



PARSON ADHESIVES, INC.

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PARLITE 4500 UV Curable Windshield Repair Resin

PL-4500 is a clear, liquid UV resin that will cure when exposed to ultraviolet light. Since it is one part system and 100% solids, it offers many advantages in windshield repair application.

◆ Feature

- Easy to use one part system, eliminates drying and heat curing
- Curing time is remarkably fast, and is dependent upon thickness applied and the amount of UV light energy available.
- Its high wetting and excellent adhesion combined with low shrinkage result in superior bonding.

◆ Advantages

- Excellent clarity, low shrinkage, and flexibility make it superior for windshield repairing application.
- PL-4500 exhibits good resistance to temperature extremes and high humidity. This resin also offers an excellent exterior durability.
- PL-4500 cures by exposure to UV light with maximum absorption within the range of 350-380 nanometers.

◆ Application

- Low viscosity of PL-4500 offers an excellent solution for filling minor cracks during windshield repairing.
- PL-4500 has an excellent adhesion to windshield glass surfaces with clarity that matches the windshield's refractive index.
- PL-4500 is highly recommended for windshield repairing applications.

◆ Properties of Uncured Adhesive

Chemical Type	Urethane Methacrylate
Appearance	Clear liquid
Specific Gravity @ 25°C	1.1
Viscosity @ 25°C, mPa.s (cP) Brookfield	800 - 1000
Refractive Index @ 25°C	1.53
Toxicity	Low

◆ **Properties for Cured Adhesive**

Tensile Modulus, psi, ASTM D 882	54,500
Tensile Strength, ASTM D882, psi	3,750
Elongation @ break %	176
Hardness, ASTM D2240 Shore D	75
Tg, ASTM D3418-82, °C	50
Water Absorption, ASTM D570, %	4.5

◆ **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 5 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	10	10	< 8
Surface Cure Speed	15	15	< 8

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.

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.

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