

# **Apollo (A7093)**

# Single-Part Polyurethane Laminating Adhesive

- Apollo (A7093) is a non-flammable, single-part sprayable polyurethane based laminating adhesive.
- It combines high solids content with low viscosity, thus ensuring excellent coverage and fast production throughput.
- Apollo (A7093) has been developed for applications in the panel manufacturing and laminating
  industries to bond all types of plastic foam and other insulating materials to a wide variety of both
  flexible and rigid facing materials such as metals, plywood, GRP etc. It is also suitable for semistructural applications involving bonding metal and plastic sheet to plywood, timber composites
  or honeycomb cores.
- Compared to Apollo (A77), Apollo (A7093) cures to a tougher more rigid bond line and exhibits slight foaming, hence accommodating uneven surfaces.
- Apollo (A7093) will withstand temperatures in the range minus 30°C to above 150°C for extended periods.

## **Benefits:**

- Complete peace of mind: due to its high-strength weatherproof bond and excellent temperature resistance.
- Minimises task-time: one-component with a low coat weight and excellent coverage.
- Extremely versatile and durable: bonds a wide range of materials.

# **Technical Data**

Base	Polyurethane	Solids	48 - 52%
Appearance	Brown or tinted	Shelf Life	12 months
Temperature Resistance	-30°C-150°C	Storage	5°C-25°C
Coverage	$13 \pm 5 \text{ m}^2$ /L approx.	Environmental	Solvent-Based/Non-Flammable
Application Temperature	15°C-25°C	Cleaner	Solvent 3 or 6
Viscosity	80 -180cps (20°C)		



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#### Instructions for Use:

#### Application:

#### 1. Spraying

- The adhesive may be applied by conventional air spray, air-mix, or airless equipment to one surface only of each alue line.
- The amount required will vary according to the porosity of the substrate and will normally be in the range of 60 120 grams (wet) per square metre. (Honeycomb cores will require about 150gsm).
- The adhesive has been specially developed for use on high speed automatic lines and the solvent system is designed to keep solvent retention to a minimum. However, due to its long open time, Apollo (A7093) allows for the handling of large size or a high number of panels prior to pressing.

#### 2. Pressing

- Once the adhesive has been applied, the panel should be assembled and pressed within 40 minutes. The pressure should be even and sufficient to keep the components in intimate contact (normally 5 - 10 psi) and should be maintained for at least 90 minutes.
- Such pressure may be obtained using a platen press or air bag but a vacuum table normally proves most suitable.
- Provided they are flat and of similar size, several panels may be pressed simultaneously in a stack.
- The open and press times depend on the temperature and humidity, the figures quoted being for 20 °C, 50% RH.
   More detailed information is given in separate leaflets.
- At temperatures below 15 °C, cure times become inconveniently long and this should therefore be regarded as a
  practical minimum working temperatures. Two-ply or unbalanced panels should not be pressed above 30 °C or
  excessive bowing will result.

## **Special Notes**

- Contamination with moisture will degrade Apollo (A7093) and could generate pressure in sealed containers. In conditions of low temperature and humidity, the cure will be adversely affected and at temperatures below 15°C and/or humidity below 50% RH, a longer open time may be required to build up sufficient tack.
- Since the adhesive is affected by moisture, it may be advisable to protect the opened adhesive container by the use of a nitrogen purge or blanket, depending on the rate of consumption.

### **IMPORTANT NOTES**

**Storage and handling:** The product should be stored unopened in a dry condition at a temperature of 5-25°C. This will ensure the stated shelf-life. The adhesive will have a limited life once the container is opened.

**Temperature and timings:** All information on temperature and timings represent normal working conditions and is provided as a guideline only. However, please contact Apollo for advice if you wish to operate outside of these parameters.

**Disclaimer:** Apollo has taken care to ensure that the information provided in the literature is correct and up to date. However, it is not intended to form any part of a contract or provide a guarantee. Purchasers/intending purchasers should contact Apollo to check whether there have been any changes to the information since publication of the literature. Please ensure you have read the hazard labels and material safety data sheet before using this product.



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