

YBDXX™ Carbon

Technical Data Sheet 4052

Product Overview

GrafTech's GRAFSTAR YBDXX carbon has enhanced properties over those of YBDX™ and YBD™ carbon. Grade YBDXX 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*

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

Typical Properties at Room Temperature**

Characteristic	Unit	WG	AG	Unit	WG	AG
Density	lbs/ft ³	103		g/cm ³	1.65	
Maximum Particle Size	inches	0.03		mm	0.76	
Specific Resistance	10 ⁻⁴ Ωin	15.7	18.1	μΩm	40	46
Flexural Strength	psi	3400	3100	MPa	24	21
Young's Modulus	10 ⁶ psi	2.1	1.5	GPa	14	10
Tensile Strength	psi	2600	2000	MPa	18	14
Compressive Strength	psi	15,800	15,800	MPa	109	109
Permeability	Darcy	0.005		Darcy	0.005	
Thermal Conductivity	BTU-ft/hr ft ² °F	3.1	2.7	W/mK	5.1	4.5
CTE (RT to 100 °C)	10 ⁻⁶ /°F	1.4	2.3	10 ⁻⁶ /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

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