Tx COOLANTS

Tx COOLANTS PRODUCT GUIDE

Tx HDD-N ANTIFREEZE RED

Tx HDD-N Antifreeze Red is a hybrid organic acid technology (HOAT) product that is OEM approved and specially formulated to protect all coolant system metals and provide excellent wet sleeve liner cavitation protection.

Performance Features & Benef ts:

- Low Silicate, Phosphate and Amine Free.
- Provides an in-service life of up to 1,000,000 km, 12,000 hours or 6 years, whichever comes f rst.
- Does not require an initial charge of supplementary coolant additives (SCA) upon initial f ll.
- Designed for use in light and heavy duty diesel applications where an extended service interval is required.
- Provides exceptional boil-over and freeze protection.
- Available in Concentrate and 50/50 Premix formulations.

Applications: Recommended for use in on-road truck, off-road, farm, marine and stationary applications including, but not limited to, Caterpillar, Cummins, Detroit Diesel/ MTU, GM Heavy Truck, Freightliner, PACCAR and Mack.

Chemical Name: Ethylene Glycol-based Engine Coolant.

Typical Product Properties when mixed at recommended 50% concentration with water:		
Test	**Performance**	**Test Method**
pH	7.6 - 8.5	ASTM D-1287
Specif c Gravity (15.6ºC)	1.065 - 1.075	ASTM D-1122
Freeze Point (50% by volume)	-37ºC	ASTM D-1177
Foam Volume (ml)	50 max	ASTM D-1881
Foam Break Time (second)	5 max	ASTM D-1881
Reserve Alkalinity (ml)	3 min	ASTM D-1121
Colour	Strawberry Red	
Total Glycols (Weight %)	50.0 min	
Inhibitors and Dye (Weight %)	2.5 max	
Chloride (ppm)	25 max	ASTM D-3634
Silicon (ppm)	93 max	ICP

Meets or exceeds the performance requirements of the following specif cations:
ASTM D-3306, D-4985, D-6210
Caterpillar EC1
Cummins 14603
Daimler Chrysler MS 7170, MS 9769
Detroit Diesel 7SE 298
Ford ESE-M97B44A, M97B18-C, WSS M97B51-A1
Freightliner 48-2288D
GM 1825M, 1899M, GM Heavy Truck
Hyundai
JIS K2234
Kenworth RO26-170-97
Mack Trucks

Tx HDD-N Antifreeze Red is approved by MTU, Detroit Diesel and Daimler Chrysler.

Tx-HDD-N Antifreeze Red	**Concentrate**	**205 litre**	**TX-RC824/205**
Tx-HDD-N Antifreeze Red	**Concentrate**	**20 litre**	**TX-RC824/20**
Tx-HDD-N Antifreeze Red	**Pre-Mix**	**205 litre**	**TX-RC824PM/205**
Tx-HDD-N Antifreeze Red	**Pre-Mix**	**20 litre**	**TX-RC824PM/20**

Tx HDD-NF ANTIFREEZE BLUE

Tx HDD-NF Antifreeze Blue is based on proprietary hybrid organic acid technology (HOAT) designed for mixed f eet use and is primarily recommended for Japanese and European OEM engines in heavy and light duty diesel applications. It is also suitable for all makes and models of automotive engines.

Performance Features & Benef ts:

- Low Silicate.
- Nitrite, Phosphate and Amine Free.
- Provides an in-service life of up to 1,000,000 km, 12,000 hours or 6 years, whichever comes f rst.
- Does not require an initial charge of supplementary coolant additives (SCA) upon initial f ll.
- Universal use, fully meets or exceeds standard industry requirements for automotive, light duty and heavy duty diesel applications.
- Compatible with both conventional and OAT coolants. However, for best performance, it is recommended to f ush the old coolant and ref ll with Tx HDD-NF Antifreeze Blue.
- Available in Concentrate and 50/50 Premix formulations.

Applications: Recommended for use in all applications were the OEM requires a Nitrite-Free coolant.

Chemical Name: Ethylene Glycol-based Engine Coolant.

Typical Product Properties when mixed at recommended 50% concentration with water:		
Test	**Performance**	**Test Method**
pH	7.6 – 8.0	ASTM D-1287
Specif c Gravity (15.6ºC)	1.070 - 1.075	ASTM D-1122
Freeze Point (50% by volume)	-37ºC	ASTM D-1177
Reserve Alkalinity (ml)	6 min	ASTM D-1121
Colour	Ice Blue	
Total Glycols (Weight %)	50.0 min	
Chloride (ppm)	25 max	ASTM D-3634

Meets or exceeds the performance requirements of the following specif cations:
ASTM D-3306, D-6210-10/D-7583
AS/NZS 21 08:2004 Type A
BS 6580
Cummins
DDC 93K217, 7SE 298
JIS K2234
Komatsu
MAN 324
MB BDL 7700.00
MTU MTL 5048
Saab/ Scania 6901
SAE J1034/J1941

Tx HDD-NF Antifreeze Blue is approved by MTU, Detroit Diesel and Daimler Chrysler.

Tx-HDD-NF Antifreeze Blue	**Concentrate**	**205 litre**	**TX-RC542/205**
Tx-HDD-NF Antifreeze Blue	**Concentrate**	**20 litre**	**TX-RC542/20**
Tx-HDD-NF Antifreeze Blue	**Pre-Mix**	**205 litre**	**TX-RC542PM/205**
Tx-HDD-NF Antifreeze Blue	**Pre-Mix**	**20 litre**	**TX-RC542PM/20**

Tx MULTI ANTIFREEZE GREEN

Tx Multi Antifreeze Green is based on proprietary hybrid organic acid technology (HOAT) specif cally designed for mixed f eet use. It can be used in all makes and models of passenger vehicles, light duty and heavy diesel applications. It not only guards against freezing and over-boil, it also provides critical protection against corrosion.

Performance Features & Benef ts:

- Complete mixed f eet use; automotive, light and heavy duty diesel.
- Borate, Nitrite, Phosphate and Amine Free.
- Add as a top-up to any colour antifreeze.
- Compatible with both conventional and OAT coolants.
- Provides an in-service life of up to 1,000,000 km or 6 years in heavy duty diesel application or 250,000 km or 5 years in an automotive application.
- Protects coolant system metals such as brass, copper, solder, steel, cast iron and aluminium.
- Protects against wet liner cavitation and provides enhanced water pump performance.
- Compatible with CAB radiators.
- Available in Concentrate and 50/50 Premix formulations.

Applications: Recommended for use in all applications were the OEM requires a Nitrite-Free coolant.

Chemical Name: Ethylene Glycol-based Engine Coolant.

Typical Product Properties when mixed at recommended 50% concentration with water:

Test	Performance	Test Method
pH	7.5 – 8.5	ASTM D-1287
Specif c Gravity (15.6ºC)	1.070 - 1.080	ASTM D-1122
Freeze Point (50% by volume)	-37ºC	ASTM D-1177
Foam Volume (ml)	150 max	ASTM D-1881
Foam Break Time (second)	5 max	ASTM D-1881
Reserve Alkalinity (ml)	5 min	ASTM D-1121
Colour	Green / Pale Yellow	
Total Glycols (Weight %)	47.0 min	
Chloride (ppm)	25 max	ASTM D-3634
Silicon, from silicate (ppm)	130 max	ASTM D-6130
Boron (ppm)	<10	
Phosphorous (ppm)	<10	

Meets or exceeds the performance requirements of the following specif cations:

Chrysler
Ford
General Motors
Honda
Hyundai
Mercedes-Benz
Nissan
Toyota
Volkswagen
Suitable in mixtures with all major coolant types

Tx-Multi Antifreeze Green	**Concentrate**	**205 litre**	**TX-RCMVC/205**
Tx-Multi Antifreeze Green	**Concentrate**	**20 litre**	**TX-RCMVC/20**
Tx-Multi Antifreeze Green	**Concentrate**	**5 litre**	**TX-RCMVC/5**
Tx-Multi Antifreeze Green	**Pre-Mix**	**205 litre**	**TX-RCMVPM/205**
Tx-Multi Antifreeze Green	**Pre-Mix**	**20 litre**	**TX-RCMVPM/20**
Tx-Multi Antifreeze Green	**Pre-Mix**	**5 litre**	**TX-RCMVPM/5**

Tx WB COOLANT INHIBITOR

Tx WB Coolant Inhibitor is a water based engine coolant concentrate that contains proprietary organic acid technology (OAT). This product is free of ethylene glycol, silicates, phosphates, borates, nitrates, nitrites and amines. It is fully compatible with other similarly formulated OAT coolants. At 5% dilution with softened or demineralised water, it will provide excellent cooling system protection in automotive applications. At 7% dilution with softened or demineralised water, it will provide excellent cooling system protection in engines in heavy duty applications.

Performance Features & Benef ts:

- Engine protection in automotive applications.
- Engine protection in heavy duty on-road and off-road applications.
- In Heavy Duty applications provides a service life of up to 4 years, or 1,000,000 km or 12,000 hours – whichever comes f rst.
- In automotive applications it provides 3 years or 100,000 kilometres.
- Free from ethylene glycol, amine, borate, phosphate, nitrates, nitrites and silicates.
- Compatible with other long life OAT based engine coolants.
- Universal use; meets industry requirements for both automotive and heavy-duty diesel applications.

Applications: Recommended for use in cooling systems in all applications that do not require antifreeze/ antiboil protection.

Typical Product Properties when mixed at recommended 7% concentration with water:

Test	Performance	Test Method
pH	7.5 – 9.0	ASTM D-1287
Specif c Gravity (15.6ºC)	1.01 - 1.02	ASTM D-1122
Foam Volume (ml)	50 max	ASTM D-1881
Foam Break Time (second)	5 max	ASTM D-1881
Ash Content (wt %)	5 max	ASTM D-1119
Colour	Green	
Total Glycols (Weight %)	0%.	
Chloride (ppm)	25 max	ASTM D-3634
Silicon (ppm)	<10	
Boron (ppm)	<10	
Phosphorous (ppm)	<10	

Tx-WB Coolant Inhibitor	**Concentrate**	**20 litre**	**TX-RCWBCI/20**
Tx-WB Coolant Inhibitor	**Concentrate**	**5 litre**	**TX-RCWBCI/5**

WHY DO WE TREAT WATER?

All engines produce heat which must be dissipated eff ciently or the engine will fail. Greater than 30% of an engine's heat is transferred through its cooling system.

Water is a natural conductor. But untreated promotes the build-up of rust and scale and provides an environment where corrosion and liner cavitation occurs. Modern inhibitors protect engines from these conditions and with the addition of glycol, give boil over and anti-freeze protection.

Long term engine reliability can only be achieved when the appropriate coolant inhibitor system is used.

ARE ALL COOLANTS THE SAME?

Coolant technology has kept pace with progress in engine design. Engine manufacturers use lighter materials but achieve higher power output. Advances in metallurgy have accentuated the need for a coolant with the appropriate chemical composition.

WHAT TYPE OF COOLANTS ARE THERE?

Coolants widely used up to the 1980's in automotive engines and 2000's in heavy diesel engines are classif ed as Conventional Coolants. They relied on additives that were consumed and the coolant typically needed replacing annually. Heavy Diesel engines required Supplementary Coolant Additives (SCA) on a regular basis.

Organic Acid Technology (OAT) describes a range of inhibitors based on a family of carboxylate acids and their salts. OAT type inhibitors provide corrosion protection by forming protective layers on metals used in the cooling system. Because OAT inhibitors simply form a protective layer they do not get used up and offer long-life protection between 3 - 5 years.

Hybrid Organic Acid Technology (HOAT) was born from the need for more supplements to target problem corrosion areas. HOAT formulations may contain inorganic additives such as nitrites and silicates. Ultimately, the engine OEM will specify the additive mix that is best for their equipment.

CAN COOLANT TYPES BE MIXED?

Corrosion inhibitor performance and stability may be affected if coolants are mixed. Certain hybrid coolants are fully compatible with OAT and Conventional coolants. Do not mix coolants of unknown chemistry. Some coolants cannot be mixed.

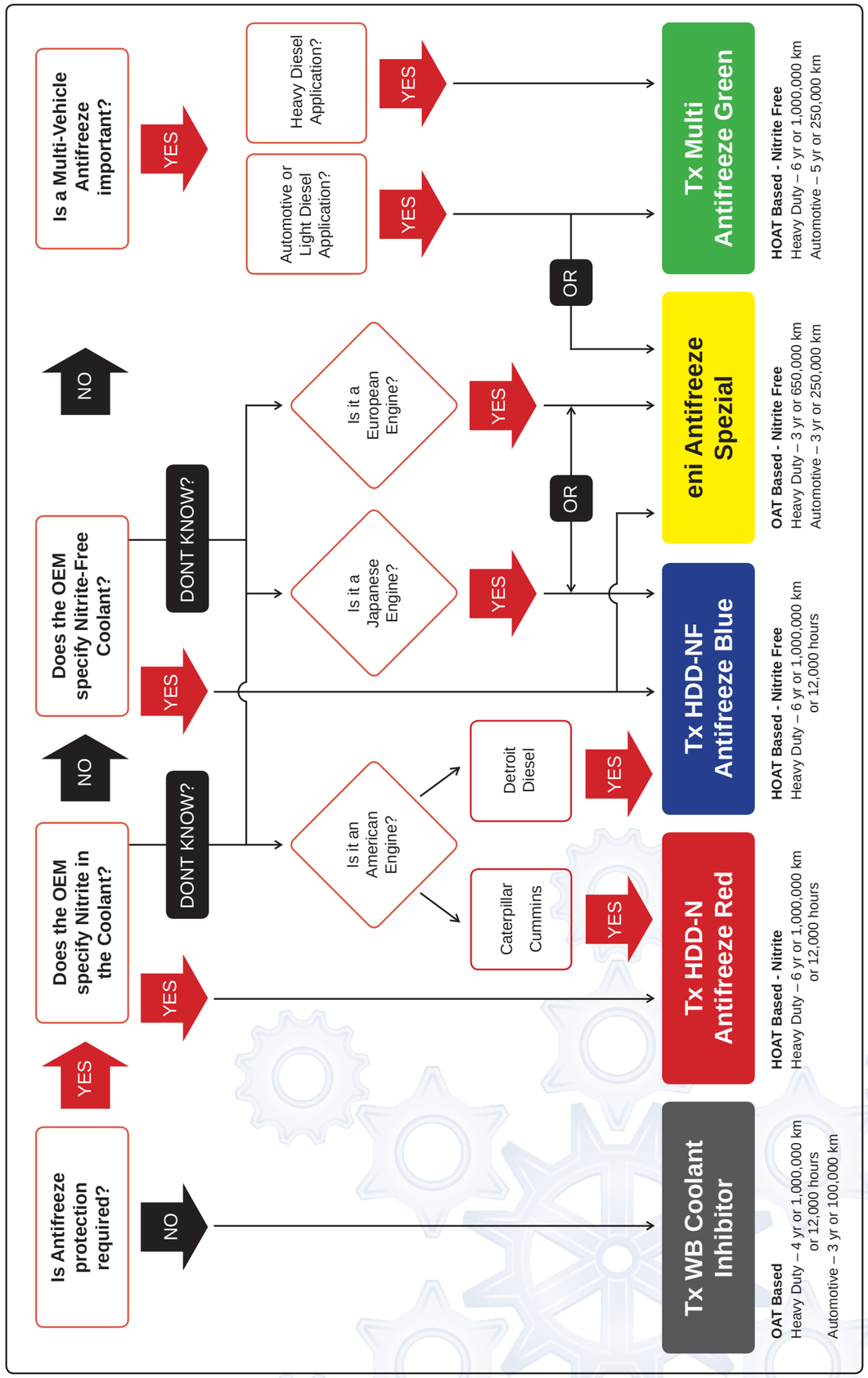
GUIDE TO MIXING COOLANTS		EXISTING COOLANT		
		HOAT	**OAT**	**Conventional**
MIX WITH	**HOAT**	YES	YES	YES
	OAT	YES	YES	NO
	Conventional	YES	NO	YES

Many coolants contain silicates to protect water pump impellers but silicates are unstable and readily form gels that plug a cooling system. Therefore coolants should not be mixed unless specif cally designed for multi-product application.

HOW DO YOU TEST COOLANT?

Inhibitor levels and glycol concentrate can be measured using a refractometer or with test strips.

COOLANT SELECTION GUIDE



Tx Coolants are sold and distributed in New Zealand by TransDiesel Ltd

www.transdiesel.com - 0800 848 267