

# Heat Wave / Road Guard Plus-3

## Liquid Deicer for De-Icing, Anti-icing at Extremely low Temperatures

Road Guard Plus-3 is a corrosion inhibited liquid form of calcium chloride and magnesium chloride brine designed especially for extremely low temperature down to  $-45^{\circ}\text{C}$ . The active ingredients for de-icing are 27% calcium chloride, 3.2% magnesium chloride, 2.3 % alkaline chlorides including sodium chloride and potassium chloride, 3% highly effective corrosion inhibitors.

### Quick Facts on Heat Wave / Road Guard Plus-3:

- A liquid brine with 3% corrosion inhibitor added to a naturally occurred calcium chloride brine
- Ability to cut through snow and ice more quickly than salt or magnesium chloride
- Ability to melt snow and ice below  $-45^{\circ}\text{C}$  ( $-49^{\circ}\text{F}$ ), the temperature at which most other salts become ineffective as a deicer.
- Lack of sediment problems in tanks, easy clean-up of vehicles
- Less corrosive than rock salt, or sodium chloride;
- Available in bulk tank truck or rail car

### Composition

Calcium Chloride, $\text{CaCl}_2$	27.0 %
Magnesium Chloride, $\text{MgCl}_2$	3.2 %
Sodium Chloride, $\text{NaCl}$	1.4 %
Potassium Chloride, $\text{KCl}$	0.9 %
Corrosion Inhibitors	3.0 %
Total Chlorides Content	32.5%
Total Active Ingredients	34.0%

### Physical Properties

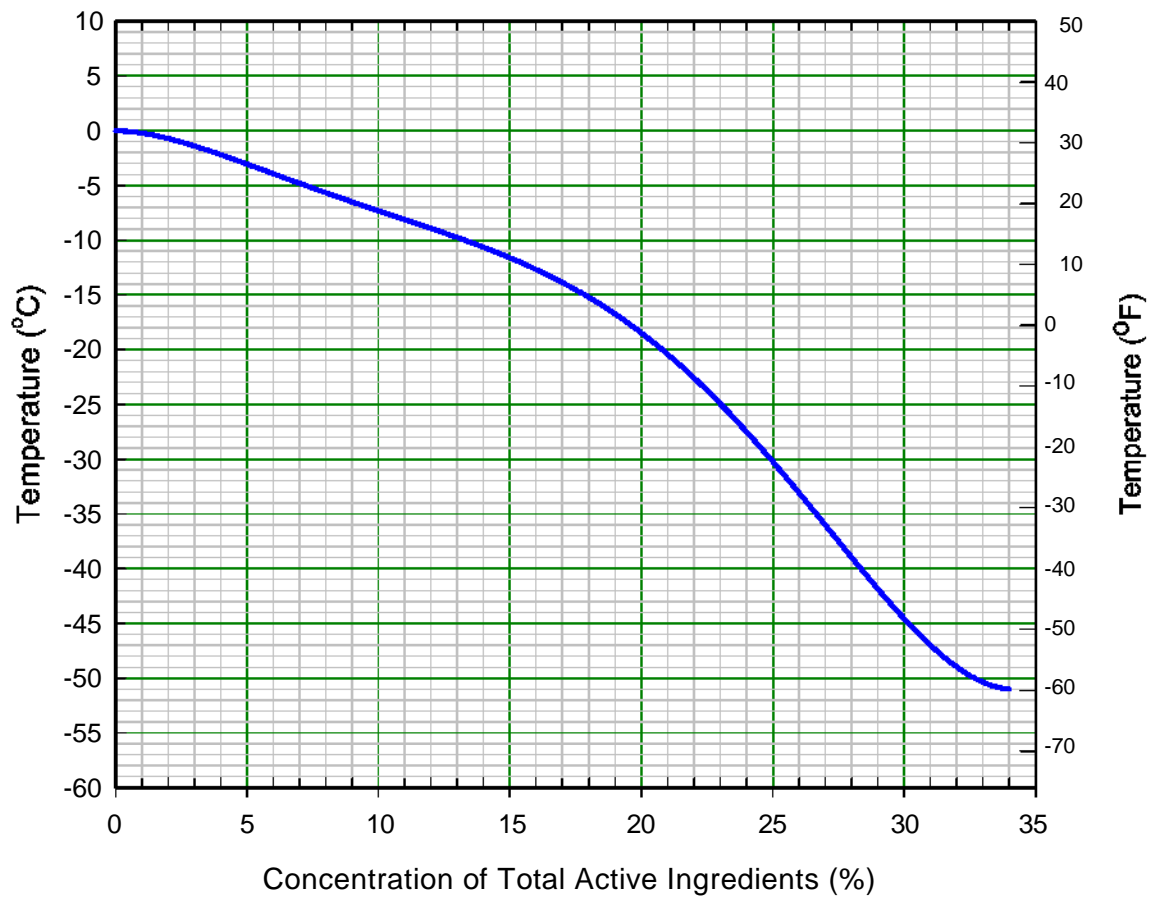
Appearance	Brown Liquid
Odor	Slight
Specific Gravity	1.320 kg/litre
Freezing Point	Free of solid down to $-45^{\circ}\text{C}$
PH	6-10
Miscibility with water	Complete

# Freezing Points of Tiger's Calcium Chloride Brine

## Heat Wave / Road Guard Plus-3

Percentage of Active Ingredients  %	Specific Gravity at 15 °C	Freeze Point	
		°C	°F
0	1.000	0.0	32.0
2	1.014	-0.7	30.7
5	1.037	-3.1	26.5
6	1.045	-3.9	24.9
7	1.052	-4.8	23.3
8	1.060	-5.7	21.8
9	1.068	-6.5	20.3
10	1.077	-7.3	18.8
11	1.085	-8.1	17.4
12	1.093	-8.9	15.9
13	1.102	-9.8	14.4
14	1.111	-10.6	12.8
15	1.119	-11.6	11.1
16	1.128	-12.7	9.2
17	1.138	-13.9	7.0
18	1.147	-15.2	4.6
19	1.156	-16.8	1.8
20	1.166	-18.5	-1.3
21	1.176	-20.4	-4.8
22	1.186	-22.6	-8.7
23	1.196	-25.0	-12.9
24	1.206	-27.5	-17.5
25	1.216	-30.2	-22.4
26	1.227	-33.1	-27.6
27	1.238	-36.0	-32.9
28	1.249	-39.0	-38.2
29	1.260	-41.9	-43.4
30	1.272	-44.6	-48.2
31	1.283	-47.0	-52.6
32	1.295	-49.0	-56.2
33	1.307	-50.4	-58.7
34	1.320	-51.0	-59.8

# Phase Diagram of Heat Wave / Road Guard Plus-3



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