Technical Data Sheet

HYSOL®OS2800

February 2003

PRODUCT DESCRIPTION

Hysol® OS2800 is a fast curing, water-white epoxy casting system designed specifically for the encapsulation of seven segment displays. This new system will cure rapidly at temperature above 100°C and can be colored by the addition of specific dye concentrates, AC7113 red, AC7044 green and AC7112 yellow. AC7117 is recommended as a standard diffusant for OS2800.

TYPICAL APPLICATIONS

Optoelectronic Liquid Encapsulant

PROPERTIES OF UNCURED MATERIAL

	OS2800 Part A	OS2800 Part B
Color	Clear Blue	Clear Lt. Yellow
Specific Gravity @ 25°C, (77°F) Gm/cc ASTM D1475	1.15	1.18
Shelf Life @ 25°C, (77°F), months	12	6

	Typical Value
Viscosity @ 25°C, (77°F) ASTM D2393	
Brookfield RVF , cP	6,500	225

PHYSICAL PROPERTIES, CURED MATERIAL

	OS2800
Color	Water-white
Coefficient of Thermal Expansion, in/in/°C ASTM D3386	70 x 10^{-6}
Glass Transition, T(g),°C	130
Moisture Absorption, % (ASTM D570)	
24 hours @ 115°C	1.88
7 days @ 25°C	0.45
Hardness, Shore D, (ASTM D2240)	90
Tensile Strength, psi, (ASTM D790)	10,000
Flexural Strength, psi (ASTM D790)	20,000

Cured Electrical Properties

	25°C	
	K	D
100 Hz	3.17	0.006
1 kHz	3.13	0.011
10 kHz	3.05	0.014
100 kHz	2.96	0.012

K = Dielectric constant by ASTM D150
D = Dissipation Factor by ASTM D150

Performance Properties

T-Cycles (55°C-+100°C)		
<1% failures	1,000 cycles	
Light Transmittance	400 nm	800 nm
Initial	75%	90%
After 500 hours @ 121°C	56%	90%

Handling

(Recommended mix ratio and typical mixed properties)

Mix Ratio, parts by weight*	100/106
Pot Life, Hours	5-6
Initial Mixed Viscosity @ 25°C, cP	1100

*Mix ratio of these materials is fixed by their chemistry. Any attempt to increase or decrease the cure rate by adding more or less hardener will result in degraded materials.

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or their strong oxidizing materials

Cure Schedule

(Recommended for optimum properties)

Recommended Cure	4 hours @ 105°C

Note: Larger parts may require 2 hours @ 85°C pre-cure to minimize exotherm. If exotherm temperature exceeds 140°C, severe yellowing will occur. Typical cured properties were determined using the recommended cure schedule. Some differences in properties may occur with the alternate or other cure schedules.

Note

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Loctite Electronics

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