

Advanced Materials

Epibond® 1544 Products

EPOXY ADHESIVES

- Self Extinguishing Adhesives
- Gap Filling Properties
- Early Green Strength

DESCRIPTION :

Epibond® 1544-A/B epoxy adhesive and other Epibond® 1544 Products are two-part pastes that are available in a variety of colors. The epoxy adhesives are non-flowing on vertical surfaces and form excellent bonds on metals, composite laminates, most thermoplastics, and many other dissimilar materials. Epibond® 1544 epoxy adhesives can be used to fabricate or repair aircraft interior parts which fulfill the FAR 25.853 and O.S.U. requirements when used in conjunction with other low combustible composite components. The product is also available in a fast-cure version. Epibond® 1544 epoxy adhesives are qualified to BMS 5-126, Type 4, Class 4, Grade B.

TYPICAL PROPERTIES AS RECEIVED :

| <u>Property</u> | <u>1544-A Resin</u> | <u>1544-B Hardener</u> | <u>1544-A/B System</u> | <u>Test Method</u> |
|---|--------------------------------------|----------------------------|--|--------------------|
| Color | Off-White | Blue | Off-White* | Visual |
| Density, g/cc | 1.23 | 1.00 | 1.18 | ASTM-D-792 |
| Viscosity, cP @ 77°F (25°C) | 120,000 | Paste | Semi-Paste | ASTM-D-2196 |
| Gel time, 50 gms at 77°F (25°C), minutes | -- | -- | 20** | ASTM-D-2471 |
| Shelf life at 77°F (25°C), unopened, months | 24 | 24 | -- | -- |
| * Also available: | Beige Pepper dust (gray) White | | - Epibond 1544A-82/D - Epibond 1544A-42/D - Epibond 1544A-71/D | |
| ** Also available: | Faster cure version | | - Epibond 1544-A/C (See Product TDS) | |

MIX RATIO :

To 100 parts by weight of Epibond® 1544-A resin, add 13 parts by weight of Epibond® 1544-B hardener. Color versions are used at same mixture. Mix both components thoroughly for several minutes to assure complete blending.

CURE SCHEDULE :

Twenty-four hours at 77°F (25°C), or gel at 77°F (25°C) plus one hour at 150°F (66°C).

TYPICAL CURED PROPERTIES (Not for specification purposes)

| <u>Test</u> | <u>Result</u> | <u>Test Method</u> |
|---|---------------|--------------------|
| Tensile lap shear strength, psi (MPa) | | |
| AL/AL after 4 hours at 77°F (25°C) | 395 (2.7) | ASTM-D-1002 |
| AL/AL after 6 hours at 77°F (25°C) | 965 (6.6) | -- |
| AL/AL after 24 hours at 77°F (25°C) | 2,600 (17.9) | -- |
| AL/AL after 24 hours at 20°F (-6°C) | 400 (2.7) | -- |
| Compressive strength, psi (MPa) | 8,000 (55) | ASTM-D-695 |
| % weight gain, 2 hours boiling water | 1.0 | ASTM-D-570 |
| Flammability, 12 sec ignition | | |
| Vertical self-extinguishing time, seconds | 2 | -- |
| Horizontal | 2 | -- |

STORAGE/ SHELF LIFE : Epoxy resins and hardeners should be stored in a dry place in their original, sealed containers at temperatures from 60-100°F (16-38°C). Material temperatures should be above 65°F (18°C) when mixing. After use, tightly reseal containers.

Under these conditions, epoxy resins and hardeners will remain useable for 24 months from date of shipping from Huntsman.

CAUTION :

Huntsman Advanced Materials Americas Inc. maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material. Copies of the latest MSDS may be requested by calling our customer service group at 800-367-8793 or emailing your request to adhesives_group@huntsman.com.

FIRST AID !

Eyes and skin: Flush eyes with water for 15 minutes. Contact a physician if irritation persists. Wash skin thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

Inhalation: Remove subject to fresh air.

Swallowing: Dilute by giving water to drink and contact a physician promptly. Never give anything to drink to an unconscious person.

KEEP OUT OF REACH OF CHILDREN

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Main Offices :
Huntsman Corporation
10003 Woodloch Forest Dr.
The Woodlands
Texas 77380
(281) 719-6000

Huntsman Advanced Technology Center
8600 Gosling Rd.
The Woodlands
Texas 77381
(281) 719-7400