METALGUARD® A40

Light-Duty OAT Extended Life Additive Package

Overview

METALGUARD A40 is an all-organic OAT (organic acid technology) inhibitor package. It contains no borate, nitrate, nitrite, phosphate or silicate. A40 contains organic acids and azoles to provide complete metal protection and guard the cooling system against corrosion. Antifreeze made with A40 can be mixed with modern extended life coolants without precipitation problems.

METALGUARD A40 produces antifreeze that can meet the ASTM D3306 specification for light-duty coolants. Antifreeze/coolant made with A40 provides a service life of 5 years or 150,000 miles and is suitable for use in foreign and domestic passenger cars, vans, SUVs and light trucks requiring extended life antifreeze.

Features & Benefits

- Makes extended life OAT coolant.
- Does not contain: nitrite, nitrate, silicate, phosphate, or borate
- Provides long-term compatibility with hoses, seals and gaskets.
- Can be blended with ethylene glycol, propylene glycol or glycerin bases.
- Contains ingredients to protect all engine metals.
- Service life of up to 5 years 150,000 miles

Specifications

Formulated to meet:

- **ASTM D3306**

Industry Applications

Used to make antifreeze/coolant for:

- Ideal as top-off coolant or aftermarket fill.
- Suitable for passenger cars, vans, SUVs and llight trucks.

Quality Control & Technical Support

WEBA's products must pass rigorous quality control tests. They are tested for conformance with product specifications and industry standards. Certificates of analysis are provided with every shipment. WEBA Technology can help with many technical questions relating to the finished fluids our additives create, types of glycol and other bases, and assist with issues on products containing our inhibitor packages.

WEBA TECHNOLOGY

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METALGUARD® A40

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Product Specifications

As concentrated inhibitor package:	
Visual	Clear to slightly cloudy, clear to amber liquid
Specific Gravity; 70ºF/21.1ºC	1.000-1.060
pH	9.5-10.5
As antifreeze concentrate, ethylene glycol base:	
Specific Gravity; 70ºF/21.1ºC	1.110-1.145
pH	8.0-9.5
Reserve Alkalinity	6 ml min at 5% use rate
Freeze Point @ 50%	-34ºF (-36ºC) max.

Blending & Use Instructions

METALGUARD A40 should be blended with glycols meeting ASTM E1177 EG-1, EG-2, PG-1 or PG-2 requirements. Dilution water should be deionized or at least meet the limits given in Table X1.1 in the appendix of ASTM D6210 standard.

Blending: The METALGUARD A40 additive package is more viscous than other WEBA additives and the viscosity will increase at lower temperatures. This is normal. Inspect the drum after opening, if there is separation then gently mix the drum. DO NOT mix the drum unless you see separation. DO NOT use high-speed agitation.

To make antifreeze concentrate: To make antifreeze concentrate: First charge the desired quantity of glycol to the blending tank. Heat the glycol to 50ºF (10ºC) or higher. Maintain the minimum temperature throughout the blending procedure. Good agitation is vital to making a consistent and proper product; agitate for 30-60 minutes after the addition of the additive package.

Light-Duty Engine Coolant: Based on the quantity being manufactured, add 3.8% by volume
Premium, 5yr/150K mile Coolant: Based on the quantity being manufactured, add 5.0% by volume

To make Premix: Option 1: dilute concentrate 50% by volume. Option 2: If you are making premix (ready-to-use) from scratch, the METALGUARD additive, antifoam, dye and bitterant are considered part of the water portion. The concentration (percentage) of water will need to be adjusted to achieve a proper freeze point as required by ASTM D3306.

Light-Duty Engine Coolant: Based on the quantity being manufactured, add 1.9% by volume
Premium, 5yr/150K mile Coolant: Based on the quantity being manufactured, add 2.5% by volume

Antifoam: Add the appropriate amount of antifoam to allow your product to pass a foam test. Use 0.01% by volume or 0.5 gallon (1.90L) per 5000 gallons (18,925L) of antifreeze concentrate (0.25 gallons/0.95L in 50/50). More may be needed depending upon glycol-base quality. Antifoam may be purchased in 5-gallon (18.93L) pails from WEBA Technology.

Dye: As the last step add the color of dye that you wish to use. If you need help determining dye colors or use rates you may contact us.

Testing: Test your finished product to be sure it conforms to specifications. See below paragraph on quality control.

Storage: Store concentrated additive packages above 60ºF (15.5ºC). If a container arrives cold to your warehouse, immediately place it in a hot room for 1-2 days then stir thoroughly prior to use. Alternatively, heating blankets may be used (follow local regulations regarding their usage) Once a container is opened there is a possibility of the liquid phase evaporating, so close the container tightly after each use. High temperatures, above 100ºF (38ºC) for an extended duration, may also cause degradation of the inhibitors. If you are in an area of the country with continuous high heat, store the additive in a cooler area of your warehouse.

Water Quality And Dilution: When antifreeze concentrate is diluted with water, the water for dilution must be of acceptable quality. Deionized water is the best to use, but other sources of water are acceptable if they meet the water quality limits outlined in both ASTM D3306.

Quality Control Procedures: WEBA strongly recommends that all antifreeze producers have an internal, complete quality control program in place for manufacturing and testing of all products made for sale.

The specifications listed in this bulletin are based on products produced with WEBA's additive packages, virgin glycol and deionized water. To confirm that your finished products meet the required industry specifications, WEBA recommends that you test your glycol and finished products at an accredited laboratory. WEBA will warrant our additive packages only if this procedure and the recommended blending and storage procedures are properly followed and documented. In addition, the glycol or other base fluid used with our additive systems should meet industry or ASTM standards unless specifically exempted in our literature.