Preliminary Product Information Sheet

EPO-TEK® UD1214 *(formerly 113-21-4)*

Note: These are typical properties to be used as a guide only, not a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results.

Date: February 2019 **Rev:** II

Material Description: EPO-TEK® UD1214 is optically opaque epoxy, which can be cured by UV, UV plus thermal or heat only. It is especially designed for UV fast cure and following low temperature (< 80C) curing for shadow areas. It can be used as adhesive, sealing and encapsulation in semiconductor, electro-optics, fiber optics, circuit assembly, medical and scientific/OEM industries for blocking out light in opto-packages.

Number of Components: Single
Mix Ratio by Weight: N/A
Specific Gravity: 1.17
Pot Life: 28 days
Shelf Life: 6 months at -40°C

Recommended Cure	
Iron-Doped Mercury Flood Lamp *100 mW/cm² @ 240-365 nm*	**> 30 sec.**
Alternative Cures*	
Iron-Doped Mercury Spot Lamp	> 30 sec.
365nm LED Flood Lamp	> 30 sec.
Pulsed Mercury Lamp	> 30 sec.
UV Cure is complete after 24 hours from UV Exposure	
* Contact Technical Services for application-specific variations	

NOTES:

- Container(s) should be kept closed when not in use.
- Filled systems should be stirred thoroughly before mixing and prior to use.
- Performance properties (rheology, conductivity, others) of the product may vary from those stated on the data sheet when bi-pak/syringe packaging or post-processing of any kind is performed. Epoxy's warranties shall not apply to any products that have been reprocessed or repackaged from Epoxy's delivered status/container into any other containers of any kind, including but not limited to syringes, bi-paks, cartridges, pouches, tubes, capsules, films or other packages.

MATERIAL CHARACTERISTICS: Cure Condition: Varies as required

PHYSICAL PROPERTIES:			
Color (before cure):		Black	
Consistency:		Smooth thixotropic paste	
Viscosity (23°C) @ 10 rpm:		12,800	cPs
Thixotropic Index:		2.3	
Glass Transition Temp:		161	°C (Dynamic Cure:20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min)
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	57	x 10^{-6} in/in°C
	Above Tg:	168	x 10^{-6} in/in°C
Shore D Hardness:		85	
Die Shear:			
UV Cure		8.6 Kg	3,058.2 PSI
UV Cure + 23°C/24 hours		8.7 Kg	3,093.7 PSI
UV Cure + 80°C/1 hour		10.6 Kg	3,769.4 PSI
UV Cure + 120°C/1 hour		15 Kg	5,334 PSI
Degradation Temp:		401	°C
Weight Loss:	**@ 200°C**	< 0.01	**%**
	@ 250°C	0.02	**%**
	@ 300°C	0.84	**%**
Suggested Operating Temperature:		< 350	°C (Intermittent)
Particle Size:		N/A	

OPTICAL PROPERTIES @ 23°C:	
Spectral Transmission:	≤ 2% @ 260-1,100 nm

The data above is INITIAL only - it may be changed at anytime, for any reason without notice to anyone. It is provided only as a guide for evaluation/consideration.

*These material characteristics are typical properties that are based on a limited number of samples/batches. All properties are based on the cure indicated above. Some properties may vary as manufactured quantities are scaled up to commercialized production levels.

EPOXY TECHNOLOGY, INC.
14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782
www.epotek.com