



APTEK LABORATORIES, INC.

ISO 9001 / AS9100 Certified

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TECHNICAL DATA & INFORMATION

APTEK® 6519-A/B

Low CTE, low outgassing, syntactic foam compound

PRODUCT DESCRIPTION

APTEK 6519-A/B is a light weight, rigid, filled, dark gray, two component, room-temperature curing, epoxy syntactic foam designed to meet Boeing Satellite Systems specification SCGMS 58001.

APTEK 6519-A/B is a 100% solids, solvent-free system that will not outgas during cure or after being fully cured.

KEY FEATURES AND BENEFITS

- Non-flow paste consistency for repair of vertical surfaces
- Trowelable for edge filling and repair of cracks, scratches, and defects. Also useful for the densification of honeycomb cores.
- Capable of complete cure at room-temperature to eliminate the need for ovens
- Excellent adhesion to syntactic and various metal surfaces
- Exceeds NASA outgassing requirements for high vacuum environments

HANDLING INFORMATION

Mix ratio, parts by weight: 3 (6519-1) / 1 (6519-B)

Work life, 100 gms @25°C, minutes: 60

MIXING

1. Filler and resin will separate during shipment/storage in parts A and B. Be sure each part is thoroughly homogenized prior to weighing and mixing parts A and B together.

2. Weigh 3 parts of APTEK 6519-A into a clean, dry metal or plastic container and then add 1 parts of APTEK 6519-B.

CURE SCHEDULE

5-7 days @ 25°C

or

RT gel + 2 hours @ 65°C

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Notes:

1. For optimum results when heat curing, allow product to gel at room temperature for a minimum of 8 hours prior to heat cure. Foaming may occur if product is heat cured immediately.
2. Kit size optimized with Boeing engineers to be used completely in one use. It is recommended that product is mixed on a planetary mixer for a minimum of 5 minutes. After 3 minutes of mixing, mixer should be stopped and sides of mixing bowl and mixing blade should be scraped to ensure complete and uniform mixing.
3. Handling of material performs best @25°C. Colder temperatures may require longer mixing times and higher temperatures may reduce pot life.
4. For best results and void free bond line, vacuum mixture at less than 10mm Hg for 10 minutes.
5. For mixes 120 grams or less hand mix slowly with metal spatula, until complete and thorough blending is achieved. If complete and thorough mixing is not achieved, compressive strength may be lower than the typical value noted.

TYPICAL PROPERTIES

(values not to be used for specification purposes)

<u>CHARACTERISTICS</u>	<u>6519-A</u>	<u>6519-B</u>	<u>TEST METHOD</u>
Color	dark gray	dark gray	Visual
Viscosity, @25°C,cps	thick paste	thick paste	Visual
Flash point, °C	>150	>150	ASTM D-92
Shelf life, @25°C or below, Months in factory sealed containers	12	12	

<u>CURED PHYSICAL PROPERTIES</u> (cured 16 hrs @ RT + 2 hrs @ 65°C)	<u>6519-A/B</u>	<u>TEST METHOD</u>
Compressive Strength, psi	6000	ASTM D-695
Cured color	dark gray	Visual
Cured specific gravity	0.63	ASTM D-1475
Hardness, Durometer D	72	ASTM D-2240
Outgassing @ 10 ⁻⁶ Torr		
TML, %	0.79	ASTM E-595
CVCM, %	0.02	ASTM E-595

SAFETY AND FIRST AID

APTEK 6519-A is a filled epoxy resin that is safe to handle when used properly. It is judged to be low in toxicity and to be rated as a slight skin irritant. Avoid contact with skin and eyes and use in a well-ventilated area and avoid breathing vapors. In case of eye contact, flush with fresh clean water for at least 15 minutes; for skin contact, wash thoroughly with soap and water. If swallowed, drink at least one pint of water and call a physician. Refer to Material Safety Data Sheet for more details.

APTEK 6519-B is a filled polyamine blend which may cause severe eye and skin irritation with direct contact. Avoid skin and eye contact. For eye contact, flush profusely with fresh clean water and contact physician. For skin contact, wash thoroughly with soap and water. If inhaled, move subject to fresh air and provide fresh water to drink. If swallowed, dilute with at least one pint of water and contact physician immediately. Avoid prolonged breathing of vapors; may cause coughing and chest discomfort. Please note that the probability of physical injury caused by this material substantially decreases when supplied in small pre-measured kits. Refer to Material Safety Data Sheet for more details.