

AD-23 ADHESIVE

Features: High room-temperature strength and toughness, excellent environmental resistance and processability, and a broad range of applications.

AD-23 is a two-component, room-temperature-curing epoxy adhesive offering high mechanical performance, excellent adhesion, low cure shrinkage, good processability and environmental resistance. It bonds metals, stone, wood, ceramics and certain rigid plastics, and may also repair glass-fiber-reinforced plastic. Long-term service temperature: -55 to 60°C.

1. KEY PROPERTIES

Component A is a milky-white paste and Component B is a brownish-yellow paste. Mix A:B = 5:3 by weight. Typical mechanical properties are listed below.

Test item	Substrate	Aging condition	Cure: temperature / time	Typical
Lap shear at R.T., MPa	Steel	Unaged	20°C / 3 days	30.2
Lap shear at R.T., MPa	Steel	Unaged	60°C / 60 min	28.4
Lap shear at R.T., MPa	Steel	Unaged	80°C / 30 min	29.6
Lap shear at R.T., MPa	Al	55°C, 100% R.H., 30 d	80°C / 30 min	25.5
Lap shear at R.T., MPa	Al	Immersed in aviation lubricating oil for 30 d	80°C / 30 min	29.2
Lap shear at R.T., MPa	Al	Immersed in artificial seawater for 30 d	80°C / 30 min	25.8
Floating-roller peel, kN/m	Steel	Unaged	80°C / 30 min	4.1

Note: Specimen surfaces were grit-blasted.

2. PROCESSING PROPERTIES

2.1 Surface preparation

Grit-blast or abrade with sandpaper. Before and after sanding, wipe the adherend surfaces with acetone.

2.2 Mixing

Measure the required amounts at the specified ratio and mix to a uniform color (stir both components thoroughly before dispensing). Pot life varies with ambient temperature as follows:

Ambient temperature, °C	16	24	30	38
Pot life, min	90	60	40	30

2.3 Application and cure

Spread the mixed adhesive evenly over the prepared bonding surfaces with a spatula. Assemble within the pot life, then cure under heat and pressure. Required cure times are shown below.

Cure temperature, °C	25	60
Cure time	3 days	120 min

3. PACKAGING, STORAGE AND TRANSPORT

3.1 Components A and B are packaged separately in plastic bottles (1.12 kg per kit).

3.2 Store tightly sealed in a cool, dry place. Prevent moisture uptake and prolonged open exposure. Shelf life at room temperature: 1 year.

3.3 AD-23 contains no volatile solvents and may be transported as a nonflammable, nonexplosive chemical product.