



PARSON ADHESIVES, INC.

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PARLITE 4111 *UV Curable Adhesive*

PARLITE 4111 is a single component, UV curable structural adhesive, which rapidly form impact resistant, flexible bonds when cured under UV light. PARLITE 4111 is designed to exhibit excellent bond strength to metals and glass.

FEATURE:

- High strength, and high performance one-part UV/visible curable adhesive system
- The adhesive cures in seconds upon exposure to UV radiation to form an impact resistant, weather resistant and flexible bond.
- UV adhesive with excellent resistance to prolonged humidity or water resistance.

APPLICATION:

- This adhesive primarily designed for bonding glass to itself and wide variety of metal surfaces. Ideal for bonding glass bevels and edges.
- Recommended for decorative glass furniture, decorative items, industrial glass assembly, electrical components, loudspeaker assembly, glass to metal, glass-to-glass, glass to wood assembly, etc.

PROPERTIES OF UNCURED ADHESIVE:

Chemical Type	Urethane Methacrylate
Appearance	Clear liquid
Specific Gravity@ 25 °C	1.06
Viscosity @ 25 °C, mPa.s (cP)	4,000 – 6,000
Brookfield RVT Spindle 4 @ 20 rpm	
Refractive Index @25 °C	1.475
Toxicity	Low

PROPERTIES OF CURED ADHESIVE:

Tensile Modulus, psi, ASTM D 882	43,000
Tensile Strength, ASTM D882, psi	3,100
Elongation @ break %	27
Hardness, ASTM D2240 Shore D	72
Tg, ASTM D3418-82, °C	44
Water Absorption, ASTM D570, %	8.6
Linear Shrinkage, %	1.65

PROPERTIES OF CURED ADHESIVE Shear Strength, psi, ASTM D4501	
Steel to Glass	3,275
Aluminum to Glass	3,345
Glass to Glass	4,000



ELECTRICAL PROPERTIES:

Dielectric Constant/Loss 1Kz	5.2/0.04	ASTM D 150
Dielectric Strength kv/mm	25	ASTM D 149

CURE CONDITIONS:

Cure can be affected with both low and high intensity UV light sources. A low UV intensity of 30 mW/cm² will cure highly transmitting substrate with < 0.010" gap in 7 seconds or 0.070" to 0.090" gaps in 10 to 20 seconds. A high UV intensity of 100 mW/cm² will cure highly transmitting surfaces with < 0.010" gap in 2 seconds or 0.100" to 0.200" gaps in 10 to 20 seconds.

UV Curing System

Lamp Type	5" x 5" Flood	3/16" Spot	1" x 6" Focused
Max. Lamp Intensity @ 365 nm	300 mW/cm ²	4000 mW/cm ²	8000 mW/cm ²
Adhesive Absorption Range (nm)	300 – 500	300 - 500	300 – 500
Cure Speed (Sec)			
Glass to Glass Bonding	9	8	<3
Surface Cure Speed	6	6	<3

Direction for Use:

This adhesive is UV sensitive. Exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling. Adhesive product should be dispensed from applicators with black feed lines. For best performance bond surfaces should be clean and free from grease.

UV cure rate is depends 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.

Recommended intensity for cure in an adhesive application are 40-mW/cm² minimums with an exposure time of 5-6 times the fixture time at this same intensity. For tack free surface cure, as necessary in coating, potting or tacking applications, higher intensity UV is required.

PRECAUTIONS: This product and the auxiliary materials normally combined with it are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the Product.

Warranty: All products purchased from or supplied by Parson are subject to terms and conditions set out in the contract. Parson warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Parson is consider accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. Parson makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will nor infringe any patent.