



# GRAFSTAR™ YBDXX Grade Carbon

## Technical Data Sheet 4052

### Product Overview

GRAFSTAR™ YBDXX carbon has enhanced properties over those of YBDX carbon and YBD carbon. YBDX carbon has higher density and mechanical properties, and lower porosity. This material is specially manufactured for electrolysis involving fluorine applications.

### Applications

- Anodes for fluorine cells
- Cathodes for fluorine cells
- Electrolysis involving the presence of fluorine

### Sizes\*

- 2" x 8" x 25.5" / 51 mm x 203 mm x 648 mm
- 2" x 7" x 22.5" / 51 mm x 178 mm x 648 mm

### Typical Properties at Room Temperature\*\*

Characteristic	Unit	WG	AG	Unit	WG	AG
Density	lbs/ft <sup>3</sup>	103		g/cm <sup>3</sup>	1.65	
Maximum Particle Size	inches	0.03		mm	0.76	
Specific Resistance	10 <sup>-4</sup> Ωin	15.7	18.1	μΩm	40	46
Flexural Strength	psi	3,400	3,100	MPa	24	21
Young's Modulus	10 <sup>6</sup> psi	2.1	1.5	GPa	14	10
Tensile Strength	psi	2,600	2,000	MPa	18	14
Compressive Strength	psi	15,800		MPa	109	
Permeability	Darcy	0.005		Darcy	0.005	
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	3.1	2.7	W/mK	5.1	4.5
CTE (RT to 100 °C)	10 <sup>-6</sup> /°F	1.4	2.3	10 <sup>-6</sup> /K	2.5	4.1
Ash Content	%	0.2		%	0.2	
Porosity	%	13		%	13	

**Notes:**

\* Custom lengths also available

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

