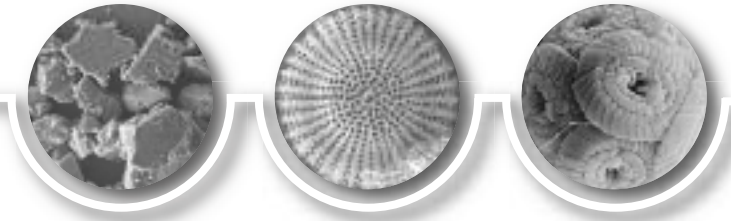


# IMERYS Products for Thermoset Resins



TYPICAL PROPERTIES

	CALCIUM CARBONATE									DIATOMACEOUS EARTH					DOLOMITE		
	Queensfil™ 25	Micronic™ S	ImerCarb™ 5L	ImerCarb™ 10L	ImerCarb™ 5G	ImerCarb™ 10G	Carbital™ 110	Carbital™ 115	Carbital™ 120	CelTIX™	Celite® 209	Diactiv® 17	Diafil® 525	Diafil® 570	Diafil® 590	D110S	DRB 20
Brightness (ISO R457)	85.5	81.0	92.0	92.0	93.0	93.0	95.0	94.2	94.0	80.3	53.1	84.2	75.1	72.8	74.5	65.0	87.5
Yellowness (Max.)	6.0	7.0	1.5	2.0	1.3	1.3	1.1	1.1	1.1	6.9	10.0	4.7	8.9	10.8	10.3	6.0	3.0
d <sub>50</sub> (µm)	3.2	3.0	5.0	7.0	5.0	8.0	2.0	2.8	3.5	12.0	11.7	11.0*	11.8	8.0	4.1	150	5
+ 10 µm (Mass % max.)	12	10	25	30	22	40	1.5	9	25	59.0	54.6	53.2*	58.4	36.1	9.1	95	10
- 2 µm (Mass %)	36	38	22	16	30	20	52	40	32	7.5	9.6	9.5*	7.7	9.2	22.3	0.5	15
pH	9	9.5	-	-	9.4	9.4	9.4	9.4	9.4	8	8.5	7.5	7.6	8	8	-	-
Oil Absorption (g/100g)	18	19	16	15	14	13	18	18	16	169	145	76	121	108	106	22	17
Surface Area (BET; m <sup>2</sup> /g)	2.6	2.0	2.5	2.0	2.1	1.0	5.0	3.3	3.0	27.4	25.3	9.3	30.0	34.6	42.5	0.2	1.7
Moisture (%)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	7.2	2.4	6.9	4.5	4.2	4.5	0.2	0.2
Aerated powder density (kg/m <sup>3</sup> )	570	480	590	620	620	-	580	730	660	120	140	280	210	220	190	1200	900
Tapped powder density (kg/m <sup>3</sup> )	1130	990	1080	1190	1180	1400	1030	1110	1220	240	300	510	420	410	360	1800	1500
Production Location	UK	FR	BE	BE	TU	TU	IT	IT	IT	MX	ES	US	US	US	US	FR	FR

**Key:**

- Recommended
- Can be used
- BE Belgium
- ES Spain
- FR France
- IT Italy
- MX Mexico
- TU Tunisia
- UK United Kingdom
- US United States of America

### RHEOLOGY CONTROL

During the mixing of the formulated molding powder, Imerys minerals assist in rheology control and moisture regulation.

The high absorptive characteristic of our diatomaceous earth products prevents caking of the powder during production and transportation.

### APPLICATIONS

Imerys Minerals are used in a variety of thermoset molding powder formulations, however they are most widely used in high temperature phenolic and melamine resins, where thermal stability is critical to the performance of the finished item.

The data quoted are determined by the use of IMERYS Minerals Ltd Standard Test Methods, copies of which will be supplied on request. Every precaution is taken to ensure the products conform to our published data, but since the products are based on naturally occurring raw materials, we reserve the right to change these data should it become necessary. Sales are in accordance with our 'Conditions of Sale', copies of which will be supplied on request.

\*Tested by Malvern light scattering



THERMOSET

## Calcium Carbonate

Sheet and Bulk moulding compounds (SMC and BMC) are used to produce a wide range of items, from small products like coffee machine housings to large ones such as lorry panels. Both can be very complex in the moulded shapes that are formed, making it essential that the compound has the correct viscosity profile so that moulds are completely filled.

Calcium Carbonate is used in SMC and BMC to reduce cost, improve surface finish, help minimise the effect of exothermic heat on warpage during curing and increase the hardness of compounds.

## Diatomaceous Earth

The addition of Diatomaceous Earth (DE) provides reinforcement to thermoset resins; the degree of reinforcement is dependent on the source (morphology) of the DE, and the particle size, shape and pore structure of the mineral. Loadings up to 10% are often used, depending on the performance requirements of the resin. The relatively low specific gravity of the DE reduces the overall cost of the formulation by replacing a higher cost resin.

The intricate surface structure of DE particles helps in the dispersion of inorganic additives, often reducing the required amounts of titanium dioxide and other materials in the final formulation.

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IMERYS

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for Thermoset Resins

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RESINS