

## Product Data

# VANGUARD

## Gasoline Additive

### Problems That Can Occur In Untreated Gasoline Engines:

- ✓ **Unleaded Fuels Are Very Dry and Give No Lubrication**
- ✓ **Damage Caused By Sulfur, Gum, Varnish and Moisture**
- ✓ **Corrosion Caused By Harmful Fuel Acids**
- ✓ **Incomplete Combustion**
- ✓ **Accumulation of Harmful Deposits and Buildups**

### VANGUARD... Performance in Action.

● **INCREASES LUBRICITY.** VANGUARD is specifically engineered to answer the needs of today's high performance engines and is blended to neutralize harmful fuel acids, as well as eliminate the damage caused by sulfur, gum, varnish and moisture found in all fuels. VANGUARD adds a special lubrication to fuel and therefore lubricates the fuel pump, injector and engine. **PERFORMANCE BENEFIT: Fewer problems. No dry fuel systems. Extends life of engine.**

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● **INCREASES FUEL EFFICIENCY.** VANGUARD saves money by allowing the engine to run at maximum efficiency which reduces the amount of fuel required. VANGUARD improves fuel performance by absorbing normal condensation in both bulk and vehicle storage tanks. VANGUARD cleans injectors and carburetors and, in general, improves engine performance and reduces downtime and maintenance costs. **PERFORMANCE BENEFIT: Elimination of equipment downtime due to fuel flow problems. Lower fuel costs. Increase mileage and power output.**

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● **MOISTURE DISPLACER.** VANGUARD's formula contains a displacing corrosion inhibitor that protects fuel storage tanks and engine fuel system components from rust and corrosion damage, especially injectors. **PERFORMANCE BENEFIT: Increases engine life.**

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● **LENGTHENS ENGINE LIFE.** Regular use of VANGUARD will reduce carbon deposits, which saves maintenance costs. Mixed with the gasoline in its proper dilution, it will hold the suspended solids within the fuel (rather than allowing them to settle out) thus, the impurities are simply burned off along with the fuel. Combustion becomes much easier and therefore the work load on the engine is reduced.

**PERFORMANCE BENEFIT: Reduces wear on the engine and saves on maintenance costs, labor and downtime.**

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● **EASIER STARTING.** VANGUARD raises the octane performance of fuel, resulting in easier starts and better operation. A low fuel octane number indicates poor combustion qualities, which also accounts for hard starts.

**PERFORMANCE BENEFIT: Fuel is ignited easier and more complete combustion is achieved. Save money on maintenance and fuel costs.**

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## APPLICATIONS

VANGUARD is designed to neutralize harmful fuel acids as well as eliminate the damage caused by sulfur, gum, varnish and moisture. During combustion, sulfur contained in fuels combines with oxygen and water to produce sulfuric acid. This acid attacks liners, piston rings, bearings and other engine parts. VANGUARD's powerful ingredients bring about more complete combustion. This helps to reduce accumulations of harmful deposits in the firing chamber. Also, by neutralizing engine acids, gums and varnishes are prevented from separating out of the fuel, further reducing deposit buildups. Other advantages include cleaner and more complete combustion; increased mileage; clean injectors and carburetors; improved engine performance; and lower maintenance costs. This product is widely used by trucking companies, auto depots, moving and storage companies, construction firms, municipal garages, boat yards and bus companies.

## DIRECTIONS

**For gasoline in fuel storage tanks:** Use 1 gallon VANGUARD for each 750 to 1,000 gallons of fuel. VANGUARD mixes thoroughly and remains mixed with all liquid fuels. **For gasoline in automobile or truck tanks:** Use 10 ounces VANGUARD for each 15 gallons of fuel. For best mixing, add VANGUARD to the tank before filling with fuel. After using VANGUARD-treated gasoline for 3 tanks or 1,000 miles, performance will be further improved by replacing spark plug gap to standard setting, inspecting distributor points and adjusting carburetor if necessary. Engine tune-ups may be at extended intervals in the future.

## TECHNICAL DATA

<b>Composition:</b>	Aliphatic hydrocarbons, dispersants
<b>Type:</b>	Solvent-based gasoline fuel conditioner and stabilizer
<b>Specific Gravity:</b>	0.83
<b>Flash Point:</b>	117°F
<b>Color:</b>	Light yellow to amber
<b>Odor:</b>	Petroleum

## APPROVALS

VANGUARD is formulated in accordance with 40 CFR 79, Registration of Fuels and Fuel Additives.



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