Casting compounds/resins for electronics, sensor technology and electrical engineering

	Product designation	Colour; appearance	Viscosity of mixture [mPas]	Density of mixture at 20 °C [g/cm³] DIN 53217, part 2	Pot life of mixture at room temperature set-up quantity 500 g	Shore-A/D hardness DIN 53505	Dielectric strength [kV/mm] VDE 0303, part 2	Volume resistivity [Ohm x cm] VDE 0303, part 3	Temperature range [°C]	Special properties
2-pack Wepox casting compounds/resins **based on epoxy resins (EP)** • cold and thermo curing • excellent resistance against moisture and aggressive media • excellent dielectric properties • high mechanical resistance for insensitive electronic components that may be subjected to a comparatively low heat development and low shrinkage pressure	VT 3000	yellowish transp.	1500	1.06	80 min	– / 80	45	2.0×10^{13}	-40 to +130	– good flowability, thus can be applied where component geometries are difficult to access
	VU 4052	blue	1100	1.06	7 h	– / 80	36	1.0×10^{15}	-40 to +130	– good flowability, long processing / pot life
	VU 4081 series	brown*	3000 – 3300	1.2 - 1.7 *	2 - 3 h	– / 88	42 - 44*	10^{13} - 10^{14}	-40 to +130	– long processing / pot life
	VU 4085 series	brown	800 – 6700*	1.6 - 1.7 *	2.5 - 3.5 h*	– / 88	43 - 45 *	10^{14}	-40 to +130	– very low heat development and low shrinkage pressure
	VU 4085/51 SB	brown	4500	1.52	2.5 - 3 h	– / 88	45	8.0×10^{14}	-40 to +130	– corresponds to the best flame class V-0 acc. to UL 94 – very low heat development and low shrinkage pressure
2-pack Wepuran casting compounds/resins **based on polyurethane resins (PUR)** • cold and thermo curing • excellent dielectric properties • good resistance against moisture, lyes, acids and various chemicals • exceptionally low heat development and very low shrinkage pressure • the elastic types are especially suitable for casting sensitive components (glass diodes, sensors, etc.)	VT 3402 KK	crystal clear	2700*	1.10*	80 min*	90 / 38*	70*	1.4×10^{15} *	-40 to +90	– **crystal-clear** (Index **KK**), weather and light-resistant
	VT 3403	brownish transp.	3300	1.06	40 min	95 / 43	31	4.5×10^{14}	-40 to +90	– in thinner layers (5 –7 mm) brownish transparent, so that conductors and components remain visible
	VT 3404 series	yellowish, clear transp./ milky-cloudy	1050 - 1100*	1.06	45 - 50 min*	90 - 95 / 43 - 45*	27 - 35	$1.3 - 2.4 \times 10^{15}$	-40 to +90	– good flowability, thus can be applied where component geometries are difficult to access – **VT 3404 LS** is slightly transparent and creates a scattered light effect when a light source is cast (Index **LS** = light diffusing)
	VT 3407 series	brownish transp.	600	1.07	40 - 60 min*	93 / 42	38	1.1×10^{14}	-40 to +90	- good flowability, thus can be applied where component geometries are difficult to access
	VU 4444 WB series	black	3700*	1.17*	70 min*	75 / –*	32*	6.0×10^{11} *	-40 to +90	– weather resistant (Index **WB**), elastic
	VU 4451/51 SB	blue	1000	1.35	50 min	75 / –	32	1.9×10^{14}	-40 to +90	– corresponds to the best flame class V-0 acc. to UL 94
	VU 4452 series	blue	1500 - 3000*	1.10 - 1.20*	105 min	65 - 70 / –*	36 - 46 *	10^{10} - 10^{11}	-40 to +120	– **highly elastic, heat stable up to 120 °C**, cost-effective alternative to silicone casting compounds
	VU 4452/41 SV-HF	blue	3200	1.43	80 min	96 / 75	38	2.6×10^{15}	-40 to +120	– **UL-approved**, best flame class UL 94 V-0 heat stable up to 120 °C, **h**alogen-**f**ree (Index **HF**)
	VU 4453 series	blue, black, grey	1000 - 55000*	1.00 - 1.22*	35 - 80 min *	50 - 85 / –*	36 - 60 *	$3.5 - 8.0 \times 10^{14}$*	-40 to +90	– highly elastic, available in various adjustments (colour, viscosity, etc.)
	VU 4456	blue	1800	1.41	45 min	95 / 58	30	5.4×10^{14}	-40 to +90	– cost-effective casting compound for lower requirements
	VU 4457 series	blue, black, grey	1100 - 2900*	1.23 - 1.60*	approx. 80 min	91 - 95 / 45 - 60*	27 - 34 *	10^{12} - 10^{14}*	-40 to +90	– available in various adjustments (colour, viscosity, etc.) – **VU 4457/61 SB** corresponds to the best flame class V-0 acc. to UL 94
	VU 4459/41 SV	blue	1700	1.50	75 min	99 / 79	24	5.2×10^{13}	-40 to +90	– **UL-approved**, best flame class UL 94 V-0
	VU 4459/41 SV-HF	blue	1800	1.44	80 min	95 / 73	31	3.2×10^{13}	-40 to +90	– **UL-approved**, best flame class UL 94 V-0 – **h**alogen-**f**ree (Index **HF**)
	VU 4493	white	2600	1.09	50 min	55 / -	42	3.3×10^{15}	-40 to +90	– highly elastic
Silicone-rubber casting compounds/resins based **organo-poly-siloxane (SIR)** • can be cut for repair • cold and thermo curing • very high elasticity • excellent dielectric properties • high temperature stability • high tear resistance • exceptionally low heat development and minimum shrinkage pressure during the curing phase, therefore particularly suitable for casting sensitive components (glass diodes, sensors, etc.)	VT 3601 E	colourless transp.	4800	1.00	90 min	45 / –	50	2.7×10^{13}	-40 to +200	– addition cross-linking, thus no separation products during curing
	VU 4670	white	55000	1.03	—	35 / –	53	1.0×10^{16}	-40 to +200	– condensation cross-linking, 1-pack system in tubes
	VU 4691 E series	white-grey / grey*	16000	1.23	90 min	65 / –	31	2.0×10^{14}	-40 to +200	– addition cross-linking, thus no separation products during curing
	VU 4692	white-grey	2200	1.52	75 min	45 / –	34	6.9×10^{14}	-40 to +200	– condensation cross-linking
	VU 4693	white	2600	1.58	100 min	35 / –	34	2.1×10^{14}	-40 to +200	– condensation cross-linking
	VU 4694 E	white	4500	1.41	5 h	52 / –	43	2.0×10^{15}	-40 to +200	– addition cross-linking, thus no separation products during curing
1-pack silicone gel • protects highly delicate electronics and hybrids against moisture and atmospheric contaminations • can be easily removed for repair purposes	VT 3700	colourless transp.	500	0.97	—	not applicable	22	2.0×10^{15}	-40 to +200	– addition cross-linking, thus no separation products during curing – exceptionally flexible after curing (1 h at 150 °C), but no longer flows – good adhesion to many surfaces; material "self-repairs" itself following smaller cuts in the surface

* These casting compounds/resins are available in various adjustments (colour, viscosity, pot life, mechanical and electrical properties, etc.). The characteristic values of the various adjustments are within the above mentioned tolerances)

Please ask for further information! We would be glad to send you free samples and detailed technical reports.

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