



TECHNICAL INFORMATION

KALEX® 16666 Urethane Adhesive System

PRODUCT DESCRIPTION

KALEX 16666 is a rigid, two-component, extra fast setting, polyurethane structural adhesive. It displays an excellent combination of shear strength and peel strength, with good impact resistance. It is highly recommended for bonding engineering thermoplastics, SMC, laminated surfaces and repair of reaction injection molded parts.

KALEX 16666 is available in the unique DOUBLE/BUBBLE® job sized package as reorder no. 04023.

HOW TO USE

The individual components containing fillers should be stirred or agitated without introducing excessive air before use to ensure that all fillers are properly dispersed. To obtain the best cured properties, accurate proportioning and thorough mixing are essential.

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.

Ratio	Part A	Part B
By weight	100	100
By volume	100	78

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

	Part A	Part B	Mixed
Color	Straw	White	Off-White
Viscosity @ 25 °C, cps	18,000	3,370	11,000
Weight per Gallon, lbs.	9.3	12.2	10.6
Specific Gravity @ 25 °C	1.11	1.46	1.27
Gel time, minutes			
4 gm mass @ 25 °C	---	---	4
Filler Type	None	Non-Abrasive	Non-Abrasive

Shelf Life (in separate

sealed containers), months 12 12 ---

TYPICAL CURED PROPERTIES

(Tested at 25 °C unless otherwise indicated)

Test	Result
Hardness, Shore D	80
Tensile Strength, psi	2,645
Elongation, %	122
Tear Strength, pli	258

Lap Shear Strength

(Al/Al, 2024-T3 acid etched; cure schedule 24 hours @ 25 °C)

Test Temperature, °C	-40	25	82	149
Shear Strength, psi	3,569	4,296	487	361

T-Peel Strength

(Al/Al, 2024-T3 acid etched; cure schedule 24 hours @ 25 °C)

Test Temperature, °C	-40	25	82
Peel Strength, pli	4.4	15.1	4.5

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 Part A. Avoid exposing either component to moisture.

Moisture reacts with the A-side to create minor levels of by products. Low levels will not degrade the final polyurethane. Moisture contamination of the B-side 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 information.

ADDITIONAL INFORMATION

Visit our web site at:

www.royaladhesives.com

Contact us at:

Royal Adhesives and Sealants, LLC
600 Cortlandt Street
Belleville, NJ 07109-3384
(888) 442-7362 Toll-free
(973) 751-3000 Phone
(973) 751-8407 Fax

NOTE

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