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PRODUCT DATA SHEET

AdvanceGuard® WLX

Water Life Extended — Engine Jacket Inhibitor

Concentrated Water-Only Corrosion & Scale Inhibitor for Closed-Loop Cooling Systems — Enhanced Heat Transfer with No Glycol

AdvanceGuard® WLX is a concentrated corrosion and scale inhibitor treatment designed for closed-loop fresh water jacket cooling systems, stationary engines, and industrial applications operating without glycol. By eliminating glycol from the cooling circuit, WLX delivers a **higher heat transfer rate** than conventional antifreeze/coolant mixtures, helping reduce high-temperature shutdowns in demanding operating environments. The formulation utilizes advanced hybrid **Nitrite/Molybdate plus OAT (NMOAT) technology** combined with filming amines and a high-performance polymer. **Special surfactants and nanomaterials** further increase heat transfer efficiency. WLX provides comprehensive protection against rust, corrosion, and pitting across all system metallurgies, including copper and yellow metals. A high-performance polymer controls mineral scale deposits in fresh, low-TDS water applications.

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SUPERIOR HEAT TRANSFER

No glycol means higher thermal conductivity — reduces high-temp shutdowns in hot climates

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NMOAT PROTECTION

Hybrid Nitrite/Molybdate + OAT inhibitor system delivers extended-life corrosion and pitting protection

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SCALE PREVENTION

High-performance polymer controls mineral scale even in variable water quality

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ALL-METAL COMPATIBLE

Safe for carbon steel, copper, and yellow metal systems

TYPICAL PHYSICAL PROPERTIES

Form @ 70°F	Blue-Green Liquid
Relative Density 60°F	1.05 – 1.08
Density (lbs/gal)	8.75 – 8.80 typical
Freeze Point, °F (°C)	32 (0)
Boiling Point, °F (°C)	220 (104) min @ 29.7 psia
pH (7% Solution)	8.5 – 9.5
Dilution Water	Deionized, Low Hardness (<50 ppm)

APPLICATION INFORMATION

- Dose at **10%** of total system volume in a water-only jacket cooling system
- **Clean first:** flush existing systems with AdvanceClean EJC 100 or EJC 200, then rinse with low-TDS water until clear
- Charge the system with the required volume of WLX, then fill remaining capacity with **deionized water**
- Use water with hardness **<50 ppm** for optimal inhibitor performance and scale control
- No supplemental coolant additives (SCA) required — optional if desired
- Monitor inhibitor levels per routine coolant analysis program

PACKAGING & AVAILABILITY

5 gal	275 gal
BUCKET	TOTE TANK

HANDLING & SAFETY

AdvanceGuard® WLX is an industrial chemical. Handle only after reviewing the Safety Data Sheet (SDS). Use appropriate PPE per SDS guidelines.

Recommendations given in this bulletin are based on tests believed to be reliable. However, the use of the information is beyond the control of Chem Advances, LLC, and no guarantee, expressed or implied, is made regarding the results obtained if not used in accordance with the directions or established safe practices. The buyer must assume all responsibility, including injury or damage from the misuse of the product, as such, or in combination with other materials. This bulletin is not to be taken as a license to operate under or a recommendation to infringe any patent.

PHYSICAL & CHEMICAL DATA

Appearance	Blue/Green
Specific Gravity (60/60°F) ASTM D1122	1.05 – 1.08
pH (33% solution) ASTM D1287	8.75 – 9.25
Reserve Alkalinity ASTM D1121	7.0
Ash Content, % max.	5.0
Boiling Protection (15 lb cap, 29.7 psia) 7% in Water	~250°F (121°C)

ADDITIVE TECHNOLOGY

Core Inhibitor Chemistry	Carboxylic Acid, Tolytriazole, Nitrites, Molybdate
Technology Platform	NMOAT (Nitrite/Molybdate + OAT)
SCA Required	No (optional)

INHIBITOR LEVELS

Nitrites	> 400 ppm
Molybdate	> 400 ppm

FORMULATION — FREE OF

0%	0%	0%	0%
SILICATE	PHOSPHATE	BORATE	NITRATE

WHY WATER-ONLY WITH WLX?

HIGHER COOLING CAPACITY

Water transfers heat significantly more efficiently than glycol/water mixtures. Eliminating glycol means the cooling system can reject more heat per unit of flow — critical in high-ambient-temperature operating environments where high-temperature shutdowns cost production.

ADVANCED NANO-ENHANCED TRANSFER

Special surfactants and nanomaterials in the WLX formulation further increase the heat transfer rate beyond that of plain water, providing an additional performance margin against high-temperature events.

NO GLYCOL DEGRADATION RISK

Glycol thermally degrades over time, forming organic acids and polymeric sludge that foul heat transfer surfaces and clog passages. Water-only operation with WLX inhibitors eliminates this failure mode entirely while providing extended-life corrosion protection.

REDUCED MAINTENANCE BURDEN

No SCA required. Extended-life NMOAT inhibitor chemistry means fewer service intervals, lower chemical consumption, and less downtime compared to conventional coolant programs.

** Typical values shown. These should not be used as quality control parameters to accept or reject product. Specifications are subject to change without notice.*

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