

# SIGRATHERM® GFG

## Highly conductive expanded graphite powder

SIGRATHERM GFG graphite powder grades listed in below table are low density, large surface area, highly conductive expanded graphite powders. It is used in a wide variety of applications where thermal conductivity is essential. For instance, it is used in thermally conductive plastics, adhesives, sealants, or as in inorganic materials, e. g. molds in foundry technology. Furthermore, due to the unique properties of graphite, GFG can also be used in electric/antistatic applications as well as mechanical applications. SIGRATHERM GFG20 can also be used as additive in battery applications. SIGRATHERM GFG75-APX2 was especially developed as a lubricant additive to improve oxidation resistance. This graphite powder is produced from SIGRAFLEX® APX2® graphite foil. SIGRATHERM GFG75-APX2 has modified surface characteristics and contains inorganic oxidation inhibitors.



### Material data of SIGRATHERM® GFG

Typical properties	Units	GFG5	GFG20	GFG75-APX2	GFG200	GFG600	GFG1000	GFG1200	GFG2700
Particle size D <sub>50</sub>	µm	5 <sup>1)</sup>	20 <sup>1)</sup>	75 <sup>1)</sup>	200 <sup>2)</sup>	600 <sup>2)</sup>	1000 <sup>2)</sup>	1200 <sup>2)</sup>	2700 <sup>2)</sup>
Tap density (ASTM B527)	g/cm <sup>3</sup>	0.10	0.11	0.12	0.12	0.14	0.16	0.18	0.22
Real density	g/cm <sup>3</sup>	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
BET surface area	m <sup>2</sup> /g	35	30	25	25	20	20	20	20
Ash content (ASTM C561)	%	≤ 3.0	≤ 3.0	≤ 2.0	≤ 3.0	≤ 3.0	≤ 3.0	≤ 3.0	≤ 3.0
Carbon content (ASTM D5373)	%	≥ 97.0	≥ 97.0	≥ 98.0	≥ 97.0	≥ 97.0	≥ 97.0	≥ 97.0	≥ 97.0
Moisture content (ASTM C562)	%	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

<sup>1)</sup> Particle size screening by laser diffraction. D<sub>50</sub>: Approx. 50% of the particles are smaller/larger in size (volume %).

<sup>2)</sup> Particle size screening by a set of sieves. D<sub>50</sub>: Approx. 50% (calculated) of the particles are smaller/larger in size (weight %)

Values are nominal unless otherwise stated. While the information on this data sheet is typical, it may be subject to change and does not constitute a product warranty or an actual specification value.

Delivery from our manufacturing plant in Valencia, California. Fine grades are typically supplied in paper bags (around 17 lbs.), coarser materials typically in supersacks.

Unless stated otherwise, all values are valid at room temperature, typical, non-binding and subject to change. For engineering or design purposes please contact our technical sales team.



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