WEVO
CASTING RESINS
SILICONE

WEVOSIL

OUR HIGH-PERFORMANCE SILICONE SYSTEMS

From the targeted relief of individual hotspots to the cooling of complete components: with their high degree of elasticity and thermal conductivity, our WEVOSIL products guarantee successful thermal management across a wide range of temperatures.

THERMAL CONDUCTIVITY

Thermally conductive solutions ensure better temperature control and fewer hotspots.

- Thermal conductivity up to > 4.0 W/m·K
- Cooling of components/electronics – thermal management
- High thermal conductivity combined with low density
- Possibility to use very low-viscosity casting resin up to thixotropic gap fillers

FLAMMABILITY

Our products with flame-retardant properties meet a wide range of requirements.

- Systems that remain stable at high temperatures of up to 250 °C
- Low smoke density and toxicity (EN 45545-2)
- Systems to prevent a thermal runaway with short-term resistances of > 1,000 °C
- UL 94 V, HB and 5V

STRONG CONNECTIONS

Our materials provide robust bonds for joining components and parts.

- Addition-curing systems, no decomposition byproduct
- Adhesion to almost all substrates
- Strong mechanical properties and great flexibility
- Adhesion up to 10 MPa

GELS & TRANSPARENT SYSTEMS

Our silicone encapsulation materials are available in a variety of formulations created to match the respective specifications.

- From gel-like to elastic, rubber-like (Shore A)
- Gel systems for low temperature applications
- Low elastic modulus, good damping properties, low stress on electronic components
- Transparent systems with high temperature and yellowing stability up to 180 °C

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.

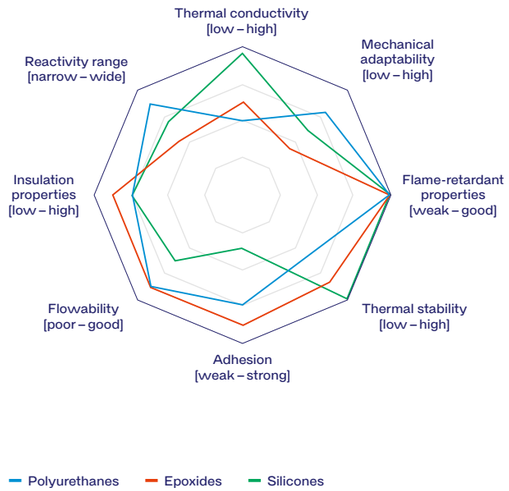
CERTIFICATIONS AND PRODUCT APPROVALS

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

IATF 16949 · ISO 14001 · ISO 45001 ·
UL file E108835 · EN 45545-2 · Ex-Plast ·
RoHS- and REACH-compliant · GWI

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.



SIL PRODUCT OVERVIEW SILICONE CASTING RESINS

WEVOSIL COMPONENT A/B		20201	20001	20002	27001 FL	28001	22006 FL	22002 FL	22005 FL	22007 FL	22008 FL	26001 FL	26011 FL	26008 FL	26010 FL	26009 FL	26007 FL	26020 FL
Mixing ratio (parts by weight)		1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1	1 : 1
Mixed viscosity at 22 °C [mPa·s]	Rotational viscometer/rheometer	300–700	1,000–1,500	15,000–35,000	4,000–8,000	30,000–60,000	2,000–2,800	2,500–4,000	4,000–8,000	10,000–20,000	4,000–8,000	paste-like	paste-like	paste-like	paste-like	paste-like	paste-like	paste-like
Reactivity at 22 °C [min]*	Rotational viscometer/rheometer	50–70	50–70	120–150	50–60	60–90	90–120	50–70	50–70	50–70	50–70	50–70	50–70	50–70	50–70	50–70	50–70	50–70
Density of component A/B at 22 °C [g/cm³]	DIN EN ISO 2811-1:2016-08	0.96–1.00	0.96–1.00	0.99–1.04	1.10–1.14	1.28–1.32	1.36–1.40	1.65–1.70	2.28–2.32	2.29–2.33	2.79–2.83	2.28–2.32	2.02–2.06	2.84–2.88	2.18–2.22	2.89–2.93	3.02–3.06	3.10–3.12
Shore hardness 00/A/D	DIN ISO 7619-1:2012-02	gel	-- / 35–45 / --	-- / 25–35 / --	-- / 25–35 / --	-- / 70–80 / --	-- / 47–55 / --	-- / 35–45 / --	-- / 55–65 / --	60–80 / -- / --	50–70 / -- / --	50–70 / -- / --	60–80 / -- / --	50–70 / -- / --	60–80 / -- / --	60–80 / -- / --	60–80 / -- / --	60–80 / -- / --
Operating temperature [°C]		-60 up to +200	-60 up to +180	-60 up to +180	-60 up to +250	-60 up to +200	-60 up to +180	-60 up to +180	-60 up to +180	-60 up to +165	-60 up to +200	-60 up to +180	-60 up to +165	-60 up to +200	-60 up to +165	-60 up to +200	-60 up to +200	-60 up to +200
E modulus [N/mm²]	DIN EN ISO 527-2:2012-06	–	1.7	1.0	1.5	4.5	4	2	6.4	1	0.25	0.7	0.6	0.6	1.2	1	0.8	0.6
Thermal conductivity [W/m·K] (pressureless)	DIN EN ISO 22007-2:2015-12	0.2	0.2	0.2	0.2	0.3	0.6	1.0	1.5	2.0	2.2	1.5	2.2	2.0	2.5	2.5	3.0	3.5
Thermal conductivity [W/m·K] (0.55 Mpa = 80 PSI = 5.5 bar)	ASTM D 5470-12	–	–	–	–	0.70	1.00	1.60	2.00	2.30	2.80	1.90	2.20	2.50	3.00	3.00	3.50	4.00
Melting point [°C]***	TMA ISO 11359-2:1999-10	< -50	< -40	< -50	< -50	< -55	-50	-45	-45	-50	-55	-45	-50	-45	-55	-50	-55	-50
Coefficient of expansion [ppm/K] > melting point***	TMA ISO 11359-2:1999-10	400	330	300	400	210	240	200	160	120	135	180	115	135	110	125	55	120
Water absorption [%]	30 days, 22 °C	–	< 0.2	< 0.3	< 0.3	< 0.2	< 0.2	< 0.1	< 0.2	3.64	< 0.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.1
Flammability	UL 94	HB	HB	HB	V-0	V-1	V-0 4 mm**	V-0 2 mm**	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0
Dielectric strength [kV/mm]	DIN EN 60243-1:2014-01	23	> 25	> 25	> 25	> 30	33	24	30	> 16	> 19	> 19	> 20	> 20	> 15	> 19	> 15	> 20
Volume resistivity [Ω·cm]	DIN EN 62631-3-1:2017-01	> 10^{14}	> 10^{14}	> 10^{15}	> 10^{14}	> 10^{14}	> 10^{14}	> 10^{14}	> 10^{10}	> 10^{11}	> 10^{15}	10^{10}	> 10^{13}	> 10^{13}	> 10^{13}	> 10^{14}	10^{14}	> 10^{13}
Dielectric constant ε (at 50 Hz, 23 °C)	DIN EN IEC 62631-2-1:2018-12	–	2.7	2.7	2.7	3.1	3.8	4.5	5.2	6.7	5.8	5.3	5.4	7.4	6.1	7.7	7.5	7.0
Loss factor tan δ (at 50 Hz, 23 °C)	DIN EN IEC 62631-2-1:2018-12	–	0.004	0.008	0.009	0.013	0.065	0.060	0.048	0.112	0.010	0.020	0.070	0.140	0.044	0.150	0.057	0.019

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 *** Melting point spring into action, if cold-crystallization occurred at temperatures lower -60 °C.

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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