



# SCHOTT Dental Glass Ceramics

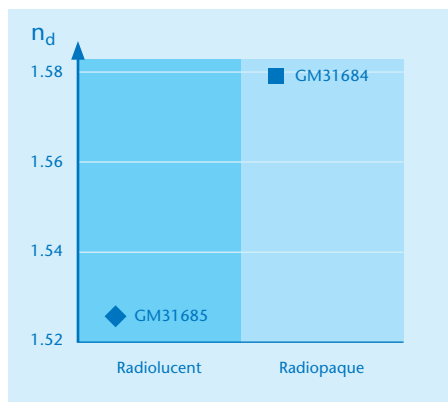
## Product Information

SCHOTT's devitrified dental glass ceramic powders will provide additional benefits for your composites.

## Advantages

### Expertise in special glass technology

- Glass ceramics have a very low CTE and high glass transition temperature due to its partly crystalline structure
- These materials can have a positive influence on tooth abrasion
- They also can improve polishability
- Refractive indices have been designed to result in one radiolucent and one radiopaque glass ceramic product variation



Glass ceramics with their refractive indices

## Materials Data:

		GM31684	GM31685
Expansion coefficient (-30/+70 °C)	10 <sup>-6</sup> /K	Approx. 1	Approx. 1
Index of refraction n <sub>d</sub>		1.58	1.53
Density	g/cm <sup>3</sup>	2.9	2.6
Transformation temperature (ISO7884-8)	°C	> 800	> 800
Radiopacity (acc.ISO 4049) as thickness of aluminium equal to 2-mm thick glass material	mm	4.4 (220%)	1.5 (75%)
Hydrolytical resistance (DIN ISO 719)		Class 1	Class 1
Composition (approx. values) [weight-%]	SiO <sub>2</sub>	50	60
	Al <sub>2</sub> O <sub>3</sub>	20	20
	ZnO	1	1
	P <sub>2</sub> O <sub>5</sub>	5	-
	La <sub>2</sub> O <sub>3</sub>	10	-
	ZrO <sub>2</sub>	5	5
	Li <sub>2</sub> O	5	5
	MgO	-	5
	K <sub>2</sub> O	1	1
	Ta <sub>2</sub> O <sub>5</sub>	1	1

## Grain sizes

Type	Description	Size	Grain size		Approx. Surface [m <sup>2</sup> /g]
			d <sub>50</sub> [µm]	d <sub>99</sub> [µm]	
K	Standard grind	K1	30 ± 10	≤ 150	-
		K2	16 ± 4	≤ 100	-
		K3	10 ± 2	≤ 63	-
		K4	7 ± 1	≤ 40	-
		K5	5 ± 1	≤ 40	0.5
		K6	3 ± 1	≤ 40	0.6
SM	Special grind with narrow distribution	SM 3.5	3.5 ± 1	≤ 13	2

## For more information:

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