



CURING EQUIPMENT RECOMMENDATIONS

Diemat adhesives can be cured in commonly-available ovens and do not require highly specialized equipment. Many oven manufacturers make a variety of suitable models. When selecting an oven, consider the following parameters to achieve a proper cure:

- 1) **Forced air convection** using a fan to continuously draw in air from the surrounding room or a controlled source, provide uniform temperature distribution in the oven, and expel the atmosphere from the oven. Ambient room air is sufficient for the intake. The intake should not be located near sources of contamination such as the exhaust of another oven. Inert gas purge such as N₂ is not required. Vacuum ovens are not recommended.
- 2) **Exhaust ventilation** to allow for the continuous removal of any volatiles (primarily solvents) that are released during the curing cycle.
- 3) **Heating capability** to effectively reach the desired peak curing temperature. Most ovens will heat to over 250 °C which is suitable for curing Diemat's polymer-based adhesives.
- 4) **Ample volume** for the batch process. A capacity of one to three cubic feet (28-85 liters) with one or more adjustable racks is typically adequate.

A programmable ramp is useful but not required. It is possible to control the ramp by either starting the oven at room temperature (for a slow ramp) or by preheating the oven to an intermediate temperature such as 100 °C (for a fast ramp) and letting the oven heat up and equilibrate at the peak temperature. Monitoring such ramping and heating with a thermocouple and chart recorder is advisable, even with programmable ovens, since there can be a significant difference between the oven air temperature and the temperature of the parts.

Multi-zone conveyor belt furnaces are also appropriate for curing Diemat adhesives. The same requirements as described above would apply.

Popular equipment brands include Blue M, Despatch and Fisher Isotemp.

www.blue-m.com/blue-m/bluem-ovens.asp

www.lindbergbluem.com/catalog/ovens/ovens.shtml

www.despatch.com

www.fishersci.com

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