

# YBDX™ Carbon

Technical Data Sheet 4051

## Product Overview

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

## Applications

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

## Sizes\*

Standard Sizes	
2" x 7" x 25.5"	51 mm x 178 mm x 648 mm
2" x 8" x 25.5"	51 mm x 203 mm x 648 mm

## Typical Properties at Room Temperature\*\*

Characteristic	Unit	WG	AG	Unit	WG	AG
Density	lbs/ft <sup>3</sup>	100		g/cm <sup>3</sup>	1.6	
Maximum Particle Size	inches	0.03		mm	0.76	
Specific Resistance	10 <sup>-4</sup> Ωin	16.7	20.1	μΩm	42.5	51.1
Flexural Strength	psi	3,300	3,000	MPa	23	21
Young's Modulus	10 <sup>6</sup> psi	2.1	1.5	GPa	14	10
Tensile Strength	psi	2,570	1,950	MPa	18.0	13.5
Compressive Strength	psi	10,400		MPa	72	
Permeability	Darcy	0.01		Darcy	0.01	
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	4	3	W/mK	7	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	%	15		%	15	

Notes:

\* Custom lengths also available

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

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**Redefining limits**

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