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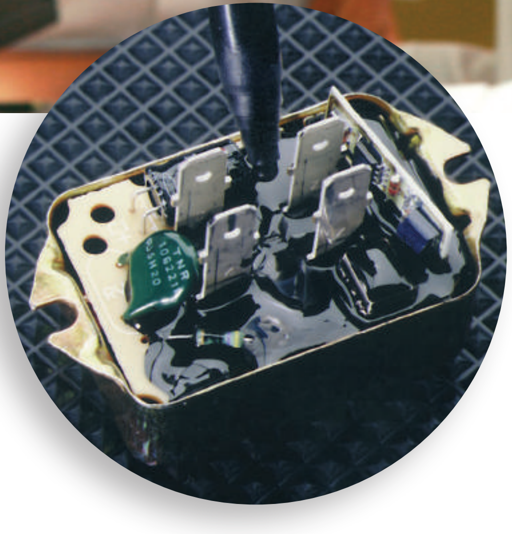

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Services

Custom Formulations: While ResinLab offers an extensive line of standard encapsulants and adhesives, we specialize in creating custom formulations to meet your exact application requirements. Our staff of Product Development Chemists can respond to projects both large and small, using their decades of experience to quickly satisfy your design, manufacturing and quality requirements.

Our state-of-the-art laboratory facility enables us to provide solutions to industries including aerospace, defense, electronics and transportation. Whether you are in need of a high-tech or low-tech formulation in a quart or a tote - we can provide it quickly and cost-effectively.

Product Modifications: ResinLab can modify color, viscosity, cure speed, hardness and nearly any other property to exactly meet your requirements. Our staff of Product Development Chemists have the expertise to get your project moving forward quickly and cost-effectively.

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Our technical expertise with a variety of resin systems will help you avoid pitfalls associated with in-house production. You can trust ResinLab for consistent quality when choosing a supplier for the toll blending of your formulas.

Custom Packaging: Working in conjunction with our sister company, KitPackers, ResinLab provides more custom packaging solutions than any other company, including the highest quality 2K and 1K packaging, such as cartridges, pouches, pre-mixed and frozen syringes.

We serve the global marketplace through Ellsworth Adhesives, the world’s largest distributor of industrial adhesives. Whatever your packaging needs may be, look to ResinLab and KitPackers for precise, efficient and professional service.

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Lab Capabilities

ResinLab's state of the art laboratory instrumentation has the capability to support our customer's needs. Used for both product development and quality control, these instruments allow us to validate design parameters and verify they stay in range with every production lot of material.

DSC: Our DSC allows us to characterize the thermal response of our polymer products. Exotherm energy, glass transition points, melting points are among the key properties clearly identified by this instrument.

FT-IR: A variety of sampling techniques such as Ge ATR and transmission through thin polymer film allows us the capability to characterize the chemical fingerprints of polymers in the mid-IR region.

Physical Tests: Our versatile physical tester is used to measure tensile strength, elongation, compressive and flexural properties and adhesion to various materials.

Thermocouple Data Acquisition: Our USB-TC allows us to capture the reaction profile and exotherm of a curing polymer in several defined areas.

Rheology: The variety of Brookfield viscometers that we have at our facility allows us to analyze the rheology of our products at both ambient temperature and elevated temperatures.

We are ISO 9001:2008 Certified

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ISO 9001:2008
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Product Selector Guide: Electronics Systems

	Products	Application
GENERAL ENCAPSULANTS SYSTEMS	EP1190	Medium devices, mid to large size PWB potting, Coils, chargers, power supplies
	EP1195	Small to medium size PWB potting
	EP1240RC	Smaller devices
	EP1282 Clear	Medium size PWB potting
	EP1282 Black	Medium size PWB potting
	EP1295	Very large mass (up to 3 gal) and low stress applications
	EP1340	Smaller devices
	EP1390	Medium devices, mid to large size PWB potting, coils, chargers, power supplies
	EP1305LV	Difficult to bond substrates, excellent on PVC
	UR3001HP Clear	Very low stress applications
	UR3001HP Black	Very low stress applications
GENERAL ADHESIVES SYSTEMS	EP1305	Difficult to bond substrates, excellent on PVC
	EP1320	One part conformal coating, small mass potting and adhesive
	EP1330	High thermal conductivity paste for bonding and staking
GLOB TOP SYSTEMS	EP1320LV	Small mass potting and adhesive
	EP1330LV	High thermal conductivity conformal coating
DAM & FILL SYSTEMS	EP3115	A thixotropic damming barrier to contain EP3122
	EP3122	Small mass potting, military switches, other high performance devices. Controlled flow for flooding a dammed area. Used in conjunction with EP3115.
UNDERFILL SYSTEMS	EP3123	Clear underfill for higher temp (Tg) applications
	EP3123 Blue	Blue underfill for higher temp (Tg) applications
	EP3112	Diode attach, ceramic bonding, piezo electric devices, optically clear applications
THERMALLY CONDUCTIVE SYSTEMS	EP1200	Small to large mass potting
	EP1285HD9	Small mass potting
	EP1285HD12	Small to large mass potting
	EP1296	General purpose, potting applications
ELECTRICALLY CONDUCTIVE SYSTEMS	SEC1222	Silver filled general purpose structural adhesive
	SEC1233	Silver filled general purpose structural adhesive
	SEC1244	Silver filled general purpose structural adhesive

Products listed in this brochure are RoHS compliant unless otherwise noted in the product table. For information on halogen content, contact ResinLab.

	Products	Description	Chemistry
GENERAL ENCAPSULANTS SYSTEMS	EP1190	UL 94 V-O and CTI rated; 4/1 ratio, non-RoHS compliant version of EP1390	Epoxy
	EP1195	UL 94 HB and CTI rated	Epoxy
	EP1240RC	UL 94 V-0; 1/1 ratio, excellent chemical resistance, non-RoHS compliant version of EP1340	Epoxy
	EP1282 Clear	94 HB and CTI rated, tough and flexible. Good adhesion to many plastics, excellent thermal shock and cycle resistance	Epoxy
	EP1282 Black	94 HB and CTI rated, tough and flexible. Good adhesion to many plastics, excellent thermal shock and cycle resistance	Epoxy
	EP1295	UL 94 V-0; 1/1 ratio	Epoxy
	EP1340	UL 94 V-0; 1/1 ratio, excellent chemical resistance	Epoxy
	EP1390	UL 94 V-0; 4/1 ratio, excellent chemical resistance	Epoxy
	EP1305LV	Highly rubber toughened, high peel and impact resistance	Epoxy
	UR3001HP Clear	Gel-like re-enterable urethane, excellent low temperature properties	Urethane
	UR3001HP Black	Gel-like re-enterable urethane, excellent low temperature properties	Urethane
GENERAL ADHESIVES SYSTEMS	EP1305	Highly rubber toughened, high peel and impact resistance	Epoxy
	EP1320	Fast/low temperature cure, RT stable	Epoxy
	EP1330	Low CTE, Heavy thixotropic paste, thermally conductive	Epoxy
GLOB TOP SYSTEMS	EP1320LV	One part conformal coating, Fast/low temp cure, RT stable	Epoxy
	EP1330LV	Low CTE, Fast/low temperature cure, RT stable	Epoxy
DAM & FILL SYSTEMS	EP3115	Pre-mixed and frozen, antifungal	Epoxy
	EP3122	Pre-mixed and frozen, antifungal, high impact and low CTE	Epoxy
UNDERFILL SYSTEMS	EP3123	One part heat cure, RT stable	Epoxy
	EP3123 Blue	One part heat cure, RT stable	Epoxy
	EP3112	Very low stress adhesive, excellent light transmittance	Epoxy
THERMALLY CONDUCTIVE SYSTEMS	EP1200	High thermal conductivity, Low CTE, low stress, high TC	Epoxy
	EP1285HD9	High thermal conductivity, good Tg and chemical resistance	Epoxy
	EP1285HD12	High temp cure, high thermal conductivity, high Tg and excellent chemical resistance	Epoxy
	EP1296	1/1 ratio, soft fillers, moderate CTE, TC and Tg	Epoxy
ELECTRICALLY CONDUCTIVE SYSTEMS	SEC1222	1/1 easy ratio, excelent conductivity, moderate Tg moderate modulus	Epoxy
	SEC1233	1/1 easy ratio, dual syringe dispensable, flexible, low Tg, low modulus	Epoxy
	SEC1244	1/1 easy ratio, excellent conductivity, high Tg, snap cure, high modulus	Epoxy

	Products	Appearance	Viscosity (cPs) (mPas)	Mixed S.G.	Pot Life at 25°C	Hardness
GENERAL ENCAPSULANTS SYSTEMS	EP1190	Black Liquid	16,000	1.50	45 min	80 D
	EP1195	Black Liquid	6,000	1.24	15-20 min	85 D
	EP1240RC	Black Liquid	8,000	1.55	20-30 min	70 D
	EP1282 Clear	Clear Liquid	3,000	1.06	90-120 min	40 D
	EP1282 Black	Black Liquid	3,000	1.06	90-120 min	40 D
	EP1295	Black Liquid	10,000	1.39	60-90 min	50 D
	EP1340	Black Liquid	12,000	1.26	20-25 min	85 D
	EP1390	Black Liquid	7,000	1.25	45 min	85 D
	EP1305LV	Black Liquid	30,000	1.06	15 min	70 D
	UR3001HP Clear	Clear Liquid	2,000	1.07	15-20 min	60 OO
	UR3001HP Black	Black Liquid	2,000	1.07	15-20 min	60 OO
GENERAL ADHESIVES SYSTEMS	EP1305	Black Paste	400,000	1.08	10-15 min	55 D
	EP1320	Black Semi-Paste	100,000	1.30	Elevated Cure	85 D
	EP1330	Black Paste	500,000	1.91	Elevated Cure	90 D
GLOB TOP SYSTEMS	EP1320LV	Black Liquid	40,000	1.30	Elevated Cure	85 D
	EP1330LV	Black Semi-Paste	250,000	1.91	Elevated Cure	90 D
DAM & FILL SYSTEMS	EP3115	Black Paste	Thixotropic	1.14	60 min	80 D
	EP3122	Black Liquid	13,500	1.60	45-60 min	85 D
UNDERFILL SYSTEMS	EP3123	Clear Liquid	8,000	1.15	Elevated Cure	80 D
	EP3123 Blue	Blue Liquid	8,000	1.15	Elevated Cure	80 D
	EP3112	Clear Liquid	200	1.05	>4 hours	40 A
THERMALLY CONDUCTIVE SYSTEMS	EP1200	Black Liquid	45,000	2.00	120-150 min	95 A
	EP1285HD9	Black Liquid	40,000	2.22	45-60 min	95 D
	EP1285HD12	Black Liquid	20,000	2.15	3-4 hours	95 D
	EP1296	Black Liquid	7,500	1.54	60-90 min	80 D
ELECTRICALLY CONDUCTIVE SYSTEMS	SEC1222	Silver Paste	318,500	3.90	45 min	80 D
	SEC1233	Silver Paste	172,000	3.90	60 min	50 D
	SEC1244	Silver Paste	234,000	3.90	>24 hours	80 D

		TENSILE					LAP SHEAR	
		Strength		Elongation	Modulus		Strength	
	Products	(PSI)	(N/mm^2)	%	(KSI)	(N/mm^2)	(PSI)	(N/mm^2)
GENERAL ENCAPSULANTS SYSTEMS	EP1190	4,000	27.6	0-1%	650	4,485	2,500	17.2
	EP1195	4,500	31.0	1-2%	450	3,100	3,000	20.7
	EP1240RC	1,500	10.3	15-20%	40	276	1,000	6.9
	EP1282 Clear	1,600	11.0	120%	10	69	1,700	11.7
	EP1282 Black	1,600	11.0	120%	10	69	1,700	11.7
	EP1295	750	5.2	18-22%	5	35	850	5.9
	EP1340	1,800	12.4	25-35%	140	965	2,800	19.3
	EP1390	6,500	44.8	1-2%	600	4,140	2,200	15.2
	EP1305LV	3,500	24.1	35-50%	90	620	2,000	13.8
	UR3001HP Clear	10	0.07	300%	10 PSI	0.07	20	0.14
	UR3001HP Black	10	0.07	300%	10 PSI	0.07	20	0.14
GENERAL ADHESIVES SYSTEMS	EP1305	2,200	15.2	25-40%	70	483	1,000	6.9
	EP1320	5,000	34.5	0-1%	700	4,830	1,300	9.0
	EP1330	7,000	48.3	0-1%	1,200	8,275	1,500	10.3
GLOB TOP SYSTEMS	EP1320LV	1,500	10.3	10-15%	70	483	2,300	15.9
	EP1330LV	8,000	55.2	0-1%	1,300	8,965	1,500	10.3
DAM & FILL SYSTEMS	EP3115	6,500	44.8	2-4%	350	2,415	3,000	20.7
	EP3122	6,000	41.4	1-2%	600	4,140	1,000	6.9
UNDERFILL SYSTEMS	EP3123	5,000	34.5	2-3%	550	3,795	1,500	10.3
	EP3123 Blue	5,000	34.5	2-3%	550	3,795	1,500	10.3
	EP3112	45	0.31	20-25%	1	7	140	1.0
THERMALLY CONDUCTIVE SYSTEMS	EP1200	1,600	11.0	15-18%	25	173	1,800	12.4
	EP1285HD9	5,500	37.9	0-1%	1,200	8,275	1,400	9.7
	EP1285HD12	2,500	17.2	0-1%	1,100	7,590	1,700	11.7
	EP1296	3,000	20.7	1-3%	400	2,760	1,100	7.6
ELECTRICALLY CONDUCTIVE SYSTEMS	SEC1222	1,000	6.9	3-5%	50	345	850	5.9
	SEC1233	450	3.1	20-30%	10	69	600	4.1
	SEC1244	5,000	34.5	1-2%	600	4,138	500	3.4

		COMPRESSIVE				GLASS TRANSITION	CTE
		Strength		Modulus		Temp	Above T (Below Tg)
	Products	(PSI)	(N/mm^2)	(KSI)	(N/mm^2)	(°C)	(ppm/°C)
GENERAL ENCAPSULANTS SYSTEMS	EP1190	12,000	82.8	500	3,450	45	40
	EP1195	20,000	137.9	300	2,070	70	42
	EP1240RC	7,000	48.3	300	2,070		40
	EP1282 Clear	25,000	172.4	45	310	30	50
	EP1282 Black	25,000	172.4	45	310	30	50
	EP1295	5,000	34.5	10	69	27	40
	EP1340	17,000	117.2	100	690	40	40
	EP1390	17,000	117.2	400	2,760	66	40
	EP1305LV	16,500	113.8	150	1,035	50	60
	UR3001HP Clear	250	1.7	60 PSI	0.4	-66	150
	UR3001HP Black	250	1.7	60 PSI	0.4	-66	150
GENERAL ADHESIVES SYSTEMS	EP1305	20,000	137.9	60	414	56	60
	EP1320	20,000	137.9	550	3,795	105	48
	EP1330	17,000	117.2	800	5,520	92	30
GLOB TOP SYSTEMS	EP1320LV	18,000	124.1	600	4,140	98	48
	EP1330LV	16,000	110.3	850	5,865	86	30
DAM & FILL SYSTEMS	EP3115	18,000	124.1	200	1,380	63	50
	EP3122	13,000	89.7	550	3,795	91	25
UNDERFILL SYSTEMS	EP3123	18,000	124.1	550	3,795	102	65
	EP3123 Blue	18,000	124.1	550	3,795	102	65
	EP3112	55	0.4	0.2	1.4	-2	65
THERMALLY CONDUCTIVE SYSTEMS	EP1200	6,500	44.8	50	345	28	45(149)
	EP1285HD9	12,000	82.8	750	5,175	79	35(99)
	EP1285HD12	12,500	86.2	650	4,485	132	31(98)
	EP1296	8,000	55.2	300	2,070	36	52
ELECTRICALLY CONDUCTIVE SYSTEMS	SEC1222	10,000	70.0	65	448	34	53(110)
	SEC1233	7,500	51.7	11	76	40	58(120)
	SEC1244	13,500	93.1	750	5,172	112	51(101)

		Thermal Conductivity		DIELECTRIC Constant	DIELECTRIC Strength		Volume Resistivity
	Products	**(W/m °K)**	**BTU(hr•ft•°F)**		**(V/mil)**	**kV/mm**	**(ohm-cm)**
GENERAL ENCAPSULANTS SYSTEMS	EP1190	0.50	0.289	4.8	410	16.1	8.1 x 10^{15}
	EP1195	0.20	0.116	4.5	440	17.3	8.0 x 10^{14}
	EP1240RC	0.50	0.289	4.8	410	16.1	8.1 x 10^{15}
	EP1282 Clear	0.14	0.080	3.5	440	17.3	2.5 x 10^{11}
	EP1282 Black	0.14	0.080	3.5	440	17.3	2.5 x 10^{11}
	EP1295	0.50	0.289	4.8	410	16.1	8.1 x 10^{15}
	EP1340	0.50	0.289	4.8	410	16.1	8.1 x 10^{15}
	EP1390	0.50	0.289	4.8	410	16.1	8.1 x 10^{15}
	EP1305LV	N/A	N/A	4.2	410	16.1	5.7 x 10^{15}
	UR3001HP Clear	N/A	N/A	3.6	380	15.0	1 x 10^{16}
	UR3001HP Black	N/A	N/A	3.6	380	15.0	1 x 10^{16}
GENERAL ADHESIVES SYSTEMS	EP1305	N/A	N/A	4.5	440	17.3	8 x 10^{14}
	EP1320	0.36	0.210	3.5	440	17.3	8 x 10^{14}
	EP1330	1.07	0.618	3.5	440	17.3	8 x 10^{14}
GLOB TOP SYSTEMS	EP1320LV	0.36	0.210	3.5	440	17.3	8 x 10^{14}
	EP1330LV	1.07	0.618	3.5	440	17.3	8 x 10^{14}
DAM & FILL SYSTEMS	EP3115	0.12	0.069	3.2	500	19.7	8 x 10^{14}
	EP3122	0.85	0.490	4.5	440	17.3	8 x 10^{14}
UNDERFILL SYSTEMS	EP3123	0.12	0.069	3.5	420	16.5	1 x 10^{14}
	EP3123 Blue	0.12	0.069	3.5	420	16.5	1 x 10^{14}
	EP3112	0.14	0.080	4.5	440	17.3	8 x 10^{14}
THERMALLY CONDUCTIVE SYSTEMS	EP1200	1.04	0.600	4.0	400	15.7	7.6 x 10^{13}
	EP1285HD9	1.25	0.720	5.0	365	14.4	>10^{15}
	EP1285HD12	1.28	0.740	5.4	380	15.0	>10^{15}
	EP1296	0.63	0.360	4.7	400	15.7	2.4 x 10^{13}
ELECTRICALLY CONDUCTIVE SYSTEMS	SEC1222	1.60	0.924	N/A	N/A	N/A	0.003
	SEC1233	1.60	0.924	N/A	N/A	N/A	0.0016
	SEC1244	2.19	1.270	N/A	N/A	N/A	0.0006

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