

Technical Data Sheet

FeedBond® EP-28-U2

UV/Visible light/ Heat cure Adhesive

Description:

FeedBond®EP-28-U2 is a modified acrylate and epoxy hybrid adhesive. This product is designed to cure fast when exposed to UV light (365 nm), even visible light (470 nm). The adhesive on shadow area can cure at elevated temperature. This product gives excellent adhesion on a wide range of materials and typical application include bonding of optical connectors, fibers, lenses and other electronic components.

Uncured Properties	Typical Value	Test Descriptions
Appearance	Orange liquid	uncured
Specific Gravity	1.2	Pycnometer
Viscosity @ 25°C (cps)	50,000 to 80,000	Brookfield DV-III/CP-51 @ 1rpm
Recommended Curing Schedule		
For the UV curable method	UV (365 nm): 500 mW/cm ² for 5 seconds with minimum intensity of 100 mW/cm ² .	
For the Visible Light curable method	Visible Light (470 nm): 600 mW/cm ² for 30 seconds with minimum intensity of 100 mW/cm ² .	
For the thermal curable method	1 hour @ 120 °C bondline temperature or 2 hour @ 100 °C bondline temperature.	
Adhesive Properties	Typical Value	Test Descriptions
Lap Shear Strength, ISO 4587, N/mm ²	14	Glass , Cured @ 100 mW/cm ² , measured @ 365 nm for 5 seconds using a medium pressure mercury arc light source, tested @ 22 °C
	15	PEI lens , Cured @ 100 mW/cm ² , measured @ 470 nm for 30 seconds using a LED lamp, tested @ 22 °C
	18	Steel , Cured for 1 hour @ 120 °C

Note: Heat curing is the secondary or accessorial way. Light curing plus heat curing can give the optimal bonding performance. Sufficient time must be added to allow the bond location to reach the desired cure temperature.

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Physical Properties	Typical Value	Test Descriptions
Hardness ,Shore D	65	ISO 868
Glass Transition Temperature (Tg) , °C	68.5	DMA Mode, ISO 11359-2
Coefficient of Thermal Expansion,ppm/°C	Below Tg: 56.9 Above Tg: 173.1	TMA Expansion Mode, ISO 11359-2
Volume Shrinkage	4.1	ASTM D 792
Water Absorption, , %	0.14	24 hours in water @ 23 °C, ISO 62
Elongation, at break, %	3.4	ISO 527-3
Tensile strength, at break, N/mm ²	28	ISO 527-3
Tensile Modulus, N/mm ²	3200	ISO 527-3

General Information

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Storage

Store product in the unopened container in a dry location. Optimal Storage: 5 °C to 20 °C. Storage below 0 °C or greater than 30 °C can adversely affect product properties.

Allow the EP-28-U2 adhesive container to reach room temperature before use. After removing from the freezer, set the syringes to stand vertically, tip down, while thawing. Do not open the container before the contents reach ambient temperature. Any moisture that collects on the container should be removed prior to use.

Material removed from containers may be contaminated. Do not return product to the original container

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