



## TECHNICAL INFORMATION

### KALEX<sup>®</sup> 46816/56816 (formerly KALEX<sup>®</sup> 16816) Urethane Coating System

#### PRODUCT DESCRIPTION

KALEX 46816/56816 is a two-component, very fast-setting, room temperature cure polyurethane coating. This system has a very low viscosity and contains no solvents. The cured system forms a tough, flexible and abrasion resistant coating and displays excellent adhesion to Mylar.

#### HOW TO USE

Stir 46816 & 56816 separately in their original containers. Weigh out the correct proportion of 46816 & 56816. Mix thoroughly.

#### MIXING AND CURING SCHEDULE

The production of the desired polyurethane requires accurate measurement of the two components and adequate mixing. In general, hand-mixing small production runs is easily accomplished by weighing the two components. Machine mixing utilizes the volumetric ratio. Most machines are calibrated by weighing the components and adjusting the volume ratio. Larger volume hand mixing is easily controlled by filling pre-measured buckets to the indicated heights. The mix ratios are shown below.

<u>Ratio</u>	<u>46816</u>	<u>56816</u>
By weight	100	87
By volume	100	100

The cure schedule is dependent upon the temperature. The recommended cure schedule will vary with the desired properties. The recommended schedule to achieve the typical properties is shown below:

24 hours at 25 °C (77 °F).

#### TYPICAL UNCURED PROPERTIES

	<u>46816</u>	<u>56816</u>	<u>Mixed</u>
Color	Amber	Black	Black
Viscosity @ 25 °C, cps	4,000	2,500	---
Weight per Gallon, lbs.	9.4	8.15	8.77
Specific Gravity @ 25 °C	1.13	0.98	1.05
Gel time, minutes			
100 gm mass @ 25 °C	---	---	4.5 min.
Shelf Life (in separate sealed containers), months	6	6	---

#### TYPICAL CURED PROPERTIES

(Tested at 25 °C unless otherwise indicated)

<u>Test</u>	<u>Result</u>
Hardness, Shore A	80

#### STORAGE AND HANDLING

These materials should be stored in a dry environment within a moderate temperature range. Extended exposure to temperatures above 35°C begins to degrade the 46816. Avoid exposing either component to moisture.

Moisture reacts with the 46816 to create minor levels of by products. Low levels will not degrade the final polyurethane. Moisture contamination of the 56816 will cause some gas bubbles in the mixed adhesive. Purge the container with dry air before closing to maintain the storage life.

When using meter-mixed dispense equipment (MMD) machines, reservoir should be blanketed with nitrogen or dry air to avoid moisture and other contamination.

Avoid contamination with oxidized metals (such as copper, brass, or mild steel), and rust or other metal oxides. The stability of the product is greatly reduced by materials such as strong acids or bases, sulfur compounds, amines, or reducing agents of any type.

#### SAFETY

These materials are intended for industrial use only, and the practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

Although the system contains low volatility materials, nevertheless, care should be taken in handling. Adequate ventilation of work place and ovens is essential.

These materials may cause dermatitis in susceptible individuals. Keep off skin and out of eyes. In case of accidental skin contact, wash thoroughly with soap and water. In case of eye contact, flush eyes thoroughly with water and consult a physician immediately.

Refer to Material Safety Data Sheet for additional

**Royal Adhesives and Sealants, LLC**  
2001 W. Washington Street  
South Bend, IN 46628  
Phone: 800-999-GLUE  
Fax: 574-246-5425  
Web: www.royaladhesives.com



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### **ADDITIONAL INFORMATION**

Visit our web site at:

[www.royaladhesives.com](http://www.royaladhesives.com)

Contact us at:

Royal Adhesives and Sealants, LLC  
2001 W. Washington Street  
South Bend, IN 46628  
Phone: 800-999-GLUE  
Fax: 574-246-5425  
Web: www.royaladhesives.com

### **NOTE**

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