



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°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, and 3% highly effective corrosion inhibitors.

Quick Facts on 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°C (-49°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, CaCl_2 | 27.0 % |
| Magnesium Chloride, MgCl_2 | 3.2 % |
| Sodium Chloride, NaCl | 1.4 % |
| Potassium Chloride, 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°C |
| PH | 6-10 |
| Miscibility with water | Complete |

Freezing Points of Tiger's Calcium Chloride Brine

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 Road Guard™ Plus 3

