

# METALGUARD® A80-Si

## Light-duty Nitrite Free Extended Life Antifreeze Inhibitor with Silicate

### Overview

METALGUARD A80-Si is an organic acid-based additive package that allows for easy blending to make antifreeze meeting ASTM D3306. It contains silicate but does not contain amine, borate, phosphate, nitrate, nitrite or 2-ethylhexanoic acid.

METALGUARD A80-Si provides multiple levels of corrosion protection for aluminum. Silicate rapidly forms a protective coating on aluminum, while the organic acid salts in A80-Si provide enduring protection for all metals, and cover areas where the silicate coating wears off.

Antifreeze/coolant made with METALGUARD A80-Si provides a service life of 5 years or 150,000 miles, and is suitable for use in passenger cars, vans, SUVs and light trucks requiring extended life antifreeze.



### Features & Benefits

- All-organic, silicate-based formulation.
- Does not contain amine, borate, phosphate, nitrate, nitrite or 2-ethylhexanoic acid.
- Provides long-term compatibility with hoses, seals and gaskets.
- Silicate content provides multiple levels of corrosion protection for aluminum.
- Contains anti-scalants and dispersants to prevent scaling and fouling of heat exchange surfaces.
- Can be blended with ethylene glycol, propylene glycol or glycerin bases.
- Contains ingredients to protect all engine metals.
- Service life of 5-years 150,000 miles.



### Specifications

Formulated to meet:

- ASTM D3306



### Industry Applications

**Used to make antifreeze/coolant for:**

- Light-duty automotive applications
- Global use in most SUVs, cars and light trucks
- Vehicles requiring an extended life coolant that contains silicate



### 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



info@webacorp.com  
www.webacorp.com



500 Cummings Center, Suite 6050  
Beverly, MA 01915 USA  
+1 812-822-3658



## Product Specifications

### As concentrated METALGUARD A80-Si inhibitor package:

Visual	Clear to slightly cloudy, clear to amber liquid
Specific Gravity, 70°F/21.1°C	1.171-1.185
pH	9.25 - 10.0

### As concentrated Antifreeze Ethylene Glycol

Specific Gravity, 70°F/21.1°C	1.115-1.125
pH, 50%	8.0-9.0
Freeze Point, 50%	-34°F (-36°C) max.
Reserve Alkalinity	7.0 min.



## Blending & Use Instructions

**METALGUARD A80-Si** 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 D3306 standard.

**Blending:** Upon opening the drum of additive, stir thoroughly. Normally METALGUARD additives remain homogeneous solutions, but stirring before use is a prudent safeguard against any precipitation. Do not use high speed agitation. If you use only a portion of the drum (i.e. a few gallons at a time) you need to mix the drum of additive prior to pulling out the required amount. If you use the entire drum to make a bulk blend you do not need to mix the drum prior to use.

**To make antifreeze concentrate:** First charge the desired quantity of glycol to the blending tank. Heat the glycol to 50°F (10°C) 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.

**Use Rate:** 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.

**Use Rate:** 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 60°F (15.5°C). 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 100°F (38°C) 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 and ASTM D6210.

**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. ©2025 WEBA Technology, All Rights Reserved.