

NAGA 4105 UV

Product Characteristics & Properties

NAGA 4105 UV is suitable for bonding a wide range of materials. When cured, it is highly resistant to vibration and impact forces. NAGA 4105 UV is used to bond, seal or coat metal and glass components in industrial applications. Typical uses include unitizing electrical devices, appliance parts and decorative components

Chemical Type	Acrylated urethane
Appearance	Transparent liquid
Cure	Ultraviolet (UV) light
Application	Bonding, Coating or Sealing
Adherents	Metals, Glass, Plastics (ABS, PVC, PC,...)

Typical properties of uncured material

Parameter description	Unit	Specification
Specific Gravity (25°C)		1.08
Viscosity (25°C)	cps	3,500 – 7,500
Refractive Index	ASTM D542	1.48

Typical curing performance

This product is cured when exposed to UV radiation of 365nm. To obtain a full cure on surfaces exposed to air, radiation at 250nm is also required. The speed of cure will depend on the UV intensity as measured at the product surface.

Tack Free Time is the time required to achieve a tack free surface

	Parameter description	Unit	Specification
Zeta® 7200	30 mW/cm ² , measured @ 365 nm	s	<20
	100 mW/cm ² , measured @ 365 nm	s	<15
Electrodeless, D bulb	50 mW/cm ² , measured @ 365 nm	s	<20
	100 mW/cm ² , measured @ 365 nm,	s	<10
Zeta® 7400	50 mW/cm ² , measured @ 365 nm	min	<5
	100 mW/cm ² , measured @ 365 nm	min	<5

Typical properties of cured material

Parameter description	Unit	Specification
Glass Transition Temperature	ISO 11357-2	45
Water Absorption	%	15 000 -26 000
Refractive Index	ASTM D542	1.48
Shore Hardness	ISO 868, Durometer D	1.51
Elongation,	% ISO 527-3,	60
Tensile Modulus	Psi ISO 527-3	37000
Tensile Strength, at break	Psi ISO 527-3	3540
Dielectric Breakdown Strength	IEC 60243-1, kV/mm	25
Volume Resistivity,	IEC 60093, $\Omega \cdot \text{cm}$	8×10^{12}
Dielectric Constant/ Dissipation Factor	IEC 60250 1 kHz	5.2 / 0.03

Direction for use

1. This product is light sensitive; exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling.
2. The product should be dispensed from applicators with Black
3. For best performance bond surfaces should be clean and free from grease.
4. Cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bond line gap and light transmittance of the substrate through which the radiation must pass.

5. Recommended intensity for cure in bond line situation is 40 mW/cm² minimum (measured at the bond line) with an exposure time of 4-5 times the fixture time at the same intensity.
6. For dry curing of exposed surfaces, higher intensity UV is required (100 mW/cm²).
7. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
8. Plastic grades should be checked for risk of stress cracking when exposed to liquid adhesive.
9. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
10. Bonds should be allowed to cool before subjecting to any service loads

Storage:

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. Naga Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative

Compliant with standards

None

Prevention

Please refer to the Material Safety Data Sheet before use. If you have any questions, please contact your company representative. This product is for industrial use only.

Quality assurance

Manufacturer will replace any defective products. Due to the storage and application of the product, manufacturer will not bear any responsibility for the problems and corresponding consequences arising therefrom.

Affirm

The content of this technical parameter table is based on the test results in the laboratory, not for the purpose of guiding the design of. Manufacturer does not assume any responsibility arising from the data.