

QR3 Capacitor Grade Tantalum

Number PD-7057  
 Issue 2-05/05/2021

## QR3 Capacitor Grade Tantalum

**Description of Product** This product data sheet covers the requirements for the production, handling, and testing of QR3 High Voltage, Capacitor Grade, Tantalum Powder manufactured by H.C. Starck, Newton, MA.

### Physical Characteristics

	Min.	Max.
Fisher Subsieve Sizer FAPD [micron]	4.5	6.5
Scott Bulk Density SBD [g/in <sup>3</sup> ]	50.0	60.0
F.S.S.		
% +60 mesh	N/A	25.0
% -325 mesh	40.0	60.0

### Chemical Characteristics

(ppm)

	Max.
Boron [B]	50
Calcium [Ca]	2
Carbon [C]	35
Chromium [Cr]	5
Copper [Cu]	5
Iron [Fe]	25
Molybdenum [Mo]	5
Nickel [Ni]	10
Niobium [Nb]	10
Nitrogen [N]	60
Oxygen [O]	2400
Potassium [K]	10
Silicon [Si]	20
Sodium [Na]	1
Sulfur [S]	10
Titanium [Ti]	5
Tungsten [W]	40

### Electrical Characteristics

#### Electrical Test 1

Sinter Temp./Time	1600 C
Voltage	150
% Wild Anodes	0
DCL [uA/g]	3.0 max.
CV/g (normalized) [uFV/g]	6950 min. 7650 max.

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VBD [V]	180 min.	
<b>Electrical Test 2</b>		
Sinter Temp./Time	1800 C	
Voltage	200	
% Wild Anodes		0
DCL [ $\mu$ A/g]		1.5 max.
CV/g (normalized) [ $\mu$ V/g]	4700 min.	5200 max.
VBD [V]	240 min.	

**Hazards identification in Advertising (Directive 67/548/EEC Article 26 and Directive 1999/45/EC Article 13)**  
Metal powder, flammable, n.o.s.

**Packaging** The HCST convention has been to package this material in 1 liter Nalgene polyethylene bottles at a maximum weight of 5kg/bottle.

**Rejection** H.C. Starck must receive written notification of rejected material with the reason for rejection. The right is reserved to inspect rejected material at customer plant for claim validation. The material may be returned only after proper authorization.

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