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PRODUCT DATA SHEET

AdvanceGuard® HDX 50

Natural Gas Engine Antifreeze Coolant

Ready-Fill Ethylene Glycol Coolant with NMOAT Technology for Stationary Natural Gas Engines & Interstage Coolers

AdvanceGuard® HDX 50 Natural Gas Engine Antifreeze Coolant is a ready-fill, ethylene glycol-based (EG) coolant specifically designed for large stationary natural gas engines and interstage coolers. Formulated for **extended life and corrosion protection** in heavy-duty systems, HDX 50 uses an advanced hybrid **Nitrite/Molybdate plus Organic Acid Technology (NMOAT)** inhibitor package to protect against damaging rust, corrosion, and pitting across all system metallurgies. Mineral scale deposits are controlled by a **high-performance scale inhibition polymer**, sustaining performance even in field operations with poor water quality.

FREEZE & BOIL PROTECTION

-34°F freeze and 265°F boil protection in a 50/50 EG ready-fill formulation

NMOAT PROTECTION

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

SCALE PREVENTION

High-performance polymer controls mineral scale even in poor field water quality

OEM-SPEC COMPATIBLE

Meets ASTM, SAE, CAT ELC, Cummins, Detroit Diesel, GM & Freightliner standards

TYPICAL PHYSICAL PROPERTIES

Form @ 70°F	Blue-Green Liquid
Glycol Concentration	50% Monoethylene Glycol
Relative Density 60°F	1.10 – 1.12
Density (lbs/gal)	8.1 – 8.5 typical
Freeze Point, °F (°C)	-34 (-37) max
Boiling Point, °F (°C)	265 (129) min @ 29.7 psia
pH (10% Solution)	8.5 – 9.5
Dilution Water	Deionized, Low TDS (<500 ppm)

APPLICATION INFORMATION

- **Ready-fill** — no dilution required for the coolant 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 HDX 50 to normal operating fill level
- Top off with additional HDX 50 or low-TDS deionized water (<500 ppm)
- No supplemental coolant additives (SCA) required — optional if desired
- Monitor inhibitor levels per routine coolant analysis program

PACKAGING & AVAILABILITY

5 gal BUCKET	**55 gal** DRUM
275 gal TOTE TANK	**Bulk** TRUCK

HANDLING & SAFETY

AdvanceGuard® HDX 50 is an industrial chemical. Handle only after reviewing the Safety Data Sheet (SDS). Use appropriate PPE per SDS guidelines. Contains ethylene glycol — keep out of reach of children and animals.

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ADVANCEGUARD® HDX 50 — CHARACTERISTICS

PHYSICAL & CHEMICAL DATA

Appearance	Blue/Green
Specific Gravity (60/60°F) ASTM D1122	1.110
pH (33% solution) ASTM D1287	8.3
Reserve Alkalinity ASTM D1121	5.5
Ash Content, % max.	5.0

Freeze Protection (ASTM D1177)	
60% EG	-67°F (-54°C)
50% EG	-34°F (-37°C)
40% EG	-8 to -12°F (-23°C)
30% EG	5°F (-15°C)

Boiling Protection (15 lb cap, 29.7 psia)	
60% EG	~270–275°F (132–135°C)
50% EG	~265°F (129°C)
40% EG	~262–267°F (128–131°C)
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)
Aluminum Compatible	Yes

INHIBITOR LEVELS

Nitrites	> 400 ppm
Molybdate	> 400 ppm

PERFORMANCE & COMPATIBILITY

ASTM D3306, D4985, D6210	**SAE** J1034, J1038
CAT ELC (EC-1) & **Cummins** 90T8-4	**Detroit Diesel** 7SE298
GM 1825M, 1899M, 6277M	**Freightliner** 48-22880, **TMC** RP329

FORMULATION — FREE OF

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

WHY HDX 50 FOR STATIONARY NATURAL GAS ENGINES?

EXTENDED-LIFE PROTECTION

NMOAT hybrid inhibitor chemistry delivers long service intervals — reducing chemical consumption, fewer service calls, and less downtime versus conventional coolant programs.

ALL-METAL CORROSION DEFENSE

Tolytriazole protects copper and yellow metals; nitrite/molybdate synergy guards ferrous components against pitting in the high heat-flux zones typical of engine jackets and interstage coolers.

SCALE CONTROL IN POOR WATER

High-performance scale inhibition polymer keeps heat transfer surfaces clean even when field water quality varies — sustaining cooling efficiency between service intervals.

READY-FILL SIMPLICITY

Pre-mixed 50/50 formulation eliminates onsite dilution errors. Compatible with existing fleet practices and major OEM specifications across the natural gas engine market.

** 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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