

## TECHNICAL COMPARISON BETWEEN GLYCOL BASED AND COLDGUARD ACTIVE SYNTHETIC COOLANT

Sr. No.	Paramenter	ETHYLENE GLYCOL BASED COOLANT Standard JIS/ASRTU Specifications	COLDGUARD ACTIVE SYNTHETIC COOLANT
1	<b>Boiling Point, Degree Celcius</b>		
	10% Glycol	102	102
	20% Glycol	103	103
	30% Glycol	106	104
2	<b>Freezing Point</b>		
	10% Glycol	-12	-1
	20% Glycol	-20	-3
	30% Glycol	-31	-5
3	<b>Foaming Property, 30% Aqueous Solution</b>	4 max	As per the specifications
4	<b>pH , 30% Aqueous Solution</b>	7 to 11	As per the specifications
5	<b>Corrosion Property of Cast Aluminium at Heat Transfre Surface. 1:2 Aqueous Solution, 180-200 Kpa 135 +/- 2 Deg C, 168 +/- 2 Hrs</b>	(+/- 0.15)	As per the specifications
6	<b>Compatibility with Cooling System- Non Metal</b>		
	Natural Rubber	(+/- 5)	As per the specifications
	EPDM Rubber	(+/- 5)	As per the specifications
	Nitrile Rubber	(+/- 5)	As per the specifications
	Chloroprene Rubber	(+/- 5)	As per the specifications
	Silicon Rubber	(+/- 5)	As per the specifications
	Poly Acrylic Rubber	(+/- 5)	As per the specifications
7	<b>Effect on Painted Finishes</b>	No discoloration, loss of gloss or swelling of film or other visible defect	As per the specifications
8	<b>Corrosion Test in Glassware 20% Concentration, 336 +/- 2 Hrs at 88 +/-2 Deg C</b>		
8.1	<b>Foaming during the Test</b>	No foam shall flood out of the collar	As per the specifications
8.2	<b>Appearance of the liquid phases</b>	No separation of phases or precipitation or gelling	As per the specifications
8.3	<b>Amount of precipitation, % Vol. Max</b>	0.5	As per the specifications
9	<b>Change in Mass of Metal Test Pieces, mg/ sq cm</b>		
9.1	Aluminium Casting	(+/- 0.15)	As per the specifications
	Cast Iron	(+/- 0.15)	As per the specifications

	Steel	(+/- 0.15)	As per the specifications
	Brass	(+/- 0.15)	As per the specifications
	Solder	(+/- 0.30)	As per the specifications
	Copper	(+/- 0.15)	As per the specifications
9.2	<b>Appearance</b>	No Visually Noticeable Corrosion. Change in colour permissible	As per the specifications
10	<b>Properties of Solution after the test</b>		
a	<b>pH</b>	6.5 to 11	As per the specifications
b	<b>Change in pH Value</b>	(+/- 1)	As per the specifications
c	<b>Liquid Phase</b>	No change in colour, No generation, separation of Gel	As per the specifications
d	<b>Amount of Precipitate Vol. %</b>	0.5 max	As per the specifications