

## **IMPORTANT PRODUCT SAFETY NOTICE**

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**Attn: Marshall Excelsior Equipment Distributors / Customers**  
**Product Series: ME806-16 Flo-Max LE Low Emission Transfer Valve**  
**Subject: Potential frosting of the valve seal in sub-zero temperatures**  
**Release Date: December 19, 2008**

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This product safety notice addresses field inquiries regarding the potential for frosting of the valve seal during operation in sub-zero temperatures.

### **Background**

Marshall Excelsior has fielded several field inquiries over the past week pertaining to liquid LP-Gas releases at disconnect after completion of filling operations using the ME806-16 Flo-Max LE Transfer Valve. These field inquiries to date have been isolated to the Northern United States during sustained sub-zero temperatures. We have determined through investigation that these events are happening due to frosting of the valve seal and/or pilot seal during product transfer.

The frosting occurs at sub-zero temperatures as water vapor is condensed at the point of transfer.

This frosting effect prevents the valve from making a complete seal in the closed and locked position at low pressures during sub-zero temperatures. This can cause liquid to become trapped between the transfer valve and ACME connection. Most of these valves have been kept in service and continue to function properly after the valve seal has been defrosted. The balance of the valves involved in the field inquiries were returned at our request as part of our internal investigation.

While the number of field inquiries represent less than 1% of the total installed base, Marshall Excelsior takes product quality and functionality very seriously.

We are continuing our review to establish if a design modification could eliminate this phenomenon.

The following section outlines our recommendations regarding safe use of the product and short term remedies to the issue should you experience this frosting event.

### **Recommendations**

- 1. When disconnecting the ME806-16 Flo-Max LE Transfer Valve, slowly break the connection to ensure there is no liquid product trapped and that the transfer valve has closed completely.**
  - 2. If frosting of the valve seal has occurred, and product is leaking past the seat; applying Leak detector by pouring, brushing or spraying liberally onto the valve seal will defrost the valve seal and immediately stop the leak. Marshall Excelsior leak detector solution (ME-LD) is rated to -40 Degrees F. and is available through any of our distributors.**
  - 3. Make sure the connection is tightened using an appropriate wrench (MEP120B) and that the seal gasket is in good condition. A loose or hand tightened joint or gasket in poor condition will promote the frosting condition at the connection as liquid escapes to atmosphere. Even a small leak at the connection joint will concentrate the moisture condensing at the valve seals.**
  - 4. Following the preventative maintenance and operating instructions provided with the ME806-16 Flo-Max LE Transfer Valve will help ensure proper operation of the valve. Closing the loading (bobtail) side valve before the Flo-Max transfer valve can cause a backpressure situation to occur. This backpressure can make it difficult to close the operating handle to the latched position.**
  - 5. Do not attempt to open the Flo-Max Transfer valve when not connected. This will cause a flow of liquid product through the pilot orifice which will frost the pilot seal.**
  - 6. If you experience a frosting issue that can't be eliminated using the guidelines in this product safety warning please discontinue use of the product and contact your distributor.**
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