Plexus® HA1410

2-component thermal conductive elastic adhesive

PRODUCT DESCRIPTION

Plexus® HA1410 is a two-component multi-element hybrid elastic adhesive with low viscosity and low modulus. It has good bonding strength and excellent aging resistance.

Plexus® HA1410 can quickly bond a variety of materials (metal, engineering composite materials, glass, etc.) without the primer.

Plexus® HA1410 has fast curing speed and excellent sealing performance with following functions:

- 100% solid content
- Good insulation performance
- Low modulus and high toughness
- Good weather resistance, high and low temperature impact resistance (thermal shock), high temperature and humidity resistance (85℃, 85%)

PRODUCT CHARACTERISTICS

Chemical Class	Hybrid
Appearance(mixed)	Black
Solids by Volume, %	100
Shelf life, months	6

TYPICAL PROPERTIES(UNCURED)

Part A	
Appearance	Yellow
Density@25 ℃, g/cm^3	1.46
Viscosity@25 ℃, Brookfield	
Spindle #7, 20 rpm, cPs	14,000
Part B	
Appearance	Amber
Density@25 ℃, g/cm^3	1.02
Viscosity@25 ℃, Brookfield	
Spindle #7, 20 rpm, cPs	650
Mixed	
Mix ratio by vol(A:B)	100: 10
Mix ratio by mass(A:B)	100: 7
Working time @25℃, mins	15
Fixture time @25℃, hrs.	30

TYPICAL PROPERTIES(CURED)

Fully Cured Product (7 days @25 ºC)

Density, g/cm^3	1.42
Shore hardness, ASTM D2240	80A
Tensile strength, ASTM D412, MPa	5
Elongation at break, ASTM D412,%	100
Thermal conductivity, ISO22007-2(Hot disk) W/(m·K)	0.5
Shear strength, aluminum/aluminum, ASTM D1002, MPa	>3.0
Shear strength, PC /PC, ASTM D1002, MPa	>3.0
Working temperature, ℃	-40~120
Coefficient of thermal expansion, ISO11358, m/(m.K)	40*10^{-6}
Dielectric strength, ASTM D149, volts/mil	450
Dielectric constant, ASTM D150, 1KHz	4.0

OPERATION

Plexus® HA1410 room temperature curing products can also be heated and accelerated, such as room temperature curing for 24 hours or room temperature curing for 16 hours and then 65°C for 2 hours. If you need a special accelerated curing process, you need to contact relevant technical personnel to verify its feasibility.

THERMAL RESISTANCE

The thermal resistance of the aluminum-aluminum joint specimen is maintained over 3 MPa under the following conditions.

1) Curing for 3 days at 25°C
2) Curing for 2 days at 50°C
3) Aging by thermal shock at -40°C to 80°C

SURFACE PREPARATION

The surface must be dry, degreased and dust-free. The surface treatment method can be different depending on the substrate (paper grinding, degreasing, corona treatment, and so on). Please consult with the technical service in detail

MIXING INSTRUCTIONS

Use the right mixing nozzle to make sure uniform color

with existing performance. Apply the mixed adhesive directly on the substrate and assemble within the working time (5-15min). Press adherend to close the gap and ensure good contact, then cure the sample.

PRECAUTIONS

Please refer to the appropriate material safety data sheet (MSDS) prior to using this product.

STORAGE

Store the unopened product in a cool, dry, well ventilated location away from sources of heat. Optimal storage temperatures should range between 10 ℃ and 32 ℃. Removed product from the containers during use should not be returned to original containers to avoid potential contamination.

CONVERSIONS

(°C x 1.8) + 32 = °F
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

WARRANTY

ITW will replace any material found to be defective. Because the storage, handling and application of this material are beyond our control, we can accept no liability for the results obtained.

NOTE

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For technical service, please call: 86-021-54265119

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