

# GK-500 Safety Sheet

## 4 oz. M-937F Coated Glass Aerosol Container Pressure Requirements and DOT Exemption E-8008

Aerosols packaged in containers with a capacity of 118.3 ml (4 oz) and less are exempt from most U.S. Department of Transportation (DOT) regulations. For aerosol products packaged in non-metallic containers larger than 4 oz., the pressure must not exceed 25 psig at 70 Degrees Fahrenheit, or 98 psig at 130 Degrees Fahrenheit, or any flammable product having a pressure greater than 25 psig at 100 Degrees Fahrenheit. Otherwise, a special permit must be obtained because DOT regulations do not address containers of this capacity and pressure.

However, DOT aerosol regulations do require that "glass containers be capable of withstanding pressures of at least equal to 1 1/2 times the vapor pressure of the contents at 130 Degrees Fahrenheit (54 C) without leakage or permanent deformation".

In 1983, LM Wheaton Coated Products was granted an exemption for the 4 oz. M-937F oversized coated glass aerosol container, DOT Exemption E-8008. The M-937F container has a minimum internal pressure spec. of 300 psig per ASTM-C147 and C-224 standard test methods to meet exemption requirements. Additional pressure and drop testing is also required for bottles manufactured and filled with product.

### **M-937F Aerosol Recommendations**

Several things need to be considered before recommending a maximum pressure for use with a specific aerosol container, namely the product application, type of propellant system, product/propellant interaction, valve choice, necessary headspace, and other aerosol filling parameters.

Based on using the correct headspace, the following recommendations can be made for the M-937F aerosol container:

\* 45 to 50 psig maximum pressure for liquefied propellants at 70 Degrees Fahrenheit. (Hydrocarbons, CFC, HCFC, HFC) Fahr-

\* 90 psig maximum pressure for compressed gasses at 70 Degrees Fahrenheit. (N<sub>2</sub>, N<sub>2</sub>O, CO<sub>2</sub>)

Reference: CSMA Aerosol Guide, 7th ed., CSMA Inc., 1001 Conn. Ave., Washington, D.C. 20036, April 1981.

**This Vessel Must Be Shielded While Under Pressure!!  
We Recommend The Use Of A Polycarbonate Hand Held Shield.**

For Parts or Service Please Call: (417) 533-5552

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