EPIC RESINS

POLYMERS FOR INDUSTRY SINCE 1958

UL RECOGNIZED POTTING SYSTEMS

Product	UL Flammability	Mixed Color	Mix Ratio by Weight	Mix Ratio by Volume	Mixed Viscosity (cps)	Gel Time	Tg (Glass Transition)	Shore Hardness @ 25˚C
Epoxies								
R1000-01/ H5000	UL94 HB @ 3.0mm	Black	10:1	5.5:1	8,000 – 10,000 @ 25˚C, 20 RPM	80 – 90 Min @ 25˚C, 200g	83 – 89˚C	88 – 92 Shore D
R1055/H5083	UL94 HB @ 1.55mm	Gray	100:18	3.25:1	2,300 – 3,300 @ 25˚C, 20 RPM	2 – 3 Hours @ 25˚C, 100g	76 – 84˚C	83 – 87 Shore D
R1074-06/ H4030-02	UL 94 V-0 @ 3.0mm	Black	1:1	1:1	7,000 – 9,000 @ 25˚C, 20 RPM	60 – 80 Min @ 25˚C, 100g	34 – 38 ˚C	78 – 82 Shore D
R3000/H3000	UL94 V-0 @ 9.0mm	Black	1:1	1:1	15,000 – 20,000 @ 25˚C, 20 RPM	65 – 75 Min @ 25˚C, 100g	60 – 65˚C	85 – 90 Shore D
S7065-03	UL94 V-0 @ 3.0mm	White	100:34	100:47	2,500 – 3,500 @ 25˚C, 20 RPM	27 – 35 Min @ 100˚C, 100g	111.7˚C	88 – 92 Shore D
S7174-03	UL94 V-0 @ 3.0mm	Black	5:1	3:1	Maximum 4,000 @ 25˚C, 20 RPM	45 – 55 Min @ 25˚C, 100g	36 – 40˚C	82 – 88 Shore D
S7242	UL94 HB @ 6.0mm	Black	100:67	2:1	7,000 – 10,000 @ 25˚C, 20 RPM	60 – 80 Min @ 25˚C, 100g	58 – 64˚C	83 – 89 Shore D
S7244	UL94 HB @ 5.9mm	Black	1:1	1:1	7,000 – 9,000 @ 25˚C, 20 RPM	12 – 15 Min @ 25˚C, 100g	41 – 47˚C	81 – 85 Shore D
S7397-02	UL94 V-0 @ 3.2mm	Black	1:1	1:1	5,200 – 7,200 @ 25˚C, 20 RPM	200 – 300 Min @ 25˚C, 200g	24 – 28˚C	70 – 72 Shore D
S7397-03	UL94 V-0 @ 3.2mm	Black	1:1	1:1	7,000 – 9,000 @ 25˚C, 20 RPM	200 – 300 Min @ 25˚C, 200g	24 – 28˚C	70 – 72 Shore D
Polyurethanes								
S7527	UL94 V-0 @ 9.0mm	Gray	100:16.7	5:1	3,000 – 4,000 @ 25˚C, 20 RPM	40 – 50 Min @ 25˚C, 100g	(-2.5) – (-1.52)˚C	88 – 92 Shore A
S7527-01	UL94 V-0 @ 9.0mm	Opaque	100:16.7	5:1	3,000 – 4,000 @ 25˚C, 20 RPM	40 – 50 Min @ 25˚C, 100g	(-2.5) – (-1.52)˚C	88 – 92 Shore A
S7527-02	UL94 V-0 @ 9.0mm	White	100:16.7	5:1	3,000 – 4,000 @ 25˚C, 20 RPM	40 – 50 Min @ 25˚C, 100g	(-2.5) – (-1.52)˚C	88 – 92 Shore A
S7527-03	UL94 V-0 @ 9.0mm	Blue	100:16.7	5:1	3,000 – 4,000 @ 25˚C, 20 RPM	40 – 50 Min @ 25˚C, 100g	(-2.5) – (-1.52)˚C	88 – 92 Shore A
S7527-04	UL94 V-0 @ 9.0mm	Black	100:16.7	5:1	3,000 – 4,000 @ 25˚C, 20 RPM	40 – 50 Min @ 25˚C, 100g	(-2.5) – (-1.52)˚C	88 – 92 Shore A
S7144-16	UL94 HB @ 4.2mm	Blue Black	100:43	3:1	250 – 350 @ 25˚C, 20 RPM	10 – 20 Min @ 25˚C, 150g	(-21) – (-23)˚C	77 – 83 Shore A
S7202-03	UL94 V-0 @ 5.7mm	Blue	8:100	9.3:100	6,000 – 7,000 @ 50˚C, 20 RPM	7.5 – 9.5 @ 50˚C, 100g	-40˚C Maximum	77 – 83 Shore A
S7202-04	UL94 V-0 @ 5.7mm	Black	8:100	9.3:100	6,000 – 7,000 @ 50˚C, 20 RPM	30 – 50 @ 50˚C, 100g	-40˚C Maximum	77 – 83 Shore A
S7202-05	UL94 V-0 @ 5.7mm	Blue	8:100	9.3:100	6,000 – 7,000 @ 50˚C, 20 RPM	12.5 – 15.5 @ 50˚C, 100g	-40˚C Maximum	77 – 83 Shore A
S7253	UL94 V-0 @ 9.0mm	Tan	100:18.2	100:21.4	1,600 – 2,000 @ 25˚C, 20 RPM	20 – 30 Min @ 25˚C, 118.2g	(-2) – 2˚C	82 – 88 Shore A
S7253-01	UL94 V-0 @ 9.0mm	Black	100:18.2	100:21.4	1,600 – 2,000 @ 25˚C, 20 RPM	20 – 40 Min @ 25˚C, 100g	(-2) – 2˚C	82 – 88 Shore A
S7253-02	UL94 V-0 @ 9.0mm	Off-White	100:18.2	100:21.6	1,800 – 2,200 @ 25˚C, 20 RPM	20 – 30 Min @ 25˚C, 100g	(-13) – (-15)˚C	82 – 88 Shore A
S7253-03	UL94 V-1 @ 12.2mm & UL94 V-2 @ 9.0mm	Blue	100:18.2	100:21.4	1,900 – 2,100 @ 25˚C, 20 RPM	20 – 40 Min @ 25˚C, 100g	0˚C	84 – 86 Shore A
S7253-04	UL94 V-0 @ 9.0mm	Black	100:18.2	100:21.4	1,600 – 2,000 @ 25˚C, 20 RPM	7 – 12 Min @ 25˚C, 100g	(-2) – 2˚C	82 – 88 Shore A
S7253-07	UL94 V-0 @ 9.0mm	Off-White	100:18.2	100:21.6	1,800 – 2,200 @ 25˚C, 20 RPM	7 – 12 Min @ 25˚C, 100g	(-13) – (-15)˚C	82 – 88 Shore A
S7253-11	UL94 V-0 @ 9.0mm	Black	100:18.2	100:21.4	4,000 – 4,500 @ 25˚C, 20 RPM	20 – 40 Min @ 25˚C, 118.2g	(-2) – 2˚C	82 – 88 Shore A
S7253-21	UL94 V-0 @ 9.0mm	Off-White	100:18.2	100:21.6	1,800 – 2,200 @ 25˚C, 20 RPM	5 – 7 Min @ 25˚C, 100g	(-13) – (-15)˚C	82 – 88 Shore A
S7348	UL94 V-0 @ 3.9mm	Gray	5:1	100:26	3,000 – 4,000 @ 25˚C, 20 RPM	20 – 30 Min @ 25˚C, 250g	38 – 42˚C	78 – 82 Shore D
S7348-01	UL94 V-0 @ 5.6mm	Gray	5:1	100:26	2,000 – 3,000 @ 25˚C, 20 RPM	10 – 20 Min @ 25˚C, 250g	35 – 40˚C	78 – 82 Shore D
S7453	UL94 HB @ 3.0mm	Amber	1:1	100:110	250 – 300 @ 25˚C, 600 RPM	55 – 85 Min @ 25˚C, 100g	<(-35)˚C	50 – 55 Shore A
S7475	UL94 V-0 @ 4.8mm, 7.7, 11.2mm & UL94 V-2 @3.2mm	Gray	100:17	4:1	1,500 – 2,500 @ 25˚C, 20 RPM	40 – 50 Min @ 25˚C, 100g	-55˚C	50 – 65 Shore OO
S7478	UL94 V-0 @ 3.0mm	Black	100:8.52	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	25 – 35 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-01	UL94 V-1 @ 3.0mm & UL94 V-0 @ 6.0mm	Pink	100:8.52	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	25 – 35 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-02	UL94 V-0 @ 3.0mm	Off-White	100:8.4	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	25 – 35 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-03	UL94 V-1 @ 3.0mm & UL94 V-0 @ 6.0mm	Red	100:8.53	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	25 – 35 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-04	UL94 V-0 @ 3.0mm	Black	100:8.52	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	40 – 80 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-05	UL94 V-1 @ 3.0mm & UL94 V-0 @ 6.0mm	Gray	100:8.4	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	40 – 80 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-06	UL94 V-0 @ 3.0mm	Black	100:8.52	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	12 – 17 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-07	UL94 V-0 @ 3.0mm	Black	100:8.52	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	7 – 10 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-08	UL94 V-1 @ 3.0mm & UL94 V-0 @ 6.0mm	Gray	100:8.4	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	12 – 17 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7478-09	UL94 V-1 @ 3.0mm & UL94 V-0 @ 6.0mm	Gray	100:8.4	100:12	5,000 – 7,000 @ 25˚C, 20 RPM	13 – 18 Min @ 25˚C, 100g	(-5) – (-10)˚C	75 – 80 Shore A
S7489	UL94 V-1 @ 8.5mm	Black	100:16.7	4:1	3,000 – 3,500 @ 25˚C, 20 RPM	40 – 50 Min @ 25˚C, 100g	-40˚C Maximum	78 – 83 Shore OO
S7506	UL94 V-0 @ 12.0mm & UL94 V-2 @ 9.0mm	Off-White	100:17.65	4.76:1	3,000 – 4,000 @ 25˚C, 20 RPM	5 – 7 Min @ 25˚C, 100g	7 – 10˚C	85 – 90 Shore A
S7516	UL94 V-0 @ 1.5mm	Black	5:1	100:25.7	1,300 – 1,600 @ 25˚C, 20 RPM	45 – 55 Min @ 25˚C, 100g	4 – 8˚C	58 – 62 Shore D
S7524	UL94 V-0 @ 3.0mm	Transparent	100:58.4	2:1	170 – 230 @ 25˚C, 500 RPM	25 – 35 Min @ 25˚C, 100g	(-19) – (-15)˚C	61 – 65 Shore A
RM2018	UL94 V-0 @ 6.0mm	Black	100:20.4	4:1	2500 – 3000 @ 25˚C, 20 RPM	60 – 80 Min @ 25˚C, 100g	(-50) – (-47)˚C	53 – 57 Shore A

EPIC RESINS PROVIDES YOUR UL SOLUTIONS

Epic Resins specializes in custom formulating adhesives, varnishes and potting and encapsulating compounds to meet our customer's specific product and process needs. Epic Resin's UL file, file number E55516, contains over 40 different UL rated epoxies and polyurethanes to fit your specific application requirements. Our knowledgeable Technical Sales staff will assist you in finding the correct product to fit your needs.

CUSTOMER SERVICE AND TECHNICAL SUPPORT

Epic Resins has been in business since 1958 dedicating our efforts to custom formulating quality, cost effective, polyurethanes and epoxies. In order to achieve our goal of complete customer satisfaction, we have implemented an ISO 9001 Quality Management System and an ISO 14001 Environmental Management System. Epic Resins continues to enhance our world class reputation by focusing on innovation, cost efficiency, customer-focused product development, large batch consistency, superior technical support, and customer service.

EPIC RESINS UL RECOGNIZED EPOXIES

R1000-01/H5000

EPIC R1000-01/H5000 is a filled modified epoxy resin that is UL 94 HB recognized. The resin is stabilized to permit successful use of dispensing equipment, as well as manual batch processing. Room temperature and elevated temperature curing options are available. EPIC R1000-01/H5000 is used in a variety of applications including capacitors, resistors, diodes and torch heads.

R1055/H5083

EPIC R1055/H5083 is a vacuum grade modified epoxy system specially formulated to achieve penetration of tightly wound electrical coils by having a low mixed viscosity combined with a long pot life. This UL 94 HB recognized epoxy is used in applications requiring an RTI rating of 180˚C or a UL 746 rating of F1 for outdoor suitability requirements for UV resistance and water immersion.

R1074-06/H4030-02

EPIC R1074-06/H4030-02 is a premium fire retardant epoxy potting compound that is UL 94-V0 recognized. With this flame rating EPIC R1074-06/H4030-02 carries a high temperature rating and could be considered for use in applications that are thermal cycled over a wide temperature range. EPIC R1074-06/H4030-02 features a long work life, convenient 1:1 mix ratio and is free of heavy metals and PBDE's throughout the formulation for RoHS compliancy.

R3000/H3000

EPIC R3000/H3000 is a two component epoxy potting compound with a convenient 1:1 by weight or volume mix ratio. EPIC R3000/H3000 has been formulated to provide a rigid cured epoxy that is recognized to a UL 94 V-0 flame rating and has a blush free finish.

S7065-03

EPIC S7065-03 is a two component heat cure epoxy potting system developed for impregnating and potting high voltage coils for maximum environmental protection. This epoxy potting system features non-abrasive fillers that make it well suited for most meter-mix dispense systems. EPIC S7065-03 is recognized UL 94 V-0 at 3.0mm and is RoHS compliant.

S7174-03

EPIC S7174-03 is a UL 94 V-0 recognized two component epoxy potting and casting system featuring a low mixed viscosity, convenient 3:1 volumetric mix ratio and very low shrinkage. EPIC S7174-03 is operates in applications that run at 130˚C continuously.

S7242

EPIC S7242 is a UL 94 HB recognized two component epoxy potting and casting compound. This product features a low coefficient of thermal expansion. EPIC S7242 can be hand mixed or dispensed via meter mix machinery due to the use of non-abrasive fillers. EPIC S7242 is used in applications that require chemical resistance combined with thermal shock resistance.

S7244

EPIC S7244 is a UL 94 HB recognized two component epoxy potting and casting system which performs strong in applications where electrical insulating properties and thermal conductivity are required. EPIC S7244 has a convenient 1:1 mix ratio by weight or volume and uses less abrasive fillers making it suitable for use in meter-mix and dispense machinery.

S7397 SERIES

EPIC S7397 is a series of high durometer epoxy potting compounds which offer maximum protection for electronics from their operating environment. The key features of this series include UL 94 V-0 recognition at 3.2mm, a 1:1 mix ratio by weight or volume for easy mixing, RoHS compliance and a long pot life with medium viscosity making it suitable for manual or automated production operations.

EPIC RESINS UL RECOGNIZED POLYURETHANES

S7527 SERIES

EPIC S7527 series of products are two component polyurethane potting compounds that are UL 94 V-0 recognized without the use of phosphate or halogen containing flame retardants and is made from RoHS compliant materials. EPIC S7527 provides a long gel time, medium hardness, excellent thermal properties and water resistance. This system comes in a variety of colors and gel times to match your specific manufacturing and application needs. EPIC S7527 offers a convenient volumetric mix ratio of 5:1 making it very adaptable to meter mix and dispense machinery. This material has been used in applications such as access card readers and other radio frequency devices, outdoor LED displays, sensor and control modules including pool and spa control modules, and a variety of automotive applications.

S7144-16

EPIC S7144-16 is a UL 94 HB recognized two component polyurethane for use in potting electronic devices. EPIC S7144-16 lends itself well to sand impregnation and offers good hydrolytic stability. EPIC S7144-16 is used in applications requiring high operating temperature ratings, low glass transition temperature of -22˚C, medium durometer, and meter mix friendly 3:1 volumetric mix ratio with an extremely low mixed viscosity.

S7202 SERIES

EPIC S7202 series of potting compounds are two component polyurethanes for outdoor electrical potting applications with sensitive components. This series has over 20 years of field history in outdoor applications such as micro-inverters, charge controllers, and electronic control modules. The EPIC S7202 series is formulated with a variety of gel times to allow for superior component impregnation and air release. The entire EPIC S7202 series is UL 94 V-0 recognized with an RTI rating of 90˚C and is formulated using RoHS compliant materials.

S7253 SERIES

EPIC S7253 series of materials are versatile polyurethane potting compounds that are recognized UL 94 V-0 and are used for potting and encapsulating sensitive electronics exposed to harsh environments. The EPIC S7253 series features many process and application friendly properties including a low mixed viscosity for superior flow into tight tolerance areas, good thermal conductivity, excellent electrical properties, moisture resistance, adhesion to various substrates, low weight loss at elevated temperatures, and thermal cycling over a wide temperature range. The EPIC S7253 series of polyurethanes are formulated using RoHS compliant materials.

S7348 SERIES

EPIC S7348 series of thermally conductive two component polyurethane potting compounds are UL 94 V-0 recognized without the use of halogen fire retardants. EPIC S7348 series offers an assortment of gel times to fit your application needs and all versions feature a high shore hardness combined with high tensile strength and superior adhesion.

S7453

EPIC S7453 is a UL 94 HB recognized two component polyurethane potting compound with a long pot-life and a low viscosity to allow the material to flow into tight tolerance areas allowing air to escape without the use of a vacuum chamber. EPIC S7453 is free of all heavy metals and polybrominated compounds restricted by RoHS.

S7475

EPIC S7475 is a UL 94 V-0 recognized two component polyurethane potting compound that was formulated for potting electronics with sensitive components such as Electronic Control Modules (ECM's). The low mixed viscosity of EPIC S7475 allows the material to flow under printed circuit boards and other tight tolerance areas. The 4:1 volumetric mix ratio makes this system very adaptable to meter mix and dispense machinery. The extremely low hardness and excellent flexibility of EPIC S7475 allows the use of delicate surface mount devices (SMD's) which expand and contract during thermal shock and thermal cycling. This product is also an excellent choice for applications that generate a great deal of heat due to its low weight loss at elevated temperatures. S7475 is free of heavy metals, PBDE's and is formulated with RoHS compliant materials.

EPIC RESINS UL RECOGNIZED POLYURETHANES

S7478 SERIES

EPIC S7478 series of products are two component polyurethane potting compounds providing flexible systems with high thermal stability for high temperature, outdoor, harsh environment applications, such as outdoor LED drivers and power supplies. The EPIC S7478 series is recognized UL 94 V-0 in a thin cross section without the use of halogen flame retardants and has achieved a UL RTI rating of 140˚C. This polyurethane is used in LED drivers that must meet the requirements of UL 8750, the safety standard for LED equipment for use in lighting products. EPIC S7478 series has many process friendly properties including a low mix viscosity, an assortment of gel times and colors, excellent moisture resistance, midrange hardness of Shore A 75-80 and is thermally conductive.

S7489

EPIC S7489 is UL 94 V-1 recognized and is free of bromine and halogenated flame retardants. EPIC S7489 offers a 4:1 volumetric mix ratio that makes the system very adaptable to meter mix and dispense machinery. This two component polyurethane offers a very low glass transition temperature and a low hardness. EPIC S7489 is formulated using RoHS compliant materials.

S7506

EPIC S7506 is a two component polyurethane potting compound that has a medium Shore A hardness with a fast gel time for quick processing. EPIC S7506 is UL recognized at UL 94 V-0 @ 12mm and UL 94 V-2 @ 9mm. This potting compound is suitable for use in transformers and other electrical devices. EPIC S7506 is formulated without the use of halogenated or heavy metal flame retardants and is RoHS compliant.

S7516

EPIC S7516 is a two component polyurethane electrical potting compound that is UL 94 V-0 recognized at a 1.5mm cross section. This polyurethane provides superior thermal resistance and a long gel time and a medium hardness upon cure. EPIC S7516 is formulated without the use of halogenated or heavy metal flame retardants and is RoHS compliant.

S7524

EPIC S7524 is a two component transparent potting compound that is UL 94 V-0 recognized. This unfilled potting and encapsulating compound features low viscosity, low density, and low hardness properties that make it suitable for many potting applications. The low density of this material sets it apart from traditional UL 94 V-0 potting compounds; OEM's can have a lighter finished unit. The transparency allows for the use of indicator lights that will be completely encapsulated. EPIC S7524 is used in a variety of applications including potting for appliances, touch pads, sensor potting, and many other general encapsulating applications.

RM2018

EPIC RM2018 is a two component polyurethane potting and encapsulating compound with a long gel time and a convenient 4:1 volumetric mix ratio. EPIC RM2018 is UL 94 V-0 recognized at a 6mm cross section and is used in sensitive outdoor electronics containing surface mount devices such as DC/DC converters. The low glass transition temperature and flexibility of the EPIC RM2018 induces minimal strain on fragile components over a wide temperature range. EPIC RM2018 is used in applications requiring IP68 ratings for ingress protection providing a dust tight finish and protection against prolonged effects of water immersion under pressure.

Epic Resins is continually adding products to our UL file. Please check the UL Online Certifications Directory at www.ul.com/database under Epic Resins file number E55516 for the most up to date listing of our UL recognized potting compounds.

EPIC RESINS

POLYMERS FOR INDUSTRY SINCE 1958

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