Cargill Deicing Technology

Technical Information

Hydro-Melt Liquid Deicer

DESCRIPTION:

Hydro-Melt Liquid Deicer is an aqueous solution whose primary active component is magnesium chloride. It is manufactured by solar evaporation of seawater. It provides excellent deicing capabilities and is highly effective in reducing corrosion and concrete scaling.

COMPLIANCE:

Hydro-Melt Liquid Deicer is not approved for human or animal consumption. It is intended for use only as a chemical deicer or prewetting agent for granular deicers on roadways.

ADDITIVES:

Hydro-Melt Liquid Deicer consists primarily of "liquid bitterns," a natural product produced by the evaporation of seawater. It contains Triethanolamine as a corrosion inhibitor. The resultant product (U.S. Patent No. 5,302,307, Canadian Patent Pending) exhibits low corrosivity.

APPLICATIONS:

Hydro-Melt Liquid Deicer is intended for use as an ice and snow removal agent on highways and other roadways. It may also be used as a prewetting agent for granular deicers, where it acts to hasten melting and reduce the tendency of these products being swept off the road before deicing commences.

CAUTION: Exercise extreme care when using this product for anti-icing. Anti-icing, the practice of applying chemical deicers in advance of precipitation, requires skill and specialized equipment. Liquid deicing products can cause slippery conditions if over-applied or misused. A number of conditions can affect this usage, including pavement type and condition, temperature, humidity, and application rate and timing. It is essential that extensive tests and evaluation be conducted to establish best practices for each condition or set of conditions that may be encountered.

PACKAGING AND SHIPPING:

Hydro-Melt Liquid Deicer is available only in bulk form. Bulk quantities are shipped by rail or truck.

STORAGE AND HANDLING PRECAUTIONS:

Hydro Melt Liquid Deicer requires normal precautionary measures for the safe handling of liquids, i.e., goggles and flushing of skin contact areas with fresh water. Prolonged storage or subjecting this product to temperatures below 0°F (-17.8°C) can result in the formation of magnesium sulfate crystals.

CHEMICAL ANALYSIS:

Component	Units	Typical	Specification
Total Magnesium (as $MgCl_2$)	%	30.0	29 - 33
Magnesium (as Mg)	%	7.7	7.4 min.
Chloride (as Cl)	%	24.0	25.0 max.
Sulfate (as SO_4)	%	0.7	0.9 max
Other	%	1.0	1.5 max.
Triethanolamine	%	0.5	-
Water	%	66.1	66.5 max.
pH, as is		-	6.5 - 7.0

PHYSICAL PROPERTIES:

Component	Units	Typical	Specification
Density	lbs./gal.	-	1088 - 11.24
Specific Gravity (at 60°/60°F)	SGU	-	1.301 – 1.349

PRODUCT BENEFITS:

Average % protection against salt-induced corrosion: 70%
Reduces surface scaling of concrete.
Can be stored at 0°F (-17.8°C) for 7 days with less than 1% settleable solids.

TECHNICAL ASSISTANCE:

Technical representatives are available for assistance in applications development, troubleshooting and help in resolving customer service issues.

METHODS OF ANALYSIS:

Methods of analysis and product performance evaluation are taken from the ASTM designations E534-91 and C672-91, from SHRP Method H205, from the Pacific Northwest States Corrosion Test Method, and from the Cargill Central Research Laboratory.

PRODUCING LOCATION: NEWARK, CA

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