



# Lanthanum Strontium Cobalt Ferrite

fuelcellmaterials.com offers a line of perovskite electrode materials based on lanthanum strontium cobalt ferrite (LSCF). This material provides improved low-temperature performance for solid oxide fuel cells and ceramic oxygen generation systems. LSCF has a relatively high thermal expansion and is most often used with ceria-based electrolyte or barrier layers. LSCF is often combined with ceria-based materials, such as gadolinium doped ceria (GDC or CGO) to enhance the catalytic activity for conversion of oxygen to oxide ion. Specifications and data on our standard LSCF product is provided in the table below and representative data are provided in the figures on the reverse. Custom formulations can be delivered typically within three weeks of ordering.

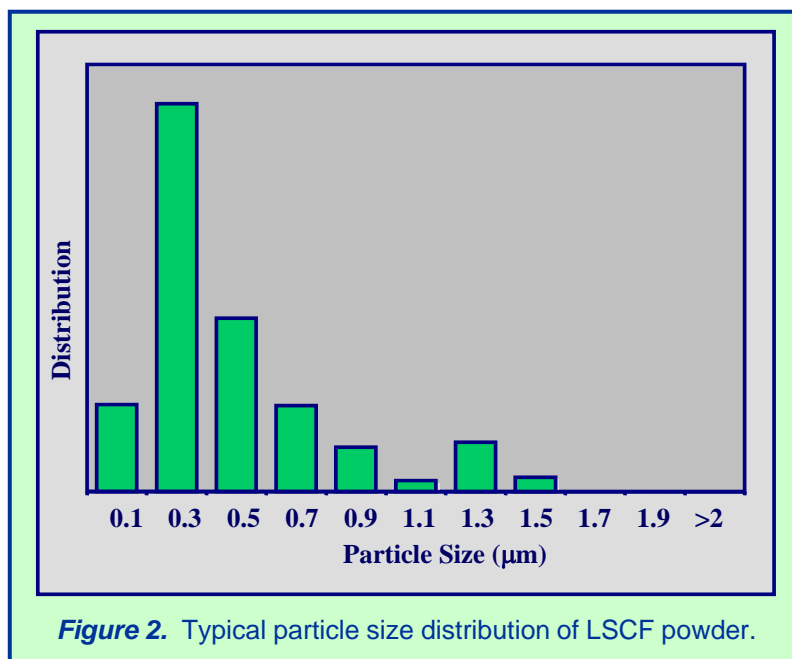
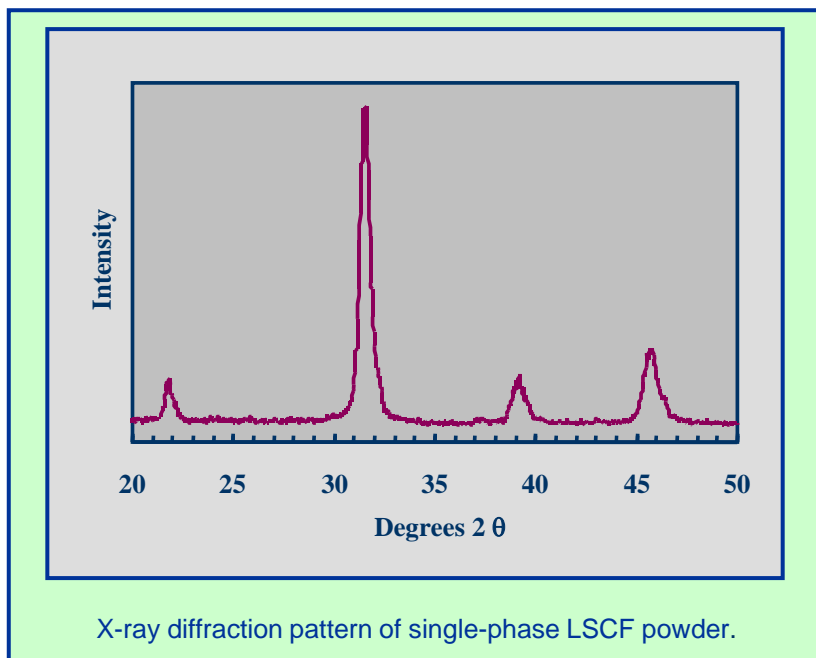
## Applications

- Electrode material for ceria-based ceramic electrolytes.
- Cathode material for solid oxide fuel cells operating at temperatures below 750°C.
- Combustion catalysts and sensors.

## Features

- Higher performance for low-temperature SOFCs.
- Powder characteristics designed for screen printing processes.
- High crystalline-phase and chemical purity.
- Consistent properties batch-to-batch.

Product Specifications	
Composition (LSCF-6428) *	$(La_{0.6}Sr_{0.4})(Co_{0.2}Fe_{0.8})O_{3-\delta}$
Crystal Structure	Single-Phase Perovskite
Surface Area	4-8 m <sup>2</sup> /gram
Particle Size (d50)	0.3-0.6 microns
Electrical Conductivity	$\sigma > 250$ S/cm @ 600°C
Thermal Expansion	$\alpha \sim 15$ ppm/°C
* slightly A-site deficient	
Custom formulations available	



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