



AMBITROL

Inhibited Propylene Glycol-based Coolants

AMBITROL* inhibited propylene glycol-based coolants are robust industrial formulations designed to protect against over-heating in summer and circulating system freeze-up in winter. Because they are propylene glycol-based, these coolants are very low in toxicity and they offer particular protection against cavitation erosion damage to cylinder liners of wet-sleeve diesel engines. Dow supplies four AMBITROL inhibited propylene glycol-based coolants:

- **AMBITROL NTC Coolant** — a concentrated, inhibited propylene glycol coolant to be diluted with distilled (or deionized) water to concentrations ranging from 30% to 60% by volume.
- **AMBITROL NTF 50 Coolant** — the standard, completely formulated, prediluted solution of 50% propylene glycol, deionized water and a complete inhibitor package.
- **AMBITROL NTF 40 Coolant** — a completely formulated, prediluted solution of 40% propylene glycol, deionized water and a complete inhibitor package.
- **AMBITROL NTF 30 Coolant** — a completely formulated, prediluted solution of 30% propylene glycol, deionized water and a complete inhibitor package.

Recommended use temperature range:

At a solution of 50% (by volume), AMBITROL propylene glycol-based coolants can provide freeze protection to -29°F and boil protection up to 222°F.

Typical Properties¹ of AMBITROL Inhibited Propylene Glycol-based Coolants

	AMBITROL NTC	AMBITROL NTF 50	AMBITROL NTF 40	AMBITROL NTF 30
Composition (% by volume)				
Propylene glycol	96	50	40	30
Color	blue	yellow	yellow	yellow
Specific gravity (at 60°F/60°F)	1.055	1.048	1.040	1.031
pH of solutions	na	9.5	9.5	9.5
Reserve alkalinity (min.)	11.0	11.0	11.0	11.0
Flash point, °F (P.M.C.C. ²)	214	none	none	none
Fire point, °F (C.O.C. ³)	220	none	none	none

¹Typical properties, not to be construed as specifications

²Pensky-Martens closed cup

³Cleveland open cup

Suitable applications: AMBITROL propylene glycol-based coolants are designed specifically for large, stationary engines such as those running compressors to transmit natural gas through pipeline distribution systems. Due to their low toxicity, these coolants are recommended for use where incidental contact with drinking water or ground water is possible. These heat transfer fluids also provide heat transfer properties and freeze and corrosion protection in gas distribution line heaters and other indirect heaters.

For health and safety information for this product, contact your Dow sales representative or call the number for your area listed on the back of this sheet for a Material Safety Data Sheet (MSDS).

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Typical Properties¹ of AMBITROL Aqueous Solutions (glycol percentage by volume)

Physical Property	Temp. °F	AMBITROL NTC (96% glycol)	AMBITROL NTF 50 (50% glycol)	AMBITROL NTF 40 (40% glycol)	AMBITROL NTF 30 (30% glycol)
Thermal Conductivity, (Btu/(hr)(ft ²)(°F/ft))	40	.118	.197	.222	.248
	180	.113	.222	.249	.280
Specific Heat, Btu/(lb)(°F)	40	.57	.84	.89	.93
	180	.68	.91	.93	.96
Viscosity, Centipoise	40	180	14	9	6
	180	4	1.1	.85	.70
Density, (g/ml)	40	1.052	1.057	1.048	1.036
	180	.990	1.003	.998	.992

¹Typical properties, not to be construed as specifications.

Freezing/Boiling Points of Aqueous Solutions (solutions of AMBITROL NTC except where noted)

Freezing Point °F	% Glycol (by vol.)	Boiling Temp. °F
26	10 [†]	212
18	20 [†]	213
8	AMBITROL NTF 30	216
-7	AMBITROL NTF 40	219
-29	AMBITROL NTF 50	222
-60	60	225
<-60	70	230
<-60	80	245
<-60	90	263
<-60	100	370

[†]Corrosion protection may be inadequate at concentrations this low.

Corrosion Test Results/Weight Loss of AMBITROL in milligrams (mils penetration/yr.)²

	Water	Uninhibited Propylene Glycol	AMBITROL Inhibited Propylene Glycol
Copper	2	4	1
	(0.08)	(0.16)	(0.04)
Solder	99	1095	2
	(3.14)	(34.7)	(0.06)
Brass	5	5	2
	(0.23)	(0.20)	(0.08)
Mild Steel	212	214	1
	(9.69)	(9.80)	(0.04)
Cast Iron	450	345	1
	(21.2)	(16.2)	(0.05)
Aluminum	110	15	+3
	(13.2)	(1.80)	(0.36)

Samples with a "+" showed weight gain.

²ASTM D1384 — 190°F for 2 weeks, 30% glycol by volume, air bubbling.

For further information, call...

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