

ALPHA UV SYSTEMS
AUSTRALIAN DISTRIBUTOR
for
ELECTRONIC MATERIALS INC. (EMI)

EASY-SELECTION PRODUCT LIST

**UV CURED EPOXIES FOR
MICRO ELECTRONICS AND OPTO ELECTRONICS**

2005

This **Easy Selection Product List** provides a **brief introduction** into EMI's UV cured epoxies and is designed to assist you to **narrow the product selection** for your application.

You can then simply contact us and we will send you the relevant detailed Technical Data Sheets.

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MICRO ELECTRONICS

Introduction

All the E.M.I. EMCAST™ epoxy systems respond to long wave and safer UV light. Some respond to both UV and heat cure or will cure by heat alone. Therefore, even in areas where no UV light can penetrate, there is an EMCAST product to do the job: Fixturing the exposed areas with UV, release any fixturing, then complete the cure with a short heat post cure.

EMCAST™ products are all “pure epoxies” which cure through the epoxy group. They have no odour, contain no monomers, and when cured have extremely low to no outgassing; and they never have a sticky surface.

Many EMCAST™ epoxies have found their way into a multiple of end uses in industries. Therefore, you can expect to find their data sheets in more than one section of this short form product list.

Summary specifications (and abbreviations in brackets) given at end of each description:

Colour: as specified.

Hardness (HD) – assumed to be reported on the Shore ‘D’ scale unless noted otherwise.

Viscosity (V) – the flow property of a fluid, measured in cps units (1000 units = 1k). Highly viscous fluids are gel-like and do not flow very well.

Thermal cure temp (Tg) – measured in degrees Celcius - C

Coefficient of Thermal Expansion (CTE) – measured in ppm/ C

Coatings

These are 100% solid, one component epoxy conformal coatings, which cure quickly with UV in the 330-380 nM wavelength range. They provide a chemical, moisture and shock resistant barrier on P.C. boards, components and substrates.

EMCAST™ 1900, 1900FC-H.V. & 1900 F.C-LV

FC-HV = Fast Cure, High Viscosity (~5k cps). FC-LV = Fast Cure, Low Viscosity (350 cps). Clear & odourless.

EMCAST 1910 – A UV and/or heat and/or room temperature curing epoxy conformal coating

This is a unique epoxy conformal coating/adhesive sealant - UV and RT curable with catalyst, faster @ elevated temps. Clear, HD 88; V 250.

EMCAST 1912 – UV and/or heat cure flexible conformal coatings

These soft coatings are innovative additions to the EMI conformal coatings line of products. Combine advantage of fast UV cure with heat curability for materials in shaded or blind areas. Cures to a soft consistency that acts as a shock absorbing buffer as well as protection from hostile environments. light amber; V ranges 700-25k; HD ~70

Adhesives & Sealants

EMCAST 700 Series – UV and/or Heat Cure Epoxy Adhesive Sealants

This series is all one component UV and/or heat curable epoxy designed as adhesives, sealants and encapsulants. Grey to translucent; V 30k – 140k cps; HD-84; Tg 60–125 C; CTE 37-70.

EMCAST 712 Clear – UV and/or Thermal Cure Epoxy

This is a single component UV and/or thermally curable epoxy designed specifically for microelectronic assembly. Translucent; V 1200; H 85; CTE 67.

EMCAST 712FC-2 – UV and/or Heat Cure Epoxies for slider Bonding

This is a one component UV and/or heat curable epoxy designed specifically for slider bonding. Translucent; V 30k; HD 83; CTE 67.

EMCAST 712-5K – UV and/or Thermal Cure Epoxy

This is a single component UV and/or thermally cured epoxy system designed specifically for use in electronic assembly. It has low viscosity, which gives it excellent flow and wicking properties. Translucent to light green; V 5k; HD 85; CTE 70; Tg 125 .

EMCAST 712-160K – UV and /or Thermal Cure Epoxy

This is a single component UV and/or thermally cured epoxy system designed specifically for use in electronic assembly. It has high viscosity which is easily dispersed, with good resistance to movement and wicking after dispensing and prior to curing. Translucent to light green; V 160k; HD 82; CTE 70, Tg 125 .

EMCAST 712-85-5K & 712-85-20K – UV and/or Thermal Cure Epoxies

These UV and/or thermally cured epoxy systems are designed specifically for use in electronic assembly. Translucent to light green; V 5k and 20k respectively; HD 85; CTE 70, Tg 125 .

EMCAST 714 – UV and/or Heat Cure Soft Epoxy Damping Adhesive/Sealant

This is a very soft epoxy designed as an adhesive/sealant for bonding flex to suspension with the added advantage of being an effective vibration damper. Hazy slight amber; V 68k; HD 82; CTE 75; Tg <-10 .

EMCAST 719 – Low Modules UV and/or Heat Cure Epoxy for slider Bonding

A one component UV and/or heat curable epoxy designed specifically for slider bonding. Its hardness, CTE, low modulus and dual cure activity make it ideal for this application. Translucent/amber; V 140k; HD 63; CTE 70; Tg 60 .

EMCAST 561 - Silver, 2 Component Conductive Epoxy

A soft paste, silver filled epoxy showing superior electrical and thermal conductivity. It is recommended for use where electrically conductive bonds are required and bonds well to most metals, glass and ceramics. Silver; V paste; HD 80; CTE 40 x 10e-6; Tg 85

EMCAST “V” Series - V140, 141, 142 and 143

This series is a further improvement to the original V120 series of UV epoxies. They display improved plastic and metal adhesion and do not progressively harden. They are unique radiation cure products that will cure in response to visible light as well as long wave ultraviolet. Light Amber; V 1.5k – 4k; HD 46 – 84.

EMCAST 1820, 1820 HV, 1821, 1821 HV, 1822, 1822 HV, 1823 & 1823 HV

UV Curable, One Component Epoxy Adhesive/Sealants with ultra high water & humidity resistance

These epoxy adhesives are 100% solid, have no odour, contain no solvents and cure under safer, long wave UV light to tough solvent and chemical resistant adhesives, little shrinkage and no stickiness on surfaces exposed to air during cure. Used when high water resistance is required. Various ranges of specs, ask for full sheet.

EMCAST 607

A new type of UV cure epoxy system. Cure it with UV alone or heat or UV + heat. It is a transparent, 2 component system with a working life of approximately 8-16 hours depending on the temperature and amount mixed. The advantage of a heat cure option is in the use to pot or coat a device with blind areas where no light can penetrate such as under or impregnated into, a potted coil. Accessible light areas cure in a few seconds. Hazy; V thixotropic; HD 65; Tg 30 .

EMCAST 610

As for 607, with a working life approximately 4-16 hours depending on the temperature and amount mixed. V 50k mixed; HD 85; Tg 85 .

EMCAST 1712 & 1714 UV Curable, Self-levelling, Epoxy Adhesives/Sealants

These are UV light curable, one component 100% solid epoxy adhesive sealants. Both are self-levelling, translucent liquids and when cured, display excellent adhesion to most substrates encountered in electronics. Hazy, translucent; V 7k; HD ~80; Tg 105 .

EMCAST 1732 & 1734 – RTV Silicone Like One Component UV Curable Epoxy Adhesive Sealants

These are UV curable one component epoxy adhesive-sealants. In appearances, they resemble the widely used one component RTV silicones. 1732 is a translucent paste while 1734 is self levelling. Unlike the RTV's they have no odour, are non corrosive and can be cured in seconds or minutes with UV light to a soft flexible consistency. Clear translucent to amber; HD 60A; Tg -5 .

EMCAST 1728 UV Epoxy Series

This series consists of six UV curable, one component epoxy sealants. All six are odourless. 100% solids soft pastes and cure rapidly in the safer long-wave UV range –UVA to a semi-flexible consistency. They are used in coil and component fixturing, wire tacking, chip coating/globbing, component mounting and gap filling. Also exhibit 'dark cure' phenomena. Translucent to grey, HD ~83;CTE 40 –70.

EMCAST 1738 Series – UV Curable Epoxy Adhesive/Sealants for Disk Drives

This series, in handling and cured physical properties, is extremely close to their 1728 parents, but there are a number of improvements in moisture/humidity resistance- water wash resistance –and adhesion to low energy surfaces. Also exhibit 'dark cure' phenomena. Light amber; V 58k HD 60-90; CTE ~70; Tg ranges 20-130 .

A FAMILY OF 1748S – HH & 1748SHH – HV3 UV Customized Epoxies for Disk Drives

This family of epoxies were developed for use inside sealed hard drive assemblies. All 4 products evolved out of the original family member 1748. All feature:-Ultra low outgassing-Almost instant fixturing -One component-Infinite pot life- no waste-Non flowing pastes-Essentially no shrinkage-No odour-Non toxic-No sticky surface or cure. Translucent; V 55k & 400k respectively; HD 85; CTE 70.

EMCAST 1748-S HTG UV Cure Epoxy Family

As for 1748 above but is a higher heat resistant version of 1748 and slightly harder when cured.

EMCAST 1768 – UV Fast Cure Hybrid Epoxies

These are well suited for fast cure adhesives and coatings on ABS and PVC plastic as well as copper, aluminium and stainless steel. V 55k cps; HD 75-84; Tg's 37-128 .

EMCAST 1790 Series – UV Curable Epoxy Adhesives Displaying “Delayed Action”

These adhesives display unusual “Delayed Action Cure” which allows 2 opaque parts to be cured together. A short heat post-cure after parts mated will hasten final cure.

EMCAST AC-5001 UV Light Curable Adhesive/Coating/Encapsulant

This is a 100% solid, one component acrylic adhesive/coating/encapsulant, that polymerizes in seconds upon exposure to ultraviolet light in the 320-380nm wavelength range or heat. Clear, odourless; V1.2k cps; HD 80-85.

EMCAST AC 5002 UV Light Curable Adhesive/Coating/Encapsulant

As for 5001 above and enables good adhesion to many polymeric substrates.

EMCAST AC –5003 UV Light Curable Adhesive/Coating/Encapsulant

This is a 100% solid, one component acrylic adhesive/coating/encapsulant, that polymerizes in seconds upon exposure to UV light in the 320-380nm wavelength range or heat and exhibits good adhesion to many inorganic substrates. V 125; HD 90; Tg 140

OPTOCAST AC–5004 UV Light Curable Adhesive/Coating/Encapsulant

As above with higher viscosity (4000 cps)

EMCAST AC–5005 UV Light Curable Adhesive/Coating/Encapsulant

As above with lower Tg (45). ie, clear, v 4k, HD 75-80.

Glob Top

EMCAST CHIPSHIELD UV CURED EPOXIES – UV Light Cured Epoxies

Chipshield 1400 Series for the Protection of Chips and Wire Bonds

They vary in properties from hi viscosity-thixotropic pastes (hi profile globs) to very low viscosity free flowing liquids (thin film coating) and from very hard to very soft.

Chipshield UV Cured Epoxies for Smart Card Applications

CHIPSHIELD 1450, 1452 1455 & 1455HD

These are silica filled, low viscosity, high flow, UV curable epoxies designed specifically for coating chips in Smart Card applications.

CHIPSHIELD 2000 Series – 1 Component UV and/or Heat Curable Epoxies

These products represent a new dimension in epoxy globs, encapsulants, coatings and underfills. They are one component epoxies that can be cured by UV alone, or by heat alone. Best cure is attained by a combination of UV followed by a short oven bake.

CHIPSHIELD 2321 – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills.

A new generation of UV curable epoxies. It is curable by UV alone, heat alone, or a combination of each (best). It is a 1 component epoxy, which eliminates meter mix and dispense equipment or handling pre mixed and frozen material. Grey or black; V 90k; HD 93; Tg 150 ; Tensile Strength 10k psi.

CHIPSHIELD 2322 – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coating and Underfills.

As for 2321 with lower viscosity (50k cps) and higher tensile strength (18k psi).

CHIPSHIELD 2323 – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills.

As for 2321 with higher viscosity (180k cps)

CHIPSHIELD 2400 – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills – Low Stress

Lower CTE making a dramatic improvement in thermal cycling – benefiting lower substrate warpage. Grey or black; V 155k; HD 92; CTE 2-60; Tg 150 .

CHIPSHIELD 2401 – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills.

As for 2400. Excellent resistance to humidity & cleaning products. V 400k cps. HD 93; Tg 160 .

CHIPSHIELD 2510 – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills – Low Stress

This is designed to improve thermal cycling of flip chip devices. It's high flow, allows it to easily fill the gap between the IC and the substrate. Amber or black; V 160k; HD 93; Tg 150 .

CHIPSHIELD 2520 – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills – Low Stress

As for 2510 It has very low viscosity for fast flow over a chip, and for low profile glob/coating such as used in smart cards. High flexibility results in low stress.

CHIPSHIELD 2527 – 1 Component UV and/or Heat Cure Epoxy, Low viscosity for fast flow

This has very low viscosity, fast flow UV and/or heat cure epoxy designed for quick capillary underfill in flip chip applications. It displays excellent wetting and adhesion to surfaces normally encountered in flip chip applications. Grey or black or blue; V 4k; CTE 29; Tg 150 .

CHIPSHIELD 2590 – 1 Component UV and/or Heat Cure Epoxy For Globbing, Coatings and Underfills – Low Stress

A new generation of UV curable epoxies, curable by UV alone, heat alone, or a combination of each (best). A 1 component epoxy which eliminates meter mix and dispense equipment or handling premixed and frozen materials. Amber or black; V 30k; HD 89; CTE 30-90; Tg 125 .

CHIPSHIELD 2610 & 2610 – WR – 1 Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills - Low Stress

This is an improved version of 2510. It is much lower in viscosity and therefore higher in flow, while retaining its UV and/or heat curability. Its low CTE improves thermal cycling of flip chip devices. Amber or black; V 18k; HD 93; CTE 27-85; Tg 150 .

CHIPSHIELD 2590-LV & 2400-HV Dam & Fill UV and/or Heat Cure Epoxies – Can be “Simulcured”

These are designed to cover and protect bare chips. They both display high Tg's and can be cured simultaneously. Dark charcoal or grey; V 12k; CTE 25; Tg 150 .

Encapsulation

EMCAST UV Light Cured Epoxies Encapsulants & Potting Materials:

This represents a new dimension in epoxy technology – single-component thermally stable material, which can be cured solely by the use of UV. This eliminates their attendant pot life problems. Cure ovens are eliminated. The cure mechanism does not stop upon removal of the UV source but rather a “dark cure” continues for several hours. The epoxies are used for encapsulation, glob topping, adhering, fixturing, mounting, sealing and many other uses in electronics and aerospace.

EMCAST 607

A new type of UV curable epoxy system, curable by UV alone, heat alone, or UV + heat. Transparent 2 component system with a working life of approximately 8-16 hours. Hazy; V-thixotropic; HD65; Tg30 .

EMCAST 610

A new type of UV cure epoxy system, curable by UV alone, heat alone, or UV + heat. Transparent 2 component system with a working life of approximately 4-16 hours. Hazy, V50k mixed; HD85; Tg85 .

EMCAST 700 Series UV and/or Heat Cure Epoxy Adhesive Sealants

All one component UV and/or heat curable epoxies designed as adhesives, sealants and encapsulants. A lower Tg product excellent in strain relief applications. Mostly Translucent, V 28-140k, Tg 60-125 .

EMCAST 708-HV4 – UV and/or Heat Cure Epoxy for Slider Bonding

A one component UV and/or heat curable epoxy designed specifically for slider bonding. Its hardness, CTE low modulus and dual cure activity make it ideal for this application. Translucent, V 140k, CTE 70

EMCAST 718, 720, 722 & 724 – 1 Component UV and/or Heat Cure Epoxies for Slider Bonding

One component UV and/or heat curable epoxies designed specifically for slider bonding. Their properties vary from high to low Tg (low modulus) and from moderate to low CTE (coeff of thermal expansion). CTE 38-70, V 50-140k.

EMCAST 722 – UV and/or Thermal Cure Epoxy for Coating and Encapsulating

A single component UV and/or thermal cure epoxy system designed specifically for use in assembly of electronic devices. Responds to both UV and thermal cure conditions. Easily adapted to many existing manufacturing processes. CTE 70, V 55k, Tg 125 .

EMCAST 748 – UV and/or Thermal Cure Epoxy for Coating and Encapsulating

As above with lower Tg (75). CTE 70, V50k.

EMCAST 748-HV3 – UV and/or Thermal Cure Epoxy for Coating & Encapsulating

As above with higher viscosity = 400k CPS. HD 85, Tg 75 , light amber gel.

EMCAST 750 Series – 1 Component UV and Heat Cure/ 2 Component RT & Heat Cure

This family of thermally conductive materials has a range of conductivities and properties. They are highly filled products, some can be surface “skin” cured with UV light and completed with a post-heat cure. Excellent adhesion to metal substrates and are manufactured with a variety of viscosities for application ease. Grey, V 50-400k, HD 72-88, Tg's 60-160 . Shelf-life = 6 months.

EMCAST 1062-A & 1062-A LV

A UV curable epoxy coating/glob with reduced coefficient of expansion and improved moisture resistance. Grey, HD94, CTE 33, V 20k cps.

EMCAST 1510 & 1511 – UV Curable, One Component Semi Rigid Epoxies for Dip Coating/Encapsulants

UV light curable, semi rigid, one component epoxies suitable for electronic encapsulation, dipping and adhering. They cure rapidly when exposed to UV light in the 320-380nm range to a tough, hard, resistant material with good impact resistance. V 20k, HD 85-90, Tg 110 .

EMCAST 1500 LI – UV Curable One Component Epoxy Encapsulant/Coating

A UV light curable epoxy suitable for electronic encapsulation, sealing and fixturing. It cures rapidly when exposed to UV light in the 320-380nm range to a tough resistant material with excellent adhesion. Grey, CTE 33 ppm/ C, V 15k, HD 90, Tg 160 C.

EMCAST 1550 & 1551 – UV Light Cure Epoxies – Ultra Low Ionic Content

A UV light curable, semi flexible, one component epoxies suitable for electronic encapsulation, dipping and coating. They cure rapidly when exposed to UV light in the 320-400nm range to tough, resistant materials with good impact and thermal shock resistance. Grey, opaque liquids. V 75k, thixotropic; HD 65, 90; CTE 35; Tg 30 .

EMCAST 4180 Thermal Cure Epoxy

A single component thermally cured epoxy system designed specifically for use in electronic assembly. Low viscosity, which gives it excellent flow and wicking properties. Black, V 6k, HD 82, Tg 120 . Shelf Life 3 months @ room temp.

Surface Mount

CHIPSHIELD 2000 Series – One Component UV and/or Heat Curable Epoxies

A new dimension in epoxy globs, encapsulants, coatings and underfills. They are one component epoxies that can be cured by UV alone, or by heat alone. Best and fastest cure is attained by a combination of UV exposure followed by a short oven bake.

CHIPSHIELD 2321 – One Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills

A new generation of UV curable epoxies. Curable by UV alone, heat alone, or a combination of each (best). It is a 1 component epoxy, which eliminates meter mix and dispense equipment or handling premixed and frozen material.

CHIPSHIELD 2322 – One Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills

As above with lower viscosity and increased tensile strength..

CHIPSHIELD 2323 – One Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills

As above with a much higher viscosity of 180,000 CPS.

CHIPSHIELD 2400 – One Component UV and/or Heat Cure Epoxy for Globbing, Coatings –Low Stress.

As above with lower CTE making a dramatic improvement in thermal cycling – benefiting lower substrate warpage..

CHIPSHIELD 2401 – One Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills

As above with viscosity of 400,000 CPS. Excellent resistance to humidity and cleaning products.

CHIPSHIELD 2527 – One Component UV and/or Heat Cure Epoxy Low Viscosity for Fast Flow

This is a very low viscosity, fast flow UV and/or heat cure epoxy designed for quick capillary underfill in flip chip applications. It displays excellent wetting and adhesion to surfaces. Grey, black or blue; V 4k, CTE 29, Tg 150 .

CHIPSHIELD 2610 & 2610-WR – One Component UV and/or Heat Cure Epoxy for Globbing, Coatings and Underfills – Low Stress

An improved version of Chipshield 2510. Much lower in viscosity and therefore higher in flow, while retaining its UV and/or heat curability. Amber or black, CTE 27amber, 85black; HD 93; V 18k; Tg 150 .

Electrically Conductive

EMCAST 501 – UV and/or Thermal Cure Conductive Epoxy for Slider Bonding

This is a single component UV and/or thermal cure epoxy system designed specifically for Slider bonding in HDD manufacturing. It is a silver filled epoxy system designed to conduct static electricity. Responds to both UV and thermal and can easily be adapted to many existing manufacturing processes. Silver, HD 85, V = thixotropic paste, Tg 125 .

EMCAST 502 – Electrically Conductive, Thermal Cure Epoxy

Highly conductive silver filled cationic epoxy system designed specifically for HSA and HGA assembly processes. Very low levels ionic contamination and ultra-low outgassing. Low viscosity designed for syringe or pin application. Silver, V 12k, CTE 40 ppm/ C, HD 90, Tg 120 .

EMCAST 510 & 510-FC – Silver Filled Electrically & Thermally Conductive “Heat Cure” Epoxy

These are 1 component heat curing epoxies designed to conduct heat & electricity efficiently in adhesive applications. Silver-grey; V-thixotropic self-levelling, CTE 35ppm/ C, HD 80, Tg 130

EMCAST 521 – Electrically Conductive, Thermal Cure Epoxy

A single-component electrically-conductive epoxy system designed specifically for HSA and HGA assembly processes. Silver, V 12k, CTE 40 ppm/ C, HD 90, Tg 120 .

EMCAST 531-1 Electrically Conductive

A single component heat curing electrically conductive epoxy system designed to be an economical, highly conductive material for automotive under hood use. Dark Charcoal, V 40k, HD87, Tg 150 , CTE 42ppm/ C

EMCAST 561 – Silver, 2 Component Conductive Epoxy

A soft paste, silver filled epoxy showing superior electrical and thermal conductivity. It is recommended for use where electrically conductive bonds are required and bonds well to most metals, glass and ceramics. 2-component system, Part B easily added by dropper. CTE 40×10^{-6} ppm/ C, HD 80, V paste.

Heat Cure

4600 Series – DIEBOND SMD Adhesives – Fast Curing 1 Part, Thixotropic Adhesives for Bonding Surface Mount Devices to Circuit Boards

These epoxies are designed for syringe, pin transfer and screen printing adhesive application systems. They display high green strength and consistent low profile without stringing. Cures rapidly under IR at low temperatures and contains no solvents. 4600 Series table of properties available on request.

Optocast

OPTOCAST 3400 – UV and/or Heat Curable One Component Epoxy

A UV light curable and/or heat curable epoxy suitable for opto-electronic assembly. It cures rapidly when exposed to UV light in the 320-380nm range to a tough resistant material with excellent adhesion. Amber or black, CTE 1-18 amber, CTE 2-60 black, Tg 150 , HD93, V 175k cps

OPTOCAST 3401 – UV and/or Heat Curable One Component Epoxy Encapsulant/Coating

A UV light or heat curable epoxy suitable for optical, sealing and fixturing. It cures rapidly when exposed to UV light in the 320-380nm range to a tough resistant material with excellent adhesion. Grey, V145k cps, CTE 33 ppm/ C, HD 90, Tg 150

OPTOCAST 3405 – One Component UV and/or heat Cure Epoxy – Low Stress

A member of new generation of UV curable epoxies. It is curable by UV alone, heat alone, or a combination of each (best). It is a one component epoxy, which eliminates meter mix and dispense equipment or handling pre-mixed and frozen material. High flexibility → low stress. White, CTE 50 ppm/ C, Tg 100 , HD 70, V 11k cps

OPTOCAST 3408 – UV and/or Heat Curable One Component Epoxy

A UV light and/or heat curable epoxy suitable for opto-electronic assembly. It cures rapidly when exposed to UV light in the 320-380nm range to a tough resistant material with excellent adhesion. Light grey, Visc 40k cps, CTE 14 ppm/ C, Tg 150 , HD 92

OPTOCAST 3410 – UV and/or Heat Curable One Component Epoxy

As for 3408 with higher viscosity (100k cps).

OPTOCAST 3410 GEN 2 – UV and/or Heat Curable One Component Epoxy

As for 3410 with formulation optimised for extended pot life (3 days) and non frozen expedited shipping.

OPTOCAST 3410-LC – UV and/or Heat Curable One Component Epoxy

As for 3410 but with extremely low viscosity (200 cps).

OPTOCAST 3411 – UV and/or Heat Curable One Component Epoxy

Similar to 3410 with lower viscosity (15k cps) and long working life at room temperature (~2 weeks).

OPTOCAST 3415 – UV and/or Heat Curable One Component Epoxy-Lowest Expansion of any Epoxy

Lowest cure shrinkage (0.22%) and thermal coefficient (0.7) of any available in the Optocast 3400 Series. Grey, V 110k cps, Tg 150 , HD 92, CTE 12 ppm/ C

OPTOCAST 3420 – UV and/or Heat Curable One Component Epoxy

As for 3400 above with lower viscosity (37k cps) and low CTE (18 ppm/ C).

OPTOCAST 3421 – UV and/or Heat Curable One Component Epoxy

Description as for 3420. Specs: Grey, V 70k cps, Tg 120 , HD 91, CTE 21 ppm/ C.

OPTOCAST 3440 A & B – Two Component Filled System

A two component, highly filled system for use on and in parts where it is impossible to expose all the epoxy to UV light. Viscosities: A 38k cps, B 13k cps. CTE 24 ppm/ C, HD90

OPTOCAST 3503 – UV Curable Coatings/Sealant

This is a cationic epoxy coating/sealant system designed to UV cure in very thin sections. High ultimate Tg and low viscosity for good flow and leveling. Clear, HD 89, CTE 70 ppm/ C, Tg >150

OPTOCAST 3505 & 3505-HM

These are cationically UV cured epoxy resins developed especially for the joining of fiber optics. Good humidity resistance, very high Tg, good chemical resistance. V 400cps, CTE 60 ppm/ C, Tg >150 , HD 88

OPTOCAST 3506 & 3506HM –

UV Cured Epoxy Resin developed especially for the joining of fiber optics. Good humidity resistance – moderately high Tg – good chemical resistance. V 900cps, CTE 60 ppm/ C, HD 81, Tg 125

OPTOCAST 3507 & 3507HM –

As above but with – very high Tg's (142)

OPTOCAST 3508 & 3508HM –

As above . Viscosity 8,000cps.

OPTOCAST 3514 & 3514-8K – UV Cure Soft Epoxy Damping Adhesive/Sealant

A very soft but tough epoxy designed as an adhesive/sealant for bonding and encapsulating optical fibers and bundles. Very low durometer combined with very low Tg means less stress. UV cure only. HD A82, Tg <-10 , CTE 75 ppm/ C, V 55k cps

OPTOCAST 3514HM & 3514HM Clear – UV and Heat Cure Soft Epoxy Damping Adhesive/Sealant

As above. Curable by UV and/or heat or heat alone.

OPTOCAST 3553 & 3553-HM

These are cationically UV cured epoxy resins developed especially for the joining of fiber optics. Good humidity resistance – very high Tg (145) – good chemical resistance. CTE 55 ppm/ C, HD 88, V 900cps

OPTOCAST 3553-LV & 3553-LV-HM

As above. Low viscosity (500cps).

OPTOCAST 3553-UTF & 3553-UTF-HM

As above. A variation of 3553 designed to cure in sections less than 20 microns.

OPTOCAST 3553LV-UTF & 3553LV-UTF-HW & 3553LV-UTF-HM

As above. Used for higher wetting on high energy surfaces. V 500cps, CTE 55 ppm/ C, HD 88

OPTOCAST 3580 & 3590 – Break through products in UV optical epoxies very high & very low Ref index

The latest additions to the family of epoxy products designed for fiber optic/photonic users. Both highest and lowest Ref. Index of any UV epoxy yet reported. Cures quickly when exposed to long wave UV, to a tough resilient plastic. HD 85, CTE 60 ppm/ C, Tg 100 . Visc 3580: 300cps, 3590 3,500 cps

OPTOCAST 3601 & 3602 – Two component Optically Clear Epoxies

Latest addition in epoxy products designed for fiber optic/photonics uses. They offer extreme clarity when cured but require no UV to effect cure. Both are 2 component amine cured epoxies. Clear, V 800cps, HD 90, CTE 55 ppm/ C Tg 130 (3601) & 65 (3602).

OPTOCAST 3653 – 2 Component Heat Cure Optical Epoxy With Superior Water/Humidity Resistance

10:1 ratio 100% solids heat cure epoxy designed for optical applications. Excellent resistance to many solvents and cleaners and is excellent for bonding optical fibres, metal, glass and ceramic. V 4000cps, Tg 120 , HD 85, CTE 60-160 ppm/ C

OPTOCAST 3663 – 1 Component Heat Cure Optical Epoxy With Superior Water/Humidity Resistance

As above and supplied pre-degassed.

OPTOCAST AC-3723 Series – UV, UV and/or Heat Curable, One Component Acrylated Urethane Adhesive/Sealant/Encapsulant

A 4 member family of liquid pre-polymers for sealing, coating, bonding, or encapsulating. Members differ in viscosity – from free flowing liquid to high viscosity gel. Clear, HD 75, Tg 40 , V ranges 2k-250k cps.

OPTOCAST AC-3724 Series – UV, UV and/or heat Curable, One Component Acrylated Urethane Adhesive/Sealant/Encapsulant

A 4 member family of liquid pre-polymers which have higher flexibility, lower hardness (55), lower Tg (35) and high elongation than that of the AC-3723 Series. Clear.

OPTOCAST AC-3725 Series – UV, UV and/or Heat Curable, One Component Acrylated Urethane Adhesive/Sealant/Encapsulant

As above with lower range of viscosity (250-250k) & linear shrinkage. Clear, Tg 55 , HD 55.

OPTOCAST AC-3741 – UV Curable Adhesive/Sealant/Encapsulant

A 1 component 100% solid, that will adhere to various metallic, ceramic and certain polymeric substrates when polymerized to a hard solid upon exposure to UV light in the 320-390 nM wavelength range or heat. Ideal for fixturing and aligning optical devices. A high viscosity with low CTE & excellent thermal cycle performance. White, V 100k, HD 92, Tg 95 , CTE <20 ppm/ C

OPTOCAST AC-3742 – UV Curable Adhesive/Sealant/Encapsulant

As above with lower Tg (35-40)

OPTOCAST AC-3743 – UV Curable Adhesive/Sealant/Encapsulant

As above with lower viscosity & high Tg.

OPTOCAST AC-3761 Series – UV, UV and/or Heat Curable, One Component Acrylated Epoxy Adhesive/Sealant/Encapsulant

Range of low viscosity with high Tg for coating or encapsulating. Full data sheet available.

OPTOCAST AC-3762 - UV Curable Adhesive/Sealant/Encapsulant

An acrylated epoxy based flexible adhesive with good adhesion to polycarbonate CAB, PMMA, ceramic and metal. Clear, V 5k cps, HD65, Tg 55 , CTE 70 ppm/ C.

Technical Service Reports

TSR #8 – Hand Mixing Procedures of 2 Component Adhesive Systems

TSR #9 – UV Cured Epoxies vs Acrylic Based Systems

TSR #10 – Spot Cure or Flood Light – That is the question (a guide)

TSR #11 – Storage/Shipping of EMCAST Epoxies

TSR #12 – Process instructions for the use of EMCAST 600 Series products packages in Dual Syringes

TSR #13 – Handling and Curing Chipshield 2000 Products

TSR #14 – Handling and Storage of OPTOCAST 3400 Series and – HM Products

TSR #15 – Water & Humidity Resistance of OPTOCAST Fiber Optic Epoxies

TSR #16 – UV and Heat Curing OPTOCAST 3400 Series Products

TSR #17 – 3410 Viscosity Vs Temperature – Sensitivity.

TSR #18 – Handling, Storage and Bench life of DIEBOND 4460LP

TSR #19 – 3553 Series Products: Viscosity Vs Temperature – Sensitivity.

For a detailed technical information sheet on any of the above products, please contact us at Alpha UV Systems:

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