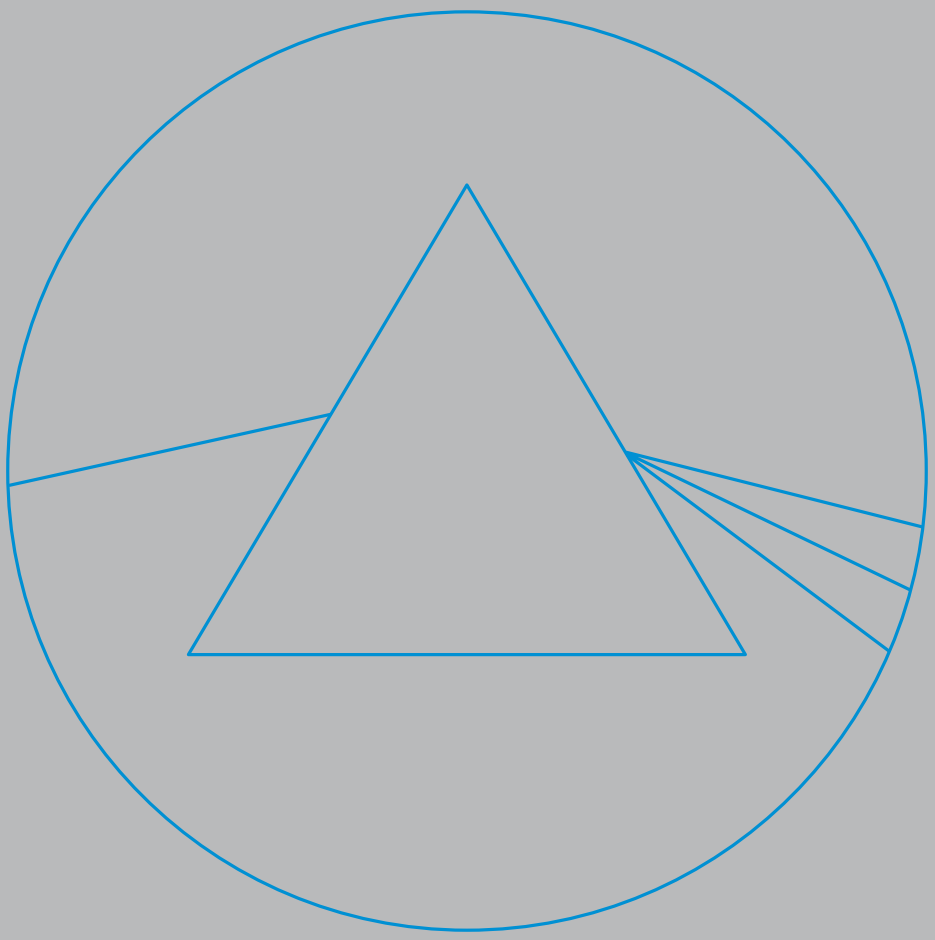
wevo

WEVO CASTING RESINS

POLYURETHANE TRANSPARENT



WEVO WORKS: IN LEDS AND SENSORS

WEVO – TRADITION OF INNOVATION

We are a leading specialist in custom casting/potting solutions as well as adhesives and sealants based on polyurethane, epoxy and silicone. More than 75 years of experience in development and applications go into each and every one of our products. The outcome: optimum solutions for reliable and safe components.

OUR CORE COMPETENCIES

Tailor-made solutions: We develop our formulations according to the product and processing requirements of our customers.

Custom services: As an expert partner, we work hand in hand with our customers from the initial product idea through to series production.

Flexible logistics: We use all shipping methods, including isothermal transportation and custom packaging concepts.

Knowledge transfer: Technical and chemical expertise go hand in hand at Wevo – from customer seminars to collaboration with research institutions or panels of experts.

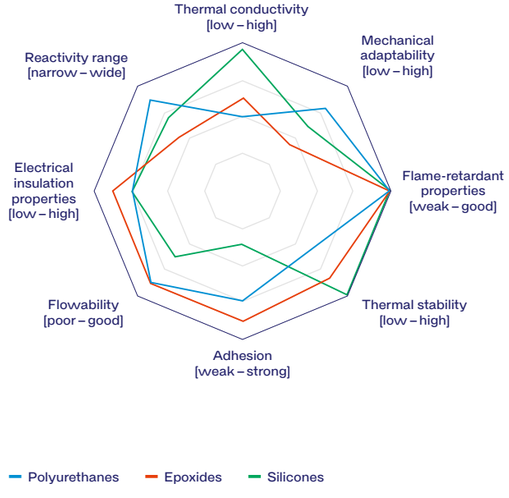
CERTIFICATIONS AND PRODUCT APPROVALS

Our uncompromising product quality is a direct result of adhering to strict guidelines and standards for chemical materials and their safe use.

REACH SVHC · UL 94 · RTI · DIN EN 60216-1 · IATF 16949 · RoHS · ExPlast · HWI/HAI · DIN EN 45545-2 · ISO 14001 · ISO 45001

OUR MATERIALS AT A GLANCE

We work with customers of all sizes, from all sectors and industries. Thanks to our broad portfolio, we can find the right solution for every application.



LED LUMINAIRES

The current trend is to use LED luminaires for industrial, automotive and household applications. The light-emitting diodes must be protected from environmental influences such as moisture, dust and mechanical stress. At the same time, their transmission and translucency must not be impaired. Wevo makes this possible. But that's not all. The use of translucent materials also makes it possible to achieve uniform light distribution. In addition, our casting resins can be adjusted from very soft and flexible to glass-hard.

WEVO PRODUCT FEATURES

- Electrically insulating
- Transparent even at high temperatures
- UV-stable
- Low refractive index
- Mechanically robust
- Flexible
- Translucent

SENSORS

Whether as infrared, motion or optical detectors, sensors are playing an increasingly important role in our lives. Especially outdoors, these sensitive devices are exposed to wind and weather. Transparent casting resins from Wevo offer the right protection against weather conditions and at the same time provide the necessary light transmission. The sensitive components are capable of withstanding very high mechanical stresses thanks to the use of these materials. At the same time, the functionality of the sensors is retained.

WEVO PRODUCT FEATURES

- Optically and infrared-transparent
- Good flowability
- Resistant to hydrolysis
- Weather-resistant
- Different degrees of hardness
- Resistant to chemicals
- Very good translucency
- Good adhesion

PRODUCT OVERVIEW TRANSPARENT CASTING RESINS

WEVOPUR		1211	1222	1223	1230	1240	1250	50001
WEVONAT		356	360	360	356	360	360	356
Mixing ratio (parts by weight)		100 : 41	100 : 163	100 : 116	100 : 68	100 : 54	100 : 100	100 : 109
Mixed viscosity at 22 °C [mPa·s]	Rotational viscometer	2,300–2,700	1,800–2,500	1,500–2,000	800–1,400	1,800–2,500	1,800–2,400	500–1,500
Reactivity at 22 °C [min]*	Rotational viscometer	50–60	50–60	50–60	40–50	40–60	30–40	40–60
Density of resin at 22 °C [g/cm³]	DIN EN ISO 2811-1:2016-08	1.06–1.11	1.03–1.07	1.04–1.08	1.08–1.12	1.06–1.10	1.07–1.11	1.06–1.10
Density of hardener at 22 °C [g/cm³]	DIN EN ISO 2811-1:2016-08	1.09–1.13	1.13–1.17	1.13–1.17	1.09–1.13	1.13–1.17	1.13–1.17	1.09–1.13
Shore hardness A/D	DIN ISO 7619-1:2012-02	50–60 / --	-- / 75–85	-- / 55–65	70–75 / --	70–80 / --	-- / 40–50	65–75 / --
Tensile strength [N/mm²]	DIN EN ISO 527-2:2012-06	2	38	27	1.5	2	4.5	2
E modulus [N/mm²]	DIN EN ISO 527-2:2012-06	3	1,900	83	8	9	10	9
Elongation at break [%]	DIN EN ISO 527-2:2012-06	70	69	120	24	25	50	41
Glass transition temperature (Tg) [°C]	TMA ISO 11359-2:1999-10	-29	36	17	-18	-12	11	-9
Operating temperature [°C]		-40 up to +120	-40 up to +120	-40 up to +120	-40 up to +120	-40 up to +120	-40 up to +120	-40 up to +120
Curing time at room temperature [h]		12–24	12–24	12–24	12–24	12–24	12–24	12–24
Flammability	UL 94	HB	HB**	HB	HB	HB	HB	HB**
Coefficient of expansion [ppm/K]	TMA ISO 11359-2:1999-10	109 < Tg 238 > Tg	80 < Tg 190 > Tg	100 < Tg 190 > Tg	96 < Tg 238 > Tg	95 < Tg 230 > Tg	100 < Tg 191 > Tg	100 < Tg 193 > Tg
Water absorption [%]	30 days, 22 °C	1.2	0.7	1.0	1.5	1.5	1.1	1.7
Volume resistivity [Ω·cm]	DIN EN 62631-3-1:2017-01	10^{11}	10^{15}	10^{15}	10^{11}	10^{12}	10^{12}	10^{12}
Dielectric constant ε (at 50 Hz, 23 °C)	DIN EN IEC 62631-2-1:2018-12	6.73	2.74	4.55	8.64	8.37	4.53	10.49
Loss factor tan δ (at 50 Hz, 23 °C)	DIN EN IEC 62631-2-1:2018-12	0.047	0.012	0.088	0.032	0.091	0.088	0.025

All application parameters refer to processing at room temperature. All mechanical, thermal and electrical properties are based on complete curing.
* The indicated range of pot life corresponds with current standard versions. Adjustment of pot life is possible.
** UL listing under file No. E108835
For a more detailed technical description of our systems please refer to the corresponding data sheets which are available for all products.
Please see our special notes on the back of this leaflet.

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