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INFORMATION SHEET

DESICCANT REGENERATION (MIL-D-3464)

Regeneration of desiccant packaged in Tyvek bags can be accomplished by the following method:

1. Arrange the bags on a wire tray in a single layer to allow for adequate air flow around the bags during the drying process. The oven's inside temperature should be room or ambient temperature (77° F - 85° F). **A convection, circulating, forced air type oven is recommended for this regeneration process. Seal failures may occur if any other type of heating unit or appliance is used.**

2. When placed in a forced air, circulating air, or convection oven, allow a minimum of 1.5 to 2.0 inches of air space between the top of the bags and the next metal tray above the bags. If placed in a radiating exposed infrared element type oven, shield the bags from the direct exposure to the heating element, giving the closest bags a minimum of 16 inches clearance from the heat shield. Excessive surface film temperature due to infrared radiation will cause the Tyvek material to melt and/or the seals to fail. Seal failure may also occur if the temperature is allowed to increase rapidly. This is due to the fact that the water vapor is not given sufficient time to diffuse through the Tyvek material, thus creating internal pressure within the bag, resulting in a seal rupture. Temperature should not increase faster than 0.25° to 0.50° F per minute.

3. Set the temperature of the oven to 245° F, and allow the bags of desiccant to reach equilibrium temperature. **WARNING**: Tyvek has a melt temperature of 250° F - 260° F. (**NON MIL-D-3464E** activation or reactivation of both silica gel and Bentonite clay can be achieved at temperatures of 220° F).

4. Desiccant bags should be allowed to remain in the oven at the assigned temperature for 24 hours. At the end of the time period, the bags should be immediately removed and placed in a desiccator jar or dry (0% relative humidity) air tight container for cooling. If this procedure is not followed precisely, any water vapor driven off during reactivation may be re-adsorbed during cooling and/or handling.

5. After bags of desiccant have been allowed to cool in an air tight desiccator, they may be removed and placed in either an appropriate type poly liner tightly sealed to prevent moisture adsorption, or a container that prevents moisture from coming into contact with the regenerated desiccant.

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