

# SF75 Graphite

Technical Data Sheet 5091

## Product Overview

GRAFSTAR™ SF75 graphite is generally made according to the specific needs and dimensions of the customer. It has higher purity and the maximum level of some impurities can be guaranteed.

## Applications

- Electrolysis
- Refractory production

## Sizes\*

- 150 x 300 to 600 x 600 mm rectangles
- 6" x 12" to 24" x 24" rectangles
- 200 to 300 mm diameter rounds
- 8" to 12" diameter rounds

## Typical Properties at Room Temperature\*\*

| Characteristic        | Unit                         | WG    | AG    | Unit                 | WG    | AG    | Unit                 | WG    | AG    |
|-----------------------|------------------------------|-------|-------|----------------------|-------|-------|----------------------|-------|-------|
| Density               | lbs/ft <sup>3</sup>          | 108   |       | g/cm <sup>3</sup>    | 1.73  |       | g/cm <sup>3</sup>    | 1.73  |       |
| Maximum Particle Size | inches                       | 0.030 |       | mm                   | 0.76  |       | mm                   | 0.76  |       |
| Specific Resistance   | 10 <sup>-4</sup> Ωin         | 2.2   | 3.9   | μΩm                  | 5.5   | 10.0  | μΩm                  | 5.5   | 10.0  |
| Flexural Strength     | psi                          | 2610  | 1450  | kg/cm <sup>2</sup>   | 183   | 102   | MPa                  | 18    | 10    |
| Young's Modulus       | 10 <sup>6</sup> psi          | 1.88  | 0.87  | kg/mm <sup>2</sup>   | 1325  | 612   | GPa                  | 13.0  | 6.0   |
| Tensile Strength      | psi                          | 2030  | 1015  | kg/cm <sup>2</sup>   | 143   | 71    | MPa                  | 14    | 7     |
| Compressive Strength  | psi                          | 4639  | 4929  | kg/cm <sup>2</sup>   | 326   | 347   | MPa                  | 32    | 34    |
| Permeability          | Darcy                        | 0.011 | 0.007 | Darcy                | 0.011 | 0.007 | Darcy                | 0.011 | 0.007 |
| Hardness              | Rockwell "R"                 | 55    |       | Rockwell "R"         | 55    |       | Rockwell "R"         | 55    |       |
| C.T.E. (to 100 °C)    | 10 <sup>-6</sup> /°F         | 0.3   | 1.3   | 10 <sup>-6</sup> /°K | 0.6   | 2.4   | 10 <sup>-6</sup> /°K | 0.6   | 2.4   |
| Thermal Conductivity  | BTU-ft/hr ft <sup>2</sup> °F | 121   | 69    | W/mK                 | 210   | 120   | W/mK                 | 210   | 120   |
| Ash Content           | ppm                          | 300   |       | ppm                  | 300   |       | ppm                  | 300   |       |

Notes:

\* Other sizes available upon request

\*\* Properties listed are typical and cannot be used as accept/reject specifications

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**Redefining limits**