease that protect under extreme conditions.

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SENTRY Fluid Analysis

JOIN THE STARFIRE SENTRY FLUID ANALYSIS PROGRAM, and you'll have access to comprehensive lubricant, antifreeze and diesel fuel testing, analysis interpretation, analysis summary and test kits, all from the convenience of your PC or mobile device!

When you make STARFIRE SENTRY an integral part of your preventive maintenance program, you will be able to:

- Maximize asset reliability
- Safely extend oil drain intervals
- Extend equipment life
- Minimize downtime by identifying minor problems before they become major failures
- Access high-quality testing by an independent, ISO 17025 A2LA-accredited laboratory
- Get online results immediately upon sample processing completion
- Use innovative data management tools to assist with daily maintenance

STARFIRE SENTRY Fluid Analysis kits provide advanced diagnostic and preventive maintenance testing designed to evaluate fluid condition, component wear and contamination in engines, hydraulic systems, transmissions, differentials, gear boxes, final drives, turbines and compressors.

RESULTS

STARFIRE SENTRY Fluid Analysis results are accessible via HORIZON®, a web-based data management application designed to help you manage your data and your program efficiently and effectively. This system allows you to submit sample information electronically and manage your equipment lists from any PC or mobile device.

- Keep sampling schedules on track with daily maintenance
- Identify bottlenecks in turnaround time
- Monitor samples submitted online
- View graphs to quickly pinpoint trends
- Add or update equipment information



THE STARFIRE BRAND

SPEAKS
VOLUMES



In addition to the packaging you see in this catalog, STARFIRE products are also available in **PAILS, KEGS, DRUMS, TOTES and BULK TANKER transports.**

We make sure you have the fluids you need, in the volume you need-to keep an enterprise moving forward.

