SERVICE BULLETIN

SB-18-010

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Info on Magnesium Chloride & Calcium Chloride

R.O.M released a technical bulletin to make users aware of damage that can occur due to chemicals used to de-ice roads.

Any questions regarding the content of their document may be directed to: R.O.M Corporation at (800) 827-3692

Any other questions regarding this service bulletin should be directed to Utility's Field Service Department at 800-423-6591.

Field Service Department
UTILITY TRAILER MANUFACTURING COMPANY

Attached: R.O.M. Tech Bulletin - Info on Magnesium Chloride and Calcium Chloride (2 pages)

Utility hasn't independently evaluated the information contained in the attached technical bulletin; it is making the bulletin available as a convenience and for information purposes. You are encouraged to contact R.O.M. at (800) 827-3692 if you have any questions concerning the content of the document, or how these issues affect trailers you are servicing.

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Technical Bulletin

Information on Magnesium Chloride and Calcium Chloride

Our Technical Bulletins are provided to inform you of design options, design improvements, standard sizes and changes, different models, applications, installation, operation, and maintenance.

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This bulletin is to make users of R•O•M products aware of damage that can occur due to chemicals used to de-ice roads. State maintenance crews use several different chemicals as liquid anti-ice or snow and ice clearing chemicals. See the Table 1 below for a list. These chemicals are often sprayed on roadways prior to arrival of storms thereby having longer exposure and not immediately being diluted by snow or water.

Table 1

Chemical Name	Abbreviation
Calcium Chloride	$CaCl_2$
Sodium Chloride (road salt)	NaCl
Magnesium Chloride	$MgCl_2$
Calcium Magnesium Acetate	$CaMg_2\{CH_3COO\}_2$
Potassium Acetate	$KC_2H_3O_2$

Of these, calcium chloride is probably most destructive because it attracts moisture more readily. Calcium chloride absorbs water vapor from air at 40% humidity vs. magnesium chloride at 75%.

Corrosion from these chemicals is seen on chrome, aluminum, and even stainless steel and concrete. Significant damage can result from as little as a single winter season.

Since magnesium chloride solution has higher viscosity and stronger hydraphilicity properties than sodium chloride, for example, it adheres and crystallizes on the surfaces of metals under dry conditions and then becomes a corrosive agent when wetted.

If these chemicals are deposited on painted surfaces that have been pitted by rocks or gravel or scratched thereby exposing bare metal, the chemically induced corrosion will eat away at the metal substrate undetected until the paint starts blistering. Therefore, it's very important to replace chipped or scratched paint immediately.

A very aggressive vehicle washing practice is probably the most effective preventative maintenance tool available to operators. It's important to note that a coating of magnesium chloride is extremely difficult to get clean and keep clean. It's also important to note that the washing system should not use recycled

Please provide this information to your engineering, manufacturing, sales and marketing departments, and to your dealers.

water because it generally contains a higher percentage of sodium chloride than water straight from the source. Other corrosion fighting techniques include:

- Frequently inspect and clean entrapment areas of debris. It's best not to block off or try to seal entrapment areas because despite your best efforts corrosion could get started and remain unnoticed.
- Drain holes should be inspected and cleared frequently
- Proper use of a common ground
- Frequently inspect and spray electrical connectors with moisture inhibitors
- Use dielectric grease
- Frequently inspect structural and safety related components for corrosion and take immediate corrective action when corrosion is observed
- Replace chipped or scratched paint immediately after thoroughly cleaning the bare metal and surrounding surface
- Frequently wax painted surfaces

R•O•M strongly recommends that our ramp, carrier and roll up door products be frequently inspected and maintained. It's extremely important to frequently and thoroughly wash these products to remove the corrosive chemicals deposited as a result of the use of these corrosive snow and ice clearing chemicals. Not doing so could result in unwanted corrosion which may cause unsafe conditions and deteriorate the product appearance including promoting bubbling of paint coatings.

For more information, visit the following site for an in-depth review of road chemical induced corrosion.

http://trailer-bodybuilders.com/mag/trucks_corrosion_explosion/index.html